Contents lists available at ScienceDirect

Journal of Experimental Social Psychology

Investigating the identification-prejudice link through the lens of national narcissism: The role of defensive group beliefs☆

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ARTICLE INFO

ABSTRACT

The identification-prejudice link describes the defensive stance toward immigrants held by strong national identifiers. Recent research refined this relationship by suggesting that defensive national identification (operationalized through national narcissism), but not secure national identification, was associated with prejudice. While previous research found intergroup threat and conspiracy beliefs to mediate the identification-prejudice link, the need to comprehensively and experimentally test the role of these defensive group beliefs remains in the context of the *narcissistic* identification-prejudice link. Furthermore, following the group-based control model, we proposed that these defensive group beliefs might be more pronounced among national narcissists compensating for a low personal control. In Study 1 ($N = 1104$, nationally representative sample), national narcissism, but not secure national identification, was related to prejudice against immigrants, and a serial model composed of perceived intergroup threat and conspiracy beliefs mediated this relationship. These relationships held when controlling for conspiracy mentality, supporting the notion that these conspiracy beliefs were motivated at the intergroup level. In Study 2 ($N = 474$, pre-registered), we experimentally induced intergroup threat and exposure to conspiracy theories about immigrants. Induced threat increased conspiracy beliefs, and both increased prejudice, corroborating their causal relationship. In Study 3 ($N = 350$, pre-registered), we induced low personal control and made national narcissism salient to test the group-based control hypothesis. The relationship between measured (but not manipulated) national narcissism and conspiracy beliefs was more pronounced under low personal control. We discuss the role of defensive group beliefs on group-based control and prejudice against immigrants

Investigating the identification-prejudice link through the lens of national narcissism: the role of defensive group beliefs

By 2060, 8 million international immigrants are expected to have reached Europe (Migration Data Portal, 2020). Despite the fact that more than 20,000 have died trying to cross the Mediterranean Sea since 2014 (ONU Info, 2020), notable protests against welcoming these newcomers have been organized in many European countries. Research has shed light on this hostility by showing that strong identification with the national ingroup is related to prejudice against immigrants (Falomir-

Pichastor & Frederic, 2013; Hasbún López et al., 2019), a relationship labelled the *identification-prejudice link* by Spiegler, Christ, and Verkuyten (2021). However, recent findings have revealed that the type of ingroup positivity matters, and that only national narcissism (and not secure national identification) is related to prejudice (Dyduch-Hazar, Mrozinski, & Golec de Zavala, 2019). National narcissism is a defensive social identification rooted in the belief that one's ingroup greatness suffers from a lack of external recognition (Golec de Zavala, Cichocka, Eidelson, & Jayawickreme, 2009), making one highly sensitive to intergroup threat and conspiracy theories (i.e., accusations of

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malevolent outgroups secretly plotting against the ingroup to achieve nefarious goals, Zonis & Joseph, 1994). Intergroup threat and conspiracy beliefs, which we labelled *defensive group beliefs*, are causally related (Cichocka, Marchlewska, Golec de Zavala, & Olechowski, 2016; Mashuri & Zaduqisti, 2015, and mediate the identification-prejudice link (Swami, Barron, Weis, & Furnham, 2018; Uenal, 2016). However, these relationships have not yet been replicated in the context of the *narcissistic* identification-prejudice link. We aim to fill this gap by arguing that intergroup threat and conspiracy beliefs serially mediate the narcissistic identification-prejudice link. Moreover, based on the group-based control model (Fritsche et al., 2013), we further argue that these defensive group beliefs might be especially prevalent when national narcissists are compensating for low personal control (Cichocka et al., 2018). Hence, in this paper we aimed to investigate the narcissistic identification-prejudice link by comprehensively testing the mediating role of defensive group beliefs, and the particular proneness of these reactions following group-level control compensation.

1. Types of ingroup positivity and prejudice against immigrants

Prejudice can be defined as "any negative attitudinal, emotional, or behavioral reaction against an outgroup" (Rios, Sosa, & Osborn, 2018, p. 227). Strong identification with the national ingroup has been documented as a reliable predictor of prejudice against immigrants (e.g., Pehrson, Brown, & Zagefka, 2009, Pehrson, Vignoles, & Brown, 2009; for a review see Esses, 2021). This identification-prejudice link has been replicated, for example, in predicting negative feelings (Yitmen & Verkuyten, 2018), collective action intentions (Shepherd, Fasoli, Pereira, & Branscombe, 2018), negative attitudes (Espinosa et al., 2018), and support for discriminatory policies (Adam-Troian, Çelebi, Bonetto, Taşdemir, & Yurtbakan, 2020). However, recent research has provided nuance to these findings by showing that the identification-prejudice link was not observed for all kinds of national ingroup positivity.

Rather, recent evidence suggests a narcissistic identification-prejudice link against immigrants, but not for secure national identification (Dyduch-Hazar, Mrozinski, & Golec de Zavala, 2019a). Hereafter, we distinguish between two kinds of national ingroup positivity with different intergroup consequences. First, secure national identification captures "a confidently held ingroup evaluation, which stems from satisfied needs" (Marchlewska, Cichocka, Jaworska, de Zavala, & Bilewicz, 2020, p. 8). Secure national identification has been related to virtuous intergroup consequences (Dyduch-Hazar, Mrozinski, Simão, & Golec De Zavala, 2019) and to decreased hostility toward immigrants (Dyduch-Hazar, Mrozinski, & Golec de Zavala, 2019). Second, defensive national identification, here operationalized through national narcissism (Cai & Gries, 2013) is a defensive social identification rooted in the belief that one's nation's greatness suffers from a lack of external recognition (Golec de Zavala et al., 2009). Contrary to secure national identification, national narcissism has been related to various prejudices against immigrants, such as increased hostility (Dyduch-Hazar, Mrozinski, & Golec de Zavala, 2019), negative attitudes (Lyons, Kenworthy, & Popan, 2010), justification of collective violence (Cichocka, Bocian, Winiewski, & Azevedo, 2021) and decreased collective action intentions in solidarity with immigrants (Górska et al., 2020, Study 1). In the following section, we review literature supporting the idea that perceiving immigrants as threatening and conspiring against one's ingroup might serially mediate the narcissistic identification-prejudice link.

2. The serially mediating role of intergroup threat and conspiracy beliefs

2.1. The mediating role of intergroup threat

A consequent body of evidence suggests that the identification-prejudice link (without distinguishing between types of ingroup

positivity) is mediated by perceived intergroup threat from immigrants (Caricati, 2018; Hasbún López et al., 2019; Louis, Esses, & Lalonde, 2013; Shepherd et al., 2018; Swami et al., 2018; Yitmen & Verkuyten, 2018). This relationship has been interpreted following the Intergroup Threat Theory (Stephan & Stephan, 2017), stating that prejudice will be displayed against outgroups following perceptions of symbolic or realistic intergroup threats. With regards to perceived threat from immigrants, symbolic threat refers to perceiving immigrants as threatening the "ingroup's values, culture, or way of life", while realistic threat refers to perceiving immigrants as threatening the "ingroup's power, resources, or well-being" (Rios et al., 2018, p. 213). As mentioned by Caricati (2018) and following Social Identity Theory (Tajfel, Turner, Austin, & Worchel, 1979), high identifiers are more susceptible to perceptions of intergroup threat. But as for prejudice, the above-mentioned research did not differentiate between types of national ingroup positivity, which is problematic given the sensitivity of collective narcissists to intergroup threat (Cichocka, 2016). By contrast, secure national identification is usually no longer positively associated with perceiving intergroup threat when these two types of ingroup positivity are partialled out (e.g., Golec de Zavala, Guerra, & Simão, 2017). This distinction matters given the differential predictions it allows.

That is, national narcissists' sensitivity to intergroup threat has been associated with generally negative outgroup attitudes (for a review, see Golec de Zavala, Dyduch-Hazar, & Lantos, 2019). For example, perceived intergroup threat mediated the relationship between Hungarian national narcissism and moral exclusion of Roma and Muslim immigrants (Hadarics, Szabó, & Kende, 2020). Based on these previous results, we expected that perceived intergroup threat from immigrants would mediate the narcissist identification-prejudice link, but not the secure identification-prejudice one. Of importance, defensive group beliefs displayed by national narcissists and leading to prejudice against immigrants might not only be explained by perceiving intergroup threat. Indeed, Hadarics et al. (2020) suggested that "blaming out-groups may not just increase salience of in-groups but also mobilize collective action against the out-group" (p. 120). That is, for prejudice (e.g., collective action) to occur, perceived intergroup threat may take the form of blaming outgroups, encompassing sentiments that are typical of conspiracy theories. Hence we also expected conspiracy beliefs to mediate the narcissistic identification-prejudice link.

2.2. The mediating role of conspiracy beliefs

Previous findings support the hypothesis that the narcissistic identification-prejudice link might not only be mediated by intergroup threat, but also by conspiracy beliefs. The relationship between national narcissism and conspiracy beliefs is robust and has been documented in many contexts. For example, national narcissism has been related to Jewish conspiracy beliefs (Golec de Zavala & Cichocka, 2012) and vaccination conspiracy beliefs (Cislak et al., 2021) in Poland, and to COVID-19 conspiracy beliefs in the U.S, U.K (Sternisko, Cichocka, & Bavel, 2020), and Romania (Stoica & Umbres, 2020). Importantly, when accounting for both national narcissism and secure national identification, the latter usually becomes non-significantly or even negatively related to conspiracy beliefs (see Cichocka, 2016). That is, distinguishing between types of national ingroup positivity also matters when examining the mediating role of conspiracy beliefs. Hence, we propose that the narcissistic identification-prejudice link is mediated by both perceived intergroup threat and by conspiracy beliefs. Furthermore, we do not conceptualize intergroup threat and conspiracy beliefs as joint mediators of the narcissistic identification-prejudice link, but as serial mediators, meaning that the former is intended to be causally related to the later. Indeed, national narcissists' conspiracy beliefs appear to be triggered by perceiving outgroups as threatening to the ingroup.

