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By all means necessary: Closed mindedness, ingroup morality, and weapon ownership

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Abstract

This research investigated the motivational underpinnings of attitudes towards weapon ownership. We propose that people who have a strong need for closure (NFC) would be more likely to approve of weapon ownership, but that this relationship would be serially mediated by the endorsement of binding moral foundations and fear of immigrants. Specifically, heightened NFC would promote moral concerns for the safety of one's group (i.e., the binding foundations), which, in turn, would trigger fear of immigrants, or the belief that immigrants threaten one's society. In turn, fear of immigrants would generate the approval of defensive means (i.e., weapons). We tested this serial mediation model in three studies with Italian and US samples, where NFC was both measured (Studies 1 and 3; $N = 286$ and $N = 278$) and experimentally induced (Study 2; $N = 290$). The results supported the proposed model. These findings suggest that a high NFC might explain individuals' approval of weapon ownership through their moral priorities, which heighten their prejudice towards immigrants.

KEYWORDS
immigration, moral foundations, need for closure, threat, weapons

1 | INTRODUCTION

In various parts of the world, the debate surrounding ownership of defensive weapons is widespread and often tense. Beyond simply a political debate, ownership of weapons is also a social psychological phenomenon, wherein weapon ownership motivated by self-defence is predicted by perceived threats to oneself, both specific (i.e., personal assault) and diffuse (i.e., a dangerous world) (Stroebe et al., 2017). In the United States, over 30,000 deaths per year are gun related, many due to suicide, leading some to classify gun violence as a public health crisis (Bauchner et al., 2017). However, despite the heated political debate over weapons in the United States and elsewhere, there is relatively little psychological research on weapon ownership (Stroebe et al., 2017).

The need for self-defence, and on a societal level, the need for security, characterizes the debate surrounding weapon ownership in the United States and, recently, also in Italy, although mass shootings and weapon violence more generally have not been a major cause for concern in Italy. Historically, Italy has had very restrictive regulations for weapon ownership. Recently, however, the Italian parliament approved a law affirming the right to self-defence, which expanded the definition of legitimate use of weapons for defensive purposes. These legal changes occurred in an environment of increased perceived need for security among Italian citizens, ushered in by economic, health, political, and immigration crises.

Self-defence may be interpreted both as the use of weapons in response to a direct assault and as the need for weapons to protect oneself and one's ingroup from potential threats in a dangerous world (Stroebe et al., 2017). Perceived danger to one's ingroup is closely tied to group polarization, which has been rising over the past decades, and even more so during the COVID-19 pandemic (Woods et al., 2020). Indeed, violent extremist groups of differing ideologies have seized upon the pandemic for propaganda and recruitment, promoting the perception of outgroups (such as immigrants and refugees) as threatening (Esses et al., 2013; Kruglanski et al., 2020). An important question is what socio-psychological variables affect people's readiness to embrace the outgroup-denigrating propaganda and instigate the process that mediates their readiness to acquire weapons for self-defence purposes.

One such possible variable is individuals' need for cognitive closure. Specifically, individuals who are high on the need for closure (hereafter, NFC), are known to desire order and stability for their ingroup (Kruglanski et al., 2006). According to recent research (Baldner & Pierro, 2019a, 2019b; Baldner et al., 2020; Federico et al., 2016), high NFC individuals hold concern for the group and its maintenance, and are especially concerned about binding moral foundations; Graham et al., 2009). Unlike individualizing foundations (i.e., moral concerns for the well-being of individuals; Graham et al., 2009), binding moral foundations were generally found to promote more prejudicial attitudes towards immigrants (e.g., Koleva et al., 2012). In the light of these findings, it is plausible to assume that individuals with a high NFC will be prejudiced against immigrants and other members of outgroups, and their prejudicial attitudes will be mediated by support for binding moral foundations and will induce a positive attitude toward weapon ownership.

1.1 | Practical significance

Given the widespread and fraught debate surrounding weapon ownership, especially in the context of self-defence, this research can be of practical as well as theoretical significance. Past research has already shown that the NFC is associated with negative attitudes towards various outgroups (e.g., Baldner et al., 2019; Kruglanski, 2004). Our model suggests that the mere desire for stable and certain knowledge can eventually lead to a justification for weapon ownership. If this model is generally supported, it would be useful to account for NFC when debating changes to weapon regulations. For instance, those arguing against decreased regulation or for increased regulation could make efforts to assuage concerns about their epistemic uncertainty (see also Kruglanski et al., 2018a, 2018b, for an examination of how NFC would pursue certain and consistent knowledge). Subsequent research could test for possible moderators that could reduce the relationship between NFC and our mediators (e.g., binding moral