Conspiracy beliefs can be described as reactions to perceived intergroup threats in which the outgroup is no longer simply depicted as threatening, but as intentionally threatening the ingroup in secret.

Whereas intergroup threats can be somewhat diffuse and intangible (Green, Glaser, & Rich, 1998), conspiracy beliefs directly attribute clear and unambiguous malevolent motives to threatening outgroups. A consequent body of evidence supports the idea that at an intergroup level, perceived intergroup threat is a necessary condition for conspiracy beliefs to occur (Mashuri & Zaduqisti, 2014; Mashuri et al., 2016; Van Prooijen & Song, 2021; Zein, Arinda, & Rikardi, 2020, study 1). Indeed, intergroup threat has been shown to positively mediate the relationship between national narcissism and conspiracy beliefs (Cichocka et al., 2016, Study 2). The same study found that secure national identification was negatively related to intergroup threat and conspiracy beliefs, further suggesting that defensive group beliefs pertain to national narcissism. Two other studies have investigated relationships between national identification (without distinguishing types of ingroup positivity), intergroup threat and conspiracy beliefs about Muslim immigrants (labelled "Islamophobic" conspiracy beliefs; Swami et al., 2018; Uenal, 2016). Their findings highlighted through cross-sectional models that national identification led to higher perceived intergroup threat from immigrants, which in turn predicted Islamophobic conspiracy beliefs. Experimental research by Mashuri and Zaduqisti (2015) also showed that conspiracy beliefs are caused by the interaction between perceived intergroup threat and strong national identification. That is, intergroup threat might trigger conspiracy beliefs in an intergroup context when it is relevant (i.e., motivated by the need to protect one's national identification), justifying outgroup prejudice.

This is in line with Sternisko, Cichocka, Cislak, and Van Bavel (2020) distinguishing between individual and social motivations grounding conspiracy beliefs, depending on whether people are attracted by their content or by their qualities. Following this model, one is likely to endorse conspiracy beliefs based on their qualities (e.g., their epistemic power) following individual inclinations (e.g., believing that the earth is flat to make sense of seeing the Chicago skyline from the opposite bank of the Lake Michigan; Brazil, 2020). By contrast, Sternisko, Cichocka, Cislak, and Van Bavel (2020) argued that one is likely to endorse conspiracy beliefs based on their content following their motives to maintain and protect a positive social identity (e.g., claiming that a football match was rigged to cope with identity threat following one's team elimination; Bertin, Delouvée, McColl, & Van Prooijen, 2021). This group-based tendency to hold conspiracy beliefs in the face of threat for one's ingroup is also in line with the notion of collective conspiracy mentality, describing Polish national identifiers' tendency to perceive conspiracies due to their strong defensive and victimized national identification (Soral et al., 2018). Overall, these conspiracy beliefs motivated at a group-level and blaming outgroups perceived as threatening, differ from conspiracy beliefs grounded on the so-called "conspiracy mentality", describing the dispositional tendency to hold conspiracy theories (Imhoff & Bruder, 2014).

Of importance, the blaming narrative of conspiracy theories leads them to be especially consequential on intergroup relations and prejudice. For example, Marchlewska, Cichocka, Łozowski, Górska, and Winiewski (2019) found that gender conspiracy beliefs held by Polish catholic narcissists were related to outgroup hostility toward those perceived as undermining Catholic values. Conspiracy beliefs also led to anticipated behavioral responses to perceived intergroup threats in the form of violent collective actions (for a review, see Biddlestone, Cichocka, Żeżelj, & Bilewicz, 2020). Krekó (2015) argues that conspiracy beliefs have a function of justifying prejudices and stereotypes, referring to what Abalakina-Paap, Stephan, Craig, and Gregory (1999) called an "outlet for hostility". Conspiracy beliefs seem to especially fuel prejudice when targeting powerless groups such as immigrants (i.e., Downward conspiracy theories; Nera, Wagner-Egger, Bertin, Douglas, & Klein, 2021). For example, Jolley et al. (2020, Study 1) found through an experiment that exposure to conspiracy theories about immigrants coming to the U.K with malevolent motives increased prejudice against immigrants. Several studies also suggested that conspiracy beliefs have a function of justifying the ingroup's violent collective actions against

outgroups (Chayinska & Minescu, 2018; Sapountzis & Condor, 2013). Other findings support the idea that conspiracy beliefs are related to the endorsement of violent political actions (Castanho Silva, Vegetti, & Littvay, 2017; Lamberty & Leiser, 2019) and intentions to employ non-normative forms of political action (Imhoff, Dieterle, & Lamberty, 2020). Hence, we propose that conspiracy beliefs caused by perceived intergroup threat are grounded in national narcissism as defensive group beliefs leading to prejudice against immigrants. Importantly, national narcissists might be especially prone to display these defensive beliefs when compensating for low personal control.

3. Defensive group beliefs and group-based control

The group-based control model (Fritsche et al., 2013; Fritsche, Jonas, & Kessler, 2011) posits that individuals are likely to look for affiliation with an ingroup viewed as powerful and agentic to restore a sense of personal control. This compensatory group-level control process seeking to protect the agentic and powerful image of the ingroup (Stollberg, Fritsche, & Bäcker, 2015) has been associated with ethnocentric and detrimental consequences for intergroup relations (Aydin, Krueger, Frey, Kastenmüller, & Fischer, 2014; Agroskin & Jonas, 2013; Goode, Keefer, Branscombe, & Molina, 2017; Jutzi, Willardt, Schmid, & Jonas, 2020; Schlueter, Schmidt, & Wagner, 2008). For example, recent research suggests that group-based control is associated with blaming immigrants when economic threat is experimentally induced (Hirsch, Veit, & Fritsche, 2021, Study 1).

Similarly, it has been suggested that the relationship between types of ingroup positivity and outgroup hostility is influenced by the motivation to compensate for low personal control. Based on longitudinal evidence, Cichocka et al. (2018, Study 4) showed that while secure national identification increased following personal control, collective narcissism increased after a loss of personal control was experienced, mediating the relationship between personal control and outgroup hostility. Marchlewska et al. (2020) replicated these findings through a cross-sectional design showing that the relationship between personal control and positive attitudes toward Ukrainians (presented as potential refugees) was positively mediated by secure national identification, but negatively by national narcissism.

Previous research also found that both intergroup threat (Greenaway, Louis, Hornsey, & Jones, 2014) and conspiracy beliefs (Van Prooijen & Acker, 2015) increased due to low personal control. Similarly, Stojanov and Halberstadt (2020) have revealed a small meta-analytic experimental effect of low personal control on belief in specific conspiracy theories (but not generic forms of conspiracy belief; see also Stojanov et al., 2021). Furthermore, Kofta, Soral, and Bilewicz (2020) found that lack of personal control increased Jewish conspiracy beliefs, which in turn led to prejudice toward Jews, highlighting the intergroup consequences of one's lack of personal control. Congruently, we argue that defensive group beliefs, and consequently prejudice against immigrants, might be especially prevalent following national narcissism that is being used to compensate for a low personal control.

4. The current studies

In this paper, we aimed to test the general hypothesis that national narcissism is related to prejudice against immigrants through a causal path composed of intergroup threat and conspiracy beliefs, and that these defensive group beliefs might be more pronounced under low personal control. In Study 1 ($N = 1104$), we tested this general hypothesis through a cross-sectional study on a nationally representative sample, controlling for conspiracy mentality to isolate conspiracy beliefs held at the group-level. In Study 2 ($N = 474$), we experimentally manipulated intergroup threat and conspiracy beliefs about immigrants to test their causal relationship and their main effect on prejudice against immigrants. Study 2 also allowed us to test the alternative hypothesis of an interaction effect between threat and conspiracy theories

on prejudice. In Study 3 ($N = 350$), we investigated whether these defensive group beliefs might be contingent at the individual-collective level when national narcissism is used to compensate for low personal control. We experimentally manipulated personal control and national narcissism salience, to test whether control compensation through national narcissism would impact defensive group beliefs.

5. Study 1

In Study 1, we first aimed to test our general hypothesis through a highly powered and nationally representative correlational study. The proposed serial mediation model is displayed in Fig. 1. We used a set of three scales to assess prejudice against immigrants in various ways: by measuring collective action intentions (Hasbún López et al., 2019), support for discriminatory policies (Adam-Troian et al., 2020), and attitudes against naturalisation of immigrants (Aydin et al., 2014; Pereira, Vala, & Costa-Lopes, 2010). Accordingly, our hypotheses are that perceived threat and conspiracy beliefs serially mediate the relationship between national narcissism and all three types of prejudice against immigrants separately (collective actions, H_1; support for discriminatory policies, H_2; attitudes against naturalisation, H_3). Following previous literature (Dyduch-Hazar, Mrozinski, & Golec de Zavala, 2019), we expect secure national identification to be related to the prejudice against immigrants' variables through negative associations with the mediators (collective actions, H_4; support for discriminatory policies, H_5; attitudes against naturalisation, H_6).

We controlled for conspiracy mentality, which has been recently described as an individual trait underlying conspiracy beliefs (Stojanov & Halberstadt, 2019). Indeed, following the distinction made by Sternisko, Cichocka, Cislak, and Van Bavel (2020), we are interested in conspiracy beliefs motivated at an intergroup and not at an individual level. Furthermore, a theoretical proposition has been recently made that collective narcissists' sensibilities to conspiracy beliefs are rooted in a more general conspiracy mentality (Golec de Zavala, 2020). Thus, to better capture group-based conspiracy beliefs, and due to the expected overlap with collective narcissism, we controlled for individuals' levels of conspiracy mentality.

5.1. Method

5.1.1. Participants and procedure

We ran this survey on a representative sample of the French population using *Dynata* survey services (see the supplementary materials for quota details). Overall, 1104[1] participants answered the survey (574 women, $M_{age} = 47.1$, $SD = 16.4$, max = 18, $min = 85$), allowing us to detect a small effect size ($r = 0.10$) in a multiple regression analysis testing one predictor among six others, with an alpha level of 0.05 and a power of 0.80 (G*Power; Faul, Erdfelder, Lang, & Buchner, 2007).

5.1.2. Measures

For all newly translated scales, we used a back-translation procedure. Two to four researchers (depending on the scale) translated the material from English to French, then a native English speaker translated it back into English, and finally two of the co-authors and the native speaker discussed differences. Full translated scales and scales we created by aggregating existing items can be found in the supplementary materials.[2]

Unless otherwise mentioned, participants responded to all scales

using a 5-point response scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Means, standard deviations, and internal reliability coefficients are displayed in Table 1.

5.1.2.1. National narcissism. We used the 9-item Collective Narcissism Scale (Golec de Zavala et al., 2009) in its French version (Bertin, Nera, Hamer, Uhl-Haedicke, & Delouvée, 2021), and adapted it to the French national context (e.g., "If France had a major say in the world, the world would be a much better place", one reverse-coded item, $\alpha = 0.89$).

5.1.2.2. Ingroup satisfaction. We operationalized secure national identification through the 4-item ingroup satisfaction subscale from Leach et al. (2008), referring to French national identity (e.g., "I am glad to be French", $\alpha = 0.93$). This way of operationalizing secure national identification has been previously used in studying consequences of national narcissism on prejudice against immigrants (Dyduch-Hazar, Mrozinski, Simão, & Golec De Zavala, 2019).

5.1.2.3. Immigrant conspiracy beliefs. To capture belief in specific conspiracy theories about immigrants, we used items from various previous studies (Gaston & Uscinski, 2018; Jolley et al., 2020; Marchlewska et al., 2019; Swami et al., 2018) to create a 9-item scale in the French context (e.g., "Immigrants are working within secret networks on behalf of ISIS", one reverse-coded item, $\alpha = 0.93$).

5.1.2.4. Intergroup threat. We translated items from various scales (Hasbún López et al., 2019; Mahfud, 2016) to create a 6-item scale capturing perceived symbolic and realistic threats from immigrants. An exploratory factor analysis revealed a single dimension according to Kaiser criteria, and all the items loaded onto this dimension (all factor loadings >0.84). We thus aggregated them into a unidimensional threat variable (e.g., "Immigrants are a threat to French culture", $\alpha = 0.96$). Aggregating realistic and symbolic threats due to high intercorrelation has been frequently reported in the literature (Shepherd et al., 2018; Riek et al., 2006).

5.1.2.5. Collective action intentions. We used the 6-item scale developed by Hasbún López et al. (2019) assessing collective action intentions in favour (3 items), and against (3 items) immigrants. For ease of interpretation, we reverse-coded items in favour of immigrants so that higher scores indicate collective action intentions against immigrants. One of the coauthors provided us with the French version of the questionnaire (e.g., "Sign a petition to restrict the number of migrants arriving in France", three reverse-coded items, $\alpha = 0.82$).

5.1.2.6. Support for discriminatory policies. We used 5 items from the scale developed by Adam-Troian et al. (2020, e.g. "In the current context in France, do you think that 'family reunification' should be abolished?", $\alpha = .89$) to measure support for discriminatory policies against immigrants.

5.1.2.7. Attitudes against naturalisation of immigrants. We translated a single item from Pereira et al. (2010) into French to measure attitudes toward naturalisation of immigrants (e.g., "Children born in France, of foreign parents, should have the right to acquire French nationality", reverse-coded).

5.1.2.8. Conspiracy mentality. We used the French version (Lantian, Muller, Nurra, & Douglas, 2016) of the Conspiracy Mentality Questionnaire (CMQ, Bruder, Haffke, Neave, Nouripanah, & Imhoff, 2013) to measure participants' general propensity to endorse conspiracy beliefs (e.g., "I think that many very important things happen in the world, which the public is never informed about.", $\alpha = 0.89$). Participants answered using an 11-point scale to rate the likelihood of each of the 5 items ranging from 0% (*Certainly not*) to 100% (*Certain*).

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[1] For scales about immigrants, participants had the possibility to not answer if they felt uncomfortable. Between 5 and 28 participants did not answer, depending on the scale. See Table 1 for details.

[2] These measures were included in a data collection with other unrelated projects. For the present project, all measures are disclosed here except political orientation and education.
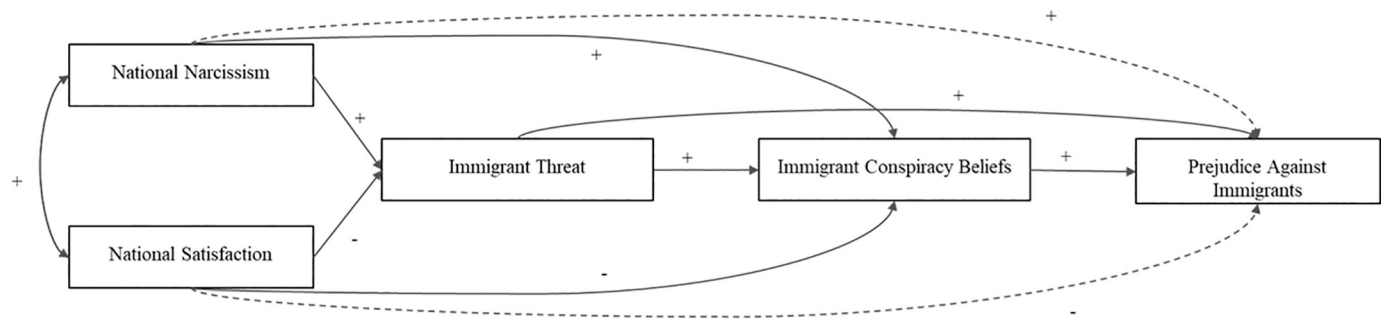
Fig. 1. The Model Tested Across Study 1.

Table 1

Correlations, Means, and Standard Deviations, Internal Reliability Coefficients and Pearson's correlation coefficients (Study 1).

	n	*Mean*	*SD*	*1.*	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*
1. National narcissism	1104	3.25	0.76	–						
2. Ingroup Satisfaction	1104	3.96	0.91	0.46***	–					
3. Immigrant threat	1099	3.36	1.27	0.40***	−0.02	–				
4. Immigrant conspiracy beliefs	1093	2.89	1.07	0.39***	−0.05	0.82***	–			
5. Collective action	1088	2.99	1.03	0.33***	−0.06	0.80***	0.71***	–		
6. Support for discriminatory policies	1098	3.53	1.11	0.40***	0.03	0.82***	0.71***	0.78***	–	
7. Attitudes against naturalisation	1076	2.72	1.29	0.21***	−0.08**	0.54***	0.48***	0.58***	0.57***	–
8. CMQ	1104	7.19	1.94	0.12***	−0.10**	0.36***	0.45***	0.28***	0.25***	0.16***

Note. All variables were measured using a 5-point scale, except for CMQ (11 points).

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

5.2. Results

Inter-scale correlations (see Table 1) showed positive relationships between national narcissism, immigrant conspiracy beliefs, perceptions of immigrant threat and the three types of prejudice against immigrants. In contrast, ingroup satisfaction was not related to immigrant conspiracy beliefs, collective actions, support for discriminatory policies, and was negatively related to perceptions of immigrant threat and attitudes toward naturalisation.

5.2.1. Test of the serial mediation models

Mediation analyses with manifest variables were run using the lavaan R package (Rosseel, 2012), with bias-corrected bootstrapping (1000 re-samples) of the indirect effect. We ran three serial mediation models with national narcissism and national satisfaction as predictors, perceptions of threat and immigrant conspiracy beliefs as serial mediators, and support for discriminatory policies (Fig. 2), collective action intentions (Fig. 3), and attitudes against naturalisation (Fig. 4), as outcome variables. We included conspiracy mentality as a covariate in all analyses to control for its potential overlap with national narcissism and conspiracy beliefs. Detailed results of these analyses, as well analyses without controlling for conspiracy mentality, can be found in the supplementary materials.

As can be seen from Figs. 2 to 4, similar patterns were observed for all three types of prejudice against immigrants. National narcissism (total effect) was positively related to collective action intentions, support for discriminatory policies, and attitudes against naturalisation, $\beta = 0.29$, 95% CI [0.22, 0.35], $z = 8.50$, $p < .001$. These effects were mediated by perceived intergroup threat and conspiracy beliefs about immigrants. Specifically, a higher level of national narcissism was linked to a greater perception of intergroup threat, as well as stronger beliefs in immigrant conspiracy theories. These two variables mediated the relationship between national narcissism and collective action intentions, as well as attitudes against naturalisation. When these indirect effects were taken into account, the direct effects were no longer significant, thus supporting H$_1$ and H$_3$. However, the direct effect of national narcissism on support for discriminatory policies remained significant although

weaker, thus not confirming H$_2$. Indirect effects only via threat, and, to a lesser extent, only via immigrant conspiracy beliefs, were also found.

By contrast, ingroup satisfaction (total effect) was negatively related to collective action intentions, $\beta = -0.22$, 95% CI [−0.28, −0.16], $z = -6.80$, $p < .001$, support for discriminatory policies, $\beta = -0.16$, 95% CI [−0.23, −0.10], $z = -4.62$, $p < .001$ and attitudes against naturalisation, $\beta = -0.20$, 95% CI [−0.27, −0.13], $z = -5.53$, $p < .001$. Indirect effects through threat and immigrant conspiracy beliefs mediated the relationship between ingroup satisfaction and discriminatory policies, thus confirming H$_5$. However, although indirect effects of ingroup satisfaction on collective actions and attitudes against naturalisation through the mediating variables were present, the direct effects were also significant, thus not confirming H$_4$ and H$_6$. Note that the relationship between ingroup satisfaction and the three types of prejudice against immigrants was also mediated by threat alone and by conspiracy beliefs alone.

5.3. Discussion

Based on a sample representative of the French population, findings of Study 1 replicated into a unified model previous isolated findings about the role of defensive group beliefs in the narcissistic identification-prejudice link. First, it highlighted the importance of differentiating types of ingroup positivity in investigating relationships to different kinds of prejudice against immigrants, be it for collective action intentions or support for anti-immigrant policies. Similar to previous studies (Dyduch-Hazar, Mrozinski, & Golec de Zavala, 2019), national narcissism was positively related to prejudice while ingroup satisfaction was negatively related. Also congruent with previous studies are our findings that defensive group beliefs, operationalized as perceived intergroup threat and conspiracy beliefs about immigrants, are relevant as mediating variables of the identification-prejudice link (Swami et al., 2018; Uenal, 2016). While these previous studies did not account for defensive national identification, our results suggest that national narcissism, but not secure national identification, is associated with these defensive group beliefs.

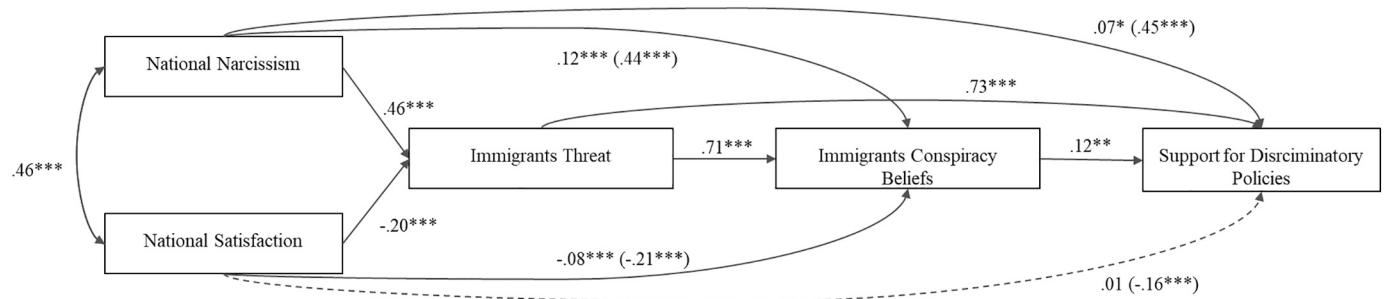It is important to note that conspiracy beliefs were significantly

Fig. 2. The mediating Role of Intergroup Threat and Conspiracy Beliefs about Immigrants in the Relationship Between Types of ingroup positivity and Support for Discriminatory Policies (Study 1).
Note. Coefficients placed within parentheses are total effects. Coefficients presented are standardised coefficients. Indirect effects (Abbreviations for Figures 2-4: NN = National Narcissism, NS = National Satisfaction, IT = Immigrants Threat, ICB = Immigrant Conspiracy Beliefs, Discr = Support for Discriminatory Policies, CA = Collective Actions Intentions, AN = Attitudes Against Naturalisation) : NN - > IT - > Discr: $\beta = 0.33$, $p < .001$, 95% CI [0.28, 0.39]; NN - > ICB - > Discr: $\beta = 0.01$, $p = .005$, 95% CI [0.004, 0.02]; NN - > IT - > ICB - > Discr: $\beta = 0.04$, $p = .001$, 95% CI [0.02, 0.06]; NS - > IT - > Discr: $\beta = -0.15$, $p < .001$, 95% CI [−0.20–0.10]; NS - > ICB - > Discr: $\beta = -0.01$, $p = .011$, 95% CI [−0.016, −0.002]; NS - > IT - > ICB - > Discr: $\beta = -0.02$, $p = .004$, 95% CI [−0.03, −0.01]. *$p < .05$ **$p < .01$ ***$p < .001$.
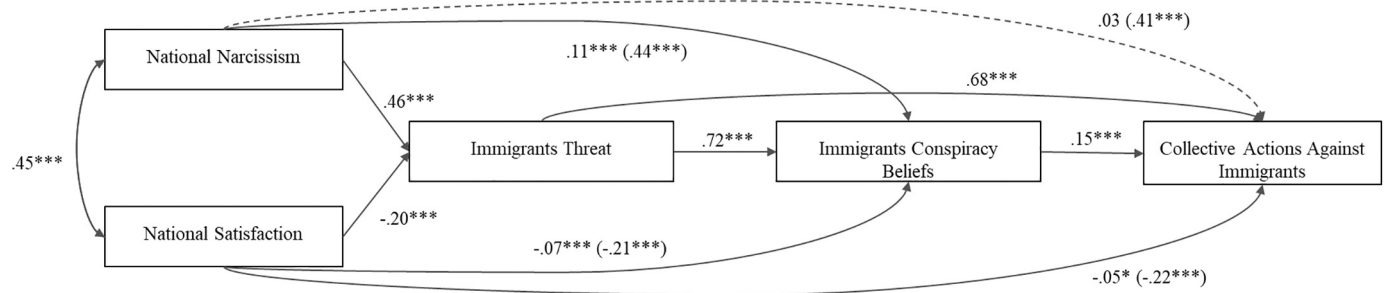

Fig. 3. The mediating Role of Intergroup Threat and Conspiracy Beliefs about Immigrants in the Relationship Between Types of ingroup positivity and Collective Actions Intentions (Study 1).
Note. Coefficients placed within parentheses are total effects. Coefficients presented are standardised coefficients. Indirect effects: NN - > IT - > CA: $\beta = 0.31$, $p < .001$, 95% CI [0.26, 0.36], NN - > ICB - > CA: $\beta = 0.02$, $p = .001$, 95% CI [0.01, 0.03], NN - > IT - > ICB - > CA: $\beta = 0.05$, $p < .001$, 95% CI [0.03, 0.08], NS - > IT - > CA: $\beta = -0.14$, $p < .001$, 95% CI [−0.18, −0.09], NS - > ICB - > CA: $\beta = -0.01$, $p = .007$, 95% CI [−0.02, −0.003], NS - > IT - > ICB - > CA: $\beta = -0.02$, $p = .001$, 95% CI [−0.03, −0.01]. *$p < .05$ **$p < .01$ ***$p < .001$.
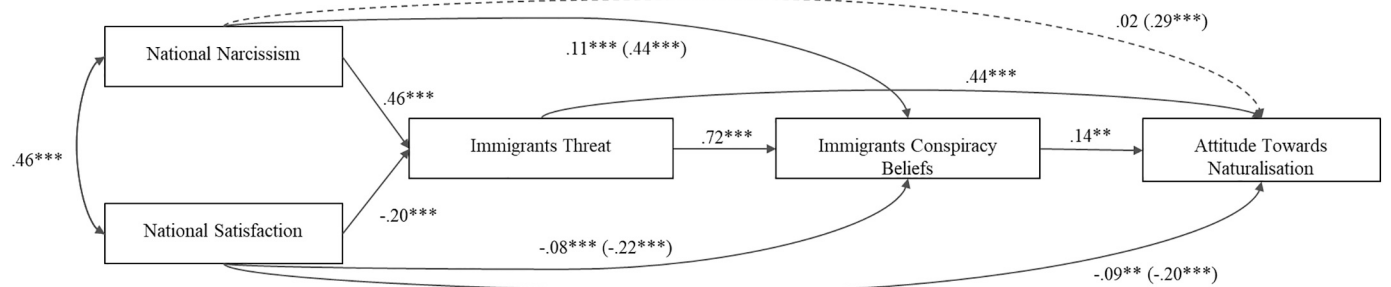

Fig. 4. The mediating Role of Intergroup Threat and Conspiracy Beliefs about Immigrants in the Relationship Between Types of ingroup positivity and Attitudes Against Naturalisation (Study 1).
Note. Coefficients placed within parentheses are total effects. Coefficients presented are standardised coefficients. Indirect effects: NN - > IT - > AN: $\beta = 0.20$, $p < .001$, 95% CI [0.15, 0.26], NN - > ICB - > AN: $\beta = 0.01$, $p = .015$, 95% CI [0.003, 0.03], NN - > IT - > ICB - > AN: $\beta = 0.05$, $p = .011$, 95% CI [0.01, 0.08], NS - > IT - > AN: $\beta = -0.09$, $p < .001$, 95% CI [−0.12, −0.05], NS - > ICB - > AN: $\beta = -0.01$, $p = .029$, 95% CI [−0.02, −0.001], NS - > IT - > ICB - > AN: $\beta = -0.02$, $p = .019$, 95% CI [−0.04, −0.003]. **$p < .01$ ***$p < .001$.

related to prejudice even when accounting for conspiracy mentality, in line with the view of conspiracy beliefs as context-dependent when motivated at an intergroup level (Sternisko, Cichocka, Cislak, & Van Bavel, 2020). Overall, we integrated these past results into a comprehensive cross-sectional model showing the role of defensive group beliefs in the narcissistic identification-prejudice link. However, because very few of these paths have been experimentally investigated, we

cannot infer causality. Thus, in Studies 2 and 3, we experimentally tested this model using factorial designs. Specifically, in Study 2 we experimentally tested the causal relationship between intergroup threat and conspiracy beliefs, and the effect of these two defensive group beliefs on prejudice against immigrants.

6. Study 2

In Study 2, we aimed to test the causal path between perceived intergroup threat about immigrants, conspiracy beliefs about immigrants, and prejudice against immigrants. Past results have shown that inducing intergroup threat increases conspiracy beliefs (Cichocka et al., 2016, Study 2; Mashuri & Zaduqisti, 2015), as well as outgroup prejudice (Shepherd et al., 2018). Other research also showed that exposure to conspiracy theories about immigrants increased prejudice toward this group (Jolley et al., 2020). However, these causal paths have never been tested together, nor in the context of immigrant issues. Thus, we tested these paths using a factorial between-subjects design.

We hypothesized that compared to the no threat (control) condition, inducing perceived intergroup threat would increase conspiracy beliefs (H$_1$) and prejudice against immigrants using the variables from Study 1 (collective actions, H$_2$; support for discriminatory policies, H$_3$; attitudes against naturalisation, H$_4$). We also hypothesized that compared to the no conspiracy (control) condition, exposure to conspiracy theories about immigrants would increase prejudice against immigrants (collective actions, H$_5$; support for discriminatory policies, H$_6$; attitudes against naturalisation, H$_7$). We also test the alternative hypothesis of an interaction effect between intergroup threat and conspiracy beliefs, i.e., that conspiracy exposure would interact with and amplify the effects of intergroup threat on prejudice against immigrants (collective actions, H$_8$; support for discriminatory policies, H$_9$; attitudes against naturalisation, H$_{10}$).

Hypotheses were pre-registered on the OSF: https://osf.io/8c4v5/?view_only=b934acc751ea410099d68080889176ff.

6.1. Method

6.1.1. Participants

We conducted a power analysis using G*Power (Faul et al., 2007) to estimate the minimum sample size we would need to detect the smallest effect sizes reported by Jolley et al, (2020, Study 1) and Shepherd et al. (2018, Study 2), on which our experimental manipulations were based. We computed a medium effect size of $\eta^2_p = 0.06$ ($r = 0.24$), with a statistical power of 0.80, and an alpha level of 0.05 for an ANOVA with four groups, which gave us $N = 128$ as the requirement for a factorial design. Following the guidelines in a blogpost by Simonsohn (2014) and Giner-Sorolla (2018) to multiply the required sample size by 4 to detect an interaction, we planned to recruit 512 participants.

Participants were recruited online using *Foule Factory*, a French survey platform, and were paid €1.10 for their participation. Overall, 529 participants answered the survey. One participant was excluded for not providing consent, one for not being French, and 12 for failing the attention check, giving a final sample of 515 participants. Congruent with our pre-registration, we applied the Median Absolute Deviation method (MAD; Leys, Ley, Klein, Bernard, & Licata, 2013) to exclude participants with doubtful completion times.[3] From this criterion, we excluded 41 participants and our analyses were based on the 474 remaining (227 women, 3 others, $M_{age} = 40.6$, $SD = 13.3$, $min = 18$, max $= 79$). Thus, our actual sample is slightly underpowered compared to what was expected with the G*power analysis and Giner-Sorolla's (2018) rule of thumb, but still allows us to detect a similar medium effect size ($r = 0.25$).

6.1.2. Experimental procedure

The survey was presented as two independent parts, with the experimental inductions depicted as information-seeking tasks and measured variables presented as questions about various societal issues.

First of all, participants completed the identification and national narcissism measures. Then, they were randomly assigned to either the intergroup threat or the no threat (control) condition. We adapted the intergroup threat induction from Shepherd et al. (2018, Study 2, see the supplementary materials for the French and English versions of the adapted texts). In both conditions, people were asked to read a short article about the current and future situation regarding immigration in France according to demographic studies. In the no-threat condition, the percentage of immigrants in France was predicted to remain more or less the same in 40 years' time, French people thus remaining the majority (10.6% immigrants, 89.4% French). In the intergroup threat condition, the percentage of immigrants in France was predicted to increase dramatically and become the new majority in 40 years' time (51.8% of immigrants, 48.2% of French). Participants had to answer two questions to ensure they read the text. Then, participants were randomly assigned to a conspiracy vs. no-conspiracy (control) condition. We adapted the conspiracy theories about immigrant induction developed by Jolley et al. (2020, Study 1; see the supplementary materials). In the conspiracy condition, people read a text highlighting the involvement of immigrants in terrorist actions in other countries, calling into question the role of immigrants in France. Then, they answered a question to ensure they read the text and completed the immigrant conspiracy beliefs scale as a manipulation check. In the no-conspiracy condition, participants did not read anything about conspiracies, only completing the immigrant conspiracy beliefs scale. Then, they completed the measures of collective action intentions, support for discriminatory policies, attitudes against naturalisation of immigrants, perceived threat (manipulation check for the threat/no-threat condition), and socio-demographic information. Finally, participants were thanked and fully debriefed.

6.1.3. Measures

Unless otherwise mentioned, participants responded to all scales using a 5-point scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Means, standard deviations, and internal reliability coefficients are displayed in Table 2.

Most of the variables used in Study 2 were measured with the same items and scales as for Study 1, namely ingroup satisfaction ($\alpha = 0.91$), threat ($\alpha = 0.95$), immigrant conspiracy beliefs ($\alpha = 0.93$), collective action against immigrants ($\alpha = 0.87$), support for discriminatory policies ($\alpha = 0.91$), attitudes against naturalisation. Due to length restriction, we measured national narcissism with the short 5-item version of the Collective Narcissism scale (Golec de Zavala et al., 2009) in its French adaptation (Bertin, Nera, et al., 2021; $\alpha = 0.88$).[4]

6.2. Results

Inter-scale correlations are displayed in Table 2. For all following analyses, conditions were coded as follows: threat $= +1$, no threat $= -1$, conspiracy $= +1$, no conspiracy $= -1$. The means and standard deviations reported are the estimated marginal means and the associated standard deviation.

6.2.1. Manipulation checks

We first tested whether our experimental manipulations worked by conducting two-ways ANOVAs with the two experimental manipulations. The level of perceived intergroup threat was significantly higher in the threat condition (estimated $M = 2.78$, $SD = 0.08$), than in the no threat condition (estimated $M = 2.39$, $SD = 0.08$), $F(1,470) = 12.85$, $p < .001$, $\eta^2_p = 0.03$, and the level of immigrant conspiracy beliefs was significantly higher in the conspiracy (estimated $M = 2.38$, $SD = 0.06$) than in the no conspiracy condition (estimated $M = 2.14$, $SD = 0.06$), $F(1,470) = 7.32$, $p = .007$, $\eta^2_p = 0.02$. Thus, according to our

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[3] The median was 616 s and the MAD was 169 s. Because we chose a conservative 3MAD criterion, we excluded participants answering below 109 s or above 1123 s.

[4] All measures (except education and political orientation), manipulations and exclusions are disclosed here.

Table 2

Correlations, Means, and Standard Deviations, Internal Reliability Coefficients and Pearson's correlation coefficients (Study 2).

	Mean	*SD*	*1.*	*2.*	*3.*	*4.*	*5.*	*6.*
1. National narcissism	3.01	0.84	–					
2. Ingroup Satisfaction	3.92	0.79	0.52***	–				
3. Immigrant threat	2.59	1.20	0.44***	0.09*	–			
4. Immigrant conspiracy beliefs	2.26	0.96	0.43***	0.03	0.83***	–		
5. Collective action	2.48	0.71	0.42***	0.08+	0.82***	0.77***	–	
6. Support for discriminatory policies	3.05	1.25	0.45***	0.16***	0.82***	0.75***	0.74***	–
7. Attitudes against naturalisation	3.45	1.21	0.23***	0.05	0.55***	0.47***	0.54***	0.60***

Note. $N = 474$. All variables were measured using a 5-point Likert scale.
$+p < .10$ $*p < .05$ $**p < .01$ $***p < .001$.

manipulation checks, both the intergroup threat and the conspiracy theory inductions were successful.

6.2.2. Causal effects of intergroup threat and exposure to conspiracy theories

The primary goals of Study 2 were to experimentally test the effects of intergroup threat on both immigrant conspiracy beliefs and prejudice against immigrants (i.e., collective action intentions, support for discriminatory policies, and attitudes against naturalisation), and the effect of exposure to conspiracy theories on prejudice. We also aimed to test the interaction effect between intergroup threat and exposure to conspiracy theories on prejudice. Hence, for each type of prejudice, we ran an ANOVA with the two conditions and their interaction.

Switching from a confirmatory to an exploratory approach, we aimed to corroborate the mediating role of intergroup threat and conspiracy beliefs proposed in Study 1. We did so by testing whether the causal effects of intergroup threat and exposure to conspiracy theories on prejudice remained when controlling for types of ingroup positivity (i.e., collective narcissism and ingroup satisfaction). We also explored whether the relationship between the experimental conditions and prejudice might be moderated by these types of ingroup positivity. Hence, we ran multiple regressions including the experimental conditions, their interaction and the types of ingroup positivity, as well as the interactions between the experimental conditions and each type of ingroup positivity.

6.2.2.1. Effect of intergroup threat on immigrant conspiracy beliefs.
The two-way ANOVA (threat manipulation: threat vs. no threat, and conspiracy manipulation: conspiracy vs. no conspiracy) showed that conspiracy beliefs were significantly higher in the threat (estimated $M = 2.35$, $SD = 0.06$), than in the no threat condition (estimated $M = 2.17$, $SD = 0.06$), $F(1,470) = 4.53$, $p = .034$, $\eta^2_p = 0.01$. Thus, inducing intergroup threat about immigrants causally increased conspiracy beliefs about this outgroup, confirming H1.

The exploratory multiple regression analyses including both types of ingroup positivity and their interactions with the experimental conditions revealed that when controlling for both types of ingroup positivity, the effect of intergroup threat on conspiracy beliefs was no longer significant, $\beta = 0.07$, $t = 1.71$, $p = .088$, $\eta^2_p = 0.01$. No interaction effect was observed between the conditions and both types of ingroup positivity, all $|\beta s| < 1.52$, $ps > 0.130$.

6.2.2.2. Effects of intergroup threat and exposure to conspiracy theories on prejudice against immigrants.
We hypothesized that inducing intergroup threat on the one hand, and conspiracy theories on the other hand, would lead to increased collective action intentions, support for discriminatory policies, and attitudes against naturalisation.

6.2.2.3. Effect of intergroup threat on prejudice.
ANOVAs revealed that collective action intentions against immigrants were significantly higher in the threat (estimated $M = 2.82$, $SD = 0.06$), than in the no threat

condition (estimated $M = 2.57$, $SD = 0.06$), $F(1,470) = 7.68$, $p = .006$, $\eta^2_p = 0.02$, confirming H2. This effect remained when controlling for both types of ingroup positivity and their interaction with conditions, $\beta = 0.10$, $t = 2.55$, $p = .011$, $\eta^2_p = 0.01$. However, the threat manipulation had no effect on support for discriminatory policies, $F(1,470) = 3.41$, $p = .065$, $\eta^2_p = 0.01$ (in the multiple regression model: $\beta = 0.07$, $t = 1.59$, $p = .112$, $\eta^2_p = 0.01$), contrary to H3. The threat manipulation also had no effect on attitudes against naturalisation, $F(1,470) = 0.06$, $p = .803$, $\eta^2_p < 0.001$ (in the multiple regression model: $\beta = 0.00$, $t = -0.01$, $p = .996$, $\eta^2_p < 0.001$), contrary to H4. There were no interaction effects between the threat manipulation and both types of ingroup positivity on any of the outcomes, all $|\beta s| < 0.10$, $ps > 0.050$.

6.2.2.4. Effect of exposure to conspiracy theories on prejudice.
Similar to the effect of threat, participants reported significantly higher willingness to engage in collective actions against immigrants in the conspiracy (estimated $M = 2.81$, $SD = 0.06$), than in the no conspiracy condition (estimated $M = 2.58$, $SD = 0.06$), $F(1,470) = 7.32$, $p = .007$, $\eta^2_p = 0.02$, thus supporting H5. This effect remained significant in the multiple regression model, $\beta = 0.12$, $t = 3.02$, $p = .003$, $\eta^2_p = 0.02$. However, the conspiracy manipulation did not impact support for discriminatory policies, $F(1,470) = 2.48$, $p = .116$, $\eta^2_p = 0.01$ (in the multiple regression model: $\beta = 0.07$, $t = 1.77$, $p = .077$, $\eta^2_p = 0.01$.), nor attitudes against naturalisation, $F(1,470) = 1.77$, $p = .184$, $\eta^2_p = 0.004$ (in the multiple regression model: $\beta = 0.06$, $t = 1.27$, $p = .205$, $\eta^2_p = 0.003$), contrary to both H6 and H7. There were no interaction effects between the conspiracy manipulation and both types of ingroup positivity, all $|\beta s| < 0.06$, $ps > 0.225$.

6.2.2.5. Interaction effect between threat and conspiracy exposure on prejudice.
We found no interaction effect between threat and conspiracy exposure on the outcomes in the ANOVA analyses, all $Fs(1470) < 0.92$, $p > .339$, $\eta^2_p < 0.003$, or in the multiple regression models, all $|\beta s| < 0.08$, $ps > 0.077$, contrary to H8, H9, and H10. Similarly, no interaction effects between the two manipulations and both types of ingroup positivity were observed, all $|\beta s| < 0.08$, $ps > 0.133$.

6.3. Discussion

In Study 2, we aimed to test the causal relationship between perceived intergroup threat, conspiracy beliefs, and prejudice against immigrants using a factorial experimental design. We observed that experimentally induced intergroup threat about immigrants increased conspiracy beliefs about immigrants, causally confirming previous cross-sectional results (Cichocka et al., 2016, Study 2). However, this relationship was no longer significant when controlling for both types of ingroup positivity (i.e., national narcissism and ingroup satisfaction). This lack of robustness might be due to a lack of statistical power.

We also observed that both induced threat and exposure to conspiracy theories increased collective action intentions against immigrants separately, experimentally validating previous cross-sectional

results (Hasbún López et al., 2019). Furthermore, the effect of intergroup threat and exposure to conspiracy theories remained significant when controlling for both types of ingroup positivity, in line with the mediation model proposed in Study 1. However, these experimentally induced defensive group beliefs did not impact all forms of prejudice against immigrants, contrary to our hypotheses about support for discriminatory policies and attitudes against naturalisation. Drawing on this null effect with great caution (i.e., Harms & Lakens, 2018), we might speculate that defensive group beliefs are more strongly directed toward concrete collective action, rather than abstract anti-immigrant policies. This would be in line with previous studies suggesting that conspiracy beliefs are used to justify violent collective actions (Chayinska & Minescu, 2018; see also Jolley & Paterson, 2020; Jolley, Douglas, Leite, & Schrader, 2019).

Lastly, Study 2 provides clarification for the serial effect of perceived threat and conspiracy beliefs, as no interaction effect was found between the two, nor with either type of ingroup positivity. Apart from methodological issues (e.g., lack of statistical power), we might hypothesize that if perceived intergroup threat causes conspiracy beliefs, this process might be a "transfer" of animosity from one form of defensive group belief to one another, without further interaction. As such, perceiving an intergroup threat from immigrants might be more of a proximal defense (i.e, anxiety reaction), and derived conspiracy beliefs might be more action-oriented reactions (Jonas et al., 2014; Jutzi et al., 2020). In sum, our findings highlight that perceived intergroup threats causally increase conspiracy beliefs, and that these two defensive group beliefs have a similar impact on increasing collective action intentions, but not policy-related forms of prejudice, without an interaction.

The interplay between defensive group beliefs and their consequences on prejudice at the intergroup level highlighted in Study 2 might be especially pronounced when national narcissism is made salient to compensate for low personal control. We thus conducted another experiment in which we successively manipulated personal control and national narcissism salience to test whether this group-level compensation process increases defensive group beliefs.

7. Study 3

In Study 3, our goal was to investigate whether defensive group beliefs would be more pronounced when national narcissism is salient to compensate for low personal control. Previous findings indicated that low personal control increases defensive identification (Goode et al., 2017), and differentially affects the links between national ingroup positivity and outgroup hostility (Cichocka et al., 2018; Marchlewska, Cichocka, Panayiotou, Castellanos, & Batayneh, 2018), in line with the group-based control model (Fritsche et al., 2011, 2013; Hirsch et al., 2021). Furthermore, low personal control has also been reported to increase belief in specific conspiracy theories (Stojanov & Halberstadt, 2020).

Extending from this previous literature, in Study 3 we examined whether inducing low personal control, and then making national narcissism salient to trigger group-level control, would increase defensive group beliefs about immigrants. Given the significant findings of Study 1 and 2, we also included intentions for collective action against immigrants as a measure of prejudice against immigrants, to check whether it was directly affected by our manipulations.

Our hypotheses relied on interaction effects between low personal control and national narcissism salience (i.e., group-level control compensation). We expected this interaction to increase perceived intergroup threat about immigrants (H_1), conspiracy beliefs about immigrants (H_2), and collective action intentions (H_3).

Hypotheses were pre-registered: https://osf.io/d9yce/?view_only=1e959a4e48f14978aec254f5f9cc956f

7.1. Method

7.1.1. Participants

Similar to Study 2, we conducted a power analysis to determine our required sample size based on previous effects reported in the literature. Cichocka et al. (2018, Study 2), from which our experimental design is inspired, reported a medium effect size of $\eta^2_p = 0.06$ ($r = 0.24$). Thus, we would have needed the same number of participants as in Study 2 ($N = 512$), for a 2×2 factorial design given a statistical power of 0.80, an alpha level of 0.05, and following Giner-Sorolla's (2018) rule of thumb to multiply the estimated sample size by 4 to have sufficient power to detect a knock-out interaction effect. However, due to restricted resources, we were not able to collect as many participants. We thus conducted an effect-size sensitivity analysis (Giner-Sorolla et al., 2019) to determine which effect size we could detect given our resources. A sample size of $N = 90$ for the same above-mentioned statistical parameters allowed us to detect a medium effect size of $r = 0.29$. We estimated this effect size to be close enough to Cichocka et al.'s (2018) to justify conducting the study. We multiplied this estimated sample size by 4, which gives 360 participants, so we aimed to recruit 400 participants, anticipating exclusions.

As in Study 2, participants were recruited using *Foule Factory*, and paid €1. In total, 414 participants answered the survey, from which we excluded 14 participants for failing the attention check and 3 participants who reported a nationality other than French. In line with our pre-registration, we then applied the MAD method (Leys et al., 2013) to exclude participants with unrealistic completion times.[5] From this criterion we excluded 47 participants, and the final sample was composed of 350 participants (167 women, 1 other, $M_{age} = 38.8$, $SD = 11.7$, $min = 18$, max = 74). This sample size would allow us to detect a similar medium effect size to the one that was pre-registered ($d = 0.60$, $r = 0.29$).

7.1.2. Experimental procedure

The survey was presented as three independent studies, with the personal control manipulation depicted as a memory task, the national narcissism induction presented as an information-seeking task, and the measured variables presented as questions about various societal issues. The personal control induction was adapted from Whitson and Galinsky (2008, Study 4), which has been recently used by Cichocka et al. (2018, Study 2) and van Elk et al. (2018, Study 1). It consists of a biographical recall task designed to increase low personal control while holding the valence of the event similar to the one recalled in the control condition. Participants were asked to write a short paragraph (around 50 words) about a threatening event that happened in their lives over which they had control (high control condition) or not (low control condition). Following this first part was the manipulation of national narcissism salience. As far as we know, and despite indirect experimental manipulations (e.g., Marchlewska et al., 2018, Study 2), national narcissism (and broadly speaking, collective narcissism), has never been successfully directly manipulated. We thus designed a new experimental paradigm consisting of a text-reading task depicting fictional poll results about domains for which French people find France to be not sufficiently recognized by other countries. These fake results indicated that French people on average believed that freedom of speech is the most unfairly criticized facet of France, and that recent international actualities corroborate this feeling, with denigration coming from several countries. Participants in the control conditions were presented a neutral text about amphibians, intended to not alter group-level salience. Participants in both conditions then answered questions to indicate that they properly read the texts (see Supplementary materials for the French and

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[5] The median was 765 s and the MAD was 232 s. Based on a conservative 3MAD criterion, we excluded participants answering below 69 s or above 1461 s.

English versions of both conditions). Lastly, participants answered the measured variables in the following order: perceived intergroup threat from immigrants, immigrant conspiracy beliefs, collective action intentions, ingroup satisfaction, national narcissism (manipulation check), personal control items (manipulation check), and demographics. Finally, participants were thanked and fully debriefed.

7.1.3. Measures

Unless otherwise mentioned, participants responded to all scales using a 5-point scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Means, standard deviations, and internal reliability coefficients are displayed in Table 3.

Most of the variables used in Study 3 were measured with the same items and scales as Study 2, namely national narcissism ($\alpha = 0.88$), ingroup satisfaction ($\alpha = 0.92$), perceived intergroup threat from immigrants ($\alpha = 0.95$), immigrant conspiracy beliefs ($\alpha = 0.93$), and collective action intentions ($\alpha = 0.87$). We also measured personal control to check whether our personal control manipulation worked. We used 3 items from van Elk et al. (2018) tapping into personal control: situational personal control (used as the manipulation check; "How much control did you experience in the situation you just described?"), valence of the situation ("How upsetting was the situation you just described?"), and control in life ("To what extent do you believe that you are the one who is in control of your life?"), measured on a slider scale from 0 to 100.[6]

7.2. Results

Inter-scale correlations are displayed in Table 3. For all following analyses, conditions were coded as follows: high personal control $= -1$, low personal control $= +1$, national narcissism $= +1$, neutral (no national narcissism) $= -1$. The means and standard deviations reported are the estimated marginal means and their associated standard deviations.

7.2.1. Manipulation checks

First, we checked whether our intended manipulations were detected by our manipulation checks. The levels of situational personal control, $F(1, 346) = 278.32, p < .001, \eta^2_p = 0.45$, and of control in life, $F(1, 346) = 4.68, p = .031, \eta^2_p = 0.01$, were significantly lower in the low personal control condition than in the control condition (Table 4). No difference between the two conditions has been observed on the valence of the situation, $F(1, 346) = 0.07, p = .795, \eta^2_p < 0.001$. This is unsurprising given that this experimental manipulation is intended to hold valence constant between conditions.

The level of national narcissism was significantly higher in the national narcissism salience condition (estimated $M = 3.16$, SD $= 0.07$) than in the neutral condition (estimated $M = 2.86, SD = 0.06$), $F(1, 346) = 10.26, p = .001, \eta^2_p = 0.03$. Ingroup satisfaction was also significantly higher in the national narcissism salience condition (estimated $M = 4.13$, SD $= 0.07$) than in the neutral condition (estimated $M = 3.89$, SD $= 0.06$), $F(1, 346) = 7.16, p = .008, \eta^2_p = 0.02$. This result is not surprising given how ingroup positivity and national narcissism are positively correlated (Cichocka et al., 2018).

7.2.2. Causal effects of control and collective narcissism manipulations

We ran two-way ANOVAs (personal control manipulation: low control vs. high control, and collective narcissism manipulation: collective narcissism vs. neutral) on perceptions of threat, immigrant conspiracy beliefs, and collective actions, separately.

No effect of the personal control manipulation was observed on the outcome variables, all $Fs(1, 346) < 2.41, ps > 0.121, \eta^2_{ps} < 0.01$.

No effect of the manipulation of national narcissism salience or its interaction with the manipulation of control was observed, all $Fs(1, 346) < 2.40, p > .122, \eta^2_{ps} < 0.01$, contrary to $H_1, H_2,$ and H_3.

7.2.3. Exploratory analyses: national narcissism and ingroup satisfaction as continuous variables

Because our national narcissism manipulation was new and its effectiveness could only be measured based on the manipulation checks, we pre-registered the possibility to conduct exploratory analyses using national narcissism in its continuous form. Thus, we tested interaction effects between the personal control manipulation and the continuous measure of national narcissism on our outcome variables, controlling for ingroup satisfaction. We did so by conducting multiple regression analyses with the control manipulation, national narcissism (standardised score), and their interaction as predictors, controlling for ingroup satisfaction (standardised score).[7] We included threat, immigrant conspiracy beliefs, and collective action intentions as three separate dependent variables (see Table 5).

As shown in Table 5, the continuous measure of national narcissism had significant main effects, predicting higher perceptions of threat, immigrant conspiracy beliefs, and collective action intentions against immigrants. Interestingly, the interaction between the personal control manipulation and continuous national narcissism impacted immigrant conspiracy beliefs. Specifically, the effect of the personal control manipulation was significant for people high in national narcissism (+1 SD), predicting higher immigrant conspiracy beliefs in the low personal control (vs. high control) condition, $\beta = 0.18, t = 2.66, p = .008, \eta^2_p = 0.02$, but not among people low in collective narcissism (−1 SD), $\beta = -0.02, t = -0.22, p = .825, \eta^2_p < 0.001$. The link between national narcissism and immigrant conspiracy beliefs was significant in both conditions, albeit stronger in the low personal control condition, $\beta = 0.62, t = 9.08, p < .001, \eta^2_p = 0.19$, than in the high control condition, $\beta = 0.43, t = 5.86, p < .001, \eta^2_p = 0.09$ (Fig. 5).

7.3. Discussion

In Study 3, we successfully manipulated personal control and national narcissism salience, which for the latter is the first reported successful direct experimental manipulation as far as we know. However, contrary to what we expected, these experimental manipulations and their interactions did not impact intergroup threat and conspiracy beliefs about immigrants, nor did they impact collective action intentions. Despite this, we did find interaction effects between the personal control conditions and national narcissism in its continuous form on conspiracy beliefs about immigrants. This result extends previous literature on individuals' motivations to restore personal control through national narcissism (Cichocka et al., 2018; Marchlewska et al., 2020), and derogating immigrants (Hirsch et al., 2021), by suggesting that group-level control might influence intergroup conspiracy beliefs.

The lack of significant effects for our manipulations on outcome variables may be explained by two possible factors. First, we must acknowledge that this study was slightly underpowered due to resource constraints. A second possible explanation might be theoretical and based on the limit of cross-sectional findings previously reported in the literature. That is, national narcissism might not be directly related to perceived threat and conspiracy beliefs, or this relationship might be in the reverse direction. Next, we discuss in detail these points as well as implications for the literature about group-based control and consequences of defensive beliefs on prejudice against immigrants.

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[6] All measures (except education and political orientation), manipulations and exclusions are disclosed here.

[7] Analyses controlling for the interaction between ingroup satisfaction and control were also carried out. No effect of this interaction was observed, and its addition did not alter the results. These analyses are reported in the additional material.

Table 3

Correlations, Means, and Standard Deviations, Internal Reliability Coefficients and Pearson's correlation coefficients (Study 3).

	Mean	SD	1.	2.	3.	4.	5.	6.	7.
1. National narcissism	3.00	0.89	–						
2. Ingroup Satisfaction	4.00	0.84	0.46***	–					
3. Immigrant threat	2.52	1.22	0.40***	0.05	–				
4. Immigrant conspiracy beliefs	2.11	0.92	0.40***	−0.03	0.83***	–			
5. Collective action	2.66	0.99	0.39***	0.05	0.84***	0.73***	–		
6. Situational personal control	37.2	30.4	0.03	−0.01	−0.03	−0.01	−0.03	–	
7. Valence of the situation	67.6	28.7	0.06	−0.05	0.13*	0.17**	0.09	−0.12*	–
8. Control in life	66.4	21.9	0.08	0.08	−0.06	−0.08	−0.01	0.20***	−0.04

Note. $N = 350$. All variables were measured using a 5-point Likert scale, except for personal control items (100 points).

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

Table 4

Means, and Standard Deviations on Manipulation Checks Depending on Control Manipulation Condition (Study 3).

	Low Control estimated M (SD)	High Control estimated M (SD)
Situational personal control	17.68 (1.69)	58.32 (1.76)
Valence of the situation	68.00 (2.14)	67.20 (2.23)
Control in life	64.03 (1.62)	69.10 (1.69)

Table 5

Main Effects and Interactions Between Types of Ingroup Positivity and Control Manipulation on Intergroup Threat, Conspiracy Beliefs, and Collective Action Intentions (Study 3).

Predictor	β	t	p	95% CI	η^2_p
Threat					
Ingroup Satisfaction	−0.17	−3.09	0.002	[−0.27, −0.06]	0.03
Control	0.09	1.92	0.056	[−0.002, 0.19]	0.01
National Narcissism	0.48	8.84	0.000	[0.37, 0.59]	0.18
Control x National Narcissism	0.07	1.36	0.174	[−0.03, 0.16]	0.01
Immigrant Conspiracy Beliefs					
Ingroup Satisfaction	−0.28	−5.20	0.000	[−0.38, −0.17]	0.07
Control	0.08	1.72	0.086	[−0.01, 0.17]	0.01
National Narcissism	0.53	9.92	0.000	[0.42, 0.63]	0.22
Control x National Narcissism	0.10	2.03	0.043	[0.003, 0.19]	0.01
Collective Action Intentions					
Ingroup Satisfaction	−0.18	−3.24	0.001	[−0.28, −0.07]	0.03
Control	0.12	2.50	0.013	[0.03, 0.22]	0.02
National Narcissism	0.48	8.76	0.000	[0.37, 0.58]	0.18
Control x National Narcissism	0.06	1.33	0.185	[−0.03, 0.16]	0.01

Fig. 5. Interaction Between level of National Narcissism and Personal Control Manipulation on Conspiracy Beliefs about Immigrants (Study 3).

beliefs about immigrants separately, and sequentially, mediated the relationship between both types of ingroup positivity, and various prejudices against immigrants, even when controlling for conspiracy mentality. Then, we causally tested this model through two factorial experiments. In Study 2, we found supporting evidence for the causal impact of perceived intergroup threat on conspiracy beliefs about immigrants, as well as for the causal impact of these two variables on collective action intentions, but not on other forms of prejudice against immigrants. Interestingly, the effects of intergroup threat and exposure to conspiracy theories on collective action intentions held even when controlling for both types of ingroup positivity, corroborating their mediating model proposed in Study 1. However, we found no supporting evidence for the alternative hypothesis of an interaction between intergroup threat and exposure to conspiracy theories on the prejudice variables, suggesting that their effects are comparable but not cumulative. In Study 3, we successfully manipulated personal control and national narcissism salience, but these manipulations did not increase defensive group beliefs. However, we did find an interaction effect between personal control and the measure of national narcissism on conspiracy beliefs.

The present contribution sheds new light on the identification-prejudice link. Firstly, it conceptually replicates previous research highlighting that only defensive, narcissistic (and not secure) national identification is related to prejudice against immigrants (Dyduch-Hazar, Mrozinski, & Golec de Zavala, 2019). In contrast, secure national identification (operationalized through ingroup satisfaction) was related to virtuous inclinations toward immigrants through decreased defensive group beliefs. Secondly, our results extend previous research on the detrimental role of defensive group beliefs on prejudice against immigrants. In line with Jolley et al. (2020, Study 1), we showed that

7.4. General discussion

Across three studies, we used the distinction between secure national identification and national narcissism to investigate the role of defensive group beliefs in the identification-prejudice link. We proposed that prejudice would occur as a consequence of two kinds of related but different defensive group beliefs: perceived intergroup threat and conspiracy beliefs, themselves arising as a result of defensively investing in the national group. Lastly, we propose that these defensive reactions might be especially prevalent when national narcissism is made salient under low personal control, acting as a group-level compensatory process. Study 1 provided cross-sectional evidence from a nationally representative sample. Perceived intergroup threat and conspiracy
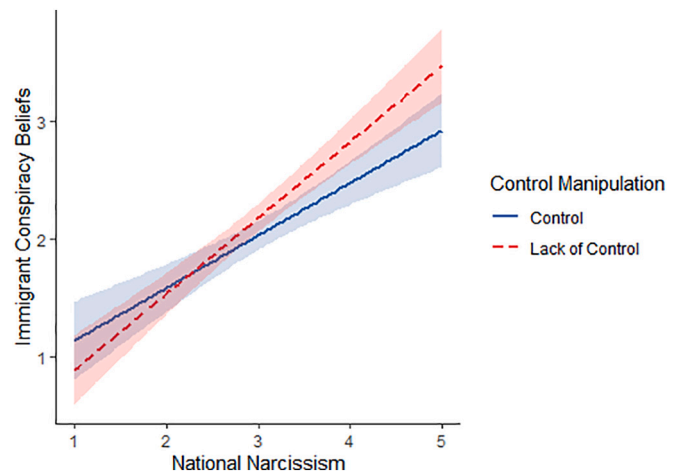
conspiracy beliefs about immigrants increased collective action intentions against this outgroup, and that this effect was similar to that of perceived intergroup threat about immigrants previously observed by Shepherd et al. (2018). Interestingly, the effects of perceived intergroup threat and conspiracy beliefs were both distinct and sequential at a cross-sectional level, and were not interacting when experimentally induced in succession. This might indicate that beyond the fact that conspiracy beliefs are a response to a perceived intergroup threat as observed in Study 2, both kinds of defensive group beliefs activate a state of hypersensitivity against the outgroup, increasing collective action intentions against this group. This propensity to react to perceived intergroup threat by blaming and accusing immigrants of conspiring, ultimately motivating prejudice, is congruent with recent research showing that people with a high level of collective narcissism adopt a biased viewpoint on the immoral actions of the ingroup to serve its interests (Bocian, Cichocka, & Wojciszke, 2020). Similar mechanisms could be at work in our studies: by relying on conspiracy beliefs as an "outlet for hostility" (Abalakina-Paap et al., 1999, cited by Krekó, 2015) to justify collective actions against immigrants perceived as threatening, people with a high level of national narcissism might protect the ingroup while allowing little questioning of their morality.

Furthermore, our findings contribute to the emerging literature about the intergroup perspective of conspiracy beliefs (Bertin & Delouvée, in press; Biddlestone et al., 2020; van Prooijen & van Lange, 2014), highlighting the importance of accounting for the impact of domain-specific, contextualized conspiracy theories at the intergroup level (Sternisko, Cichocka, Cislak, & Van Bavel, 2020). Indeed, in Study 1 we showed that the effects of immigrant conspiracy beliefs appear even when controlling for individuals' conspiracy mentality. This is of great importance because it suggests that actions to reduce these specific conspiracy beliefs might be achieved most effectively in a targeted way, without attempting to change the general mindset embedded in individuals. This is in line with recent findings pointing out the effect of low personal control on increasing only conspiracy beliefs that are context-relevant (i.e., "domain-specific" conspiracy beliefs; Stojanov, Bering, & Halberstadt, 2021, Stojanov, Halberstadt, Bering, & Kenig, 2021). Our findings suggest that restoring individuals' sense of control might help to diminish, although not completely neutralize, specific conspiracy beliefs targeting immigrants. This interpretation extends findings pointing out that reinforcing a personal sense of control can have beneficial effects in diminishing conspiracy beliefs to the intergroup level (Van Prooijen & Acker, 2015).

The interaction effect we observed between low personal control and the continuous measure of national narcissism on conspiracy beliefs extends previous findings on the consequences of group-based control (Fritsche et al., 2011; Fritsche et al., 2013; Goode et al., 2017), suggesting that conspiracy beliefs might be prevalent among national narcissists facing lack of personal control. Firstly, while Cichocka et al. (2018, Study 4) observed that individuals investing narcissistically in the ingroup following a lack of personal control expressed outgroup hostility, our results suggest that this hostility might be rooted in "collective motivated cognition" such as beliefs in outgroup conspiracies (Krekó, 2015, p. 64). Together with Study 2, our results suggest that conspiracy beliefs arise from high narcissistic identifiers lacking personal control, which as a consequence increases collective action intentions against immigrants. Interestingly, we did not find similar effects for other kinds of prejudice, namely, support for discriminatory policies and attitudes against naturalisation of immigrants. We speculate that these forms of prejudice are more abstract and politically rooted, and thus less reactive to perceived intergroup threat. On the contrary, collective action intentions tap into concrete group-level reactions to face the threatening outgroup. However, we failed to conceptually replicate previous evidence (Cichocka et al., 2018; Marchlewska et al., 2020) highlighting the effect of personal control on the relationship between national narcissism and outgroup hostility (here operationalized through collective action intentions). These null results might be due to

Study 3 lacking statistical power, which we will now discuss along with other limitations of our work.

7.5. Limitations and future research

First, as previously stated, Study 3 was quite underpowered compared to our a priori determined sample size and Study 2. This lack of statistical power calls for further replication to attest to the robustness of our findings using the continuous form of national narcissism. We also note that this continuous form of national narcissism was a manipulation check, so future research should measure it more distinctly from experimental manipulations. The lack of statistical power in Study 3 might also explain why we did not observe experimental effects of lack of personal control and national narcissism salience on our outcome variables. However, given the consequent size of the correlations between these variables reported in the literature and observed in Study 1, we may have expected to find an effect nevertheless. Thus, the relationship might be contingent upon a third variable, or it may be reversed. Indeed, Marchlewska et al. (2018, Study 2) reported that experimentally highlighting collective relative deprivation (which can be considered a form of threat to social identity) increased national narcissism. Guerra et al. (2020) also recently argued for intergroup threat to be a cause rather than a consequence of national narcissism, but their results are cross-sectional and thus do not allow for inference of causation. Also, our experimental manipulation of national narcissism increased both national narcissism and ingroup satisfaction, thereby potentially diminishing the effect of national narcissism salience on our outcome variables. Indeed, both types of ingroup positivity are correlated but have contradictory effects. Future research should attempt to only activate national narcissism, and clarify this causality question through an experimental research program.

We also must acknowledge potential cultural limitations of the present research. Indeed, our results are only based on French populations and one must be cautious when generalizing to other contexts. Recent media and political events in France, such as terrorist attacks and police violence against immigrants, might have influenced our findings. Thus, we also call for future replications in other contexts to strengthen the generalisability of our findings about the role of defensive group beliefs on the narcissistic identification-prejudice link. Future research might also want to test whether these findings extend to collective narcissism in other intergroup contexts, such as catholic narcissism, which has also been associated to be related to outgroup derogation through specific conspiracy beliefs (Marchlewska et al., 2019). In line with previous studies, we operationalized secure ingroup identification through Leach et al.' (2008) ingroup satisfaction subscale (Dyduch-Hazar, Mrozinski, & Golec de Zavala, 2019; Golec de Zavala et al., 2019). However, recent research suggests that accounting for the full self-investment dimension of Leach's scale together with national narcissism will provide more nuanced effects (Marchlewska et al., 2020), and thus future research would benefit from applying this distinction in further investigations of the identification-prejudice link. Last, we used the generic "immigrant" label, which is the most commonly used in French media. However, in their review, Esses (2021) pointed out that the level of prejudice against immigrants can depend on characteristics and specificities of the immigrant group. Thus, future research might want to add nuance to our findings by conceptually replicating them with different groups of immigrants.

8. Conclusion

Overall, the present contribution aimed at comprehensively examining the role of defensive group beliefs in the identification-prejudice link. We did so by showing that it is necessary to distinguish between types of ingroup positivity, with only national narcissism being related to prejudice through perceived threat and conspiracy beliefs about immigrants. This model held even when controlling for conspiracy

mentality, which corroborates the domain-specificity of conspiracy beliefs motivated at the group-level. We provided experimental evidence for the causal relationship between these mediating variables and collective action intentions against immigrants. Lastly, we find that the relationship between national narcissism and conspiracy beliefs was moderated by experimentally induced low personal control, extending previous research on the consequences of group-based control. Our research shed more light, in both cross-sectional and experimental ways, on the individual and collective processes involved in hostility against immigrants. At a time when migratory waves are intensifying, it is of utmost importance to understand the causes of these rejections in order to mitigate the deleterious consequences for intergroup harmony, for example, by debunking conspiracy theories about immigrants, or by minimizing individuals' feelings of control loss.

9. Open science statement

For all three studies, materials, data and analyses are openly available on the Open Science Framework repository of the project at the following link: https://osf.io/d9yce/?view_only=1e959a4e48f149 78aec254f5f9cc956f

Ethical statement

This research is in line with the 1964 Helsinki Declaration and its later amendments (2001), the ethical principles of the French Code of Ethics for Psychologists (2012), and the American Psychological Association Ethical Principles of Psychologists and Code of Conduct (2017). Participants were informed about the purpose of the studies in a cover letter and were assured that their data would remain confidential. Participants had to give explicit written consent to access the study.

Author note

Declaration of competing interest

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi. org/10.1016/j.jesp.2021.104252.

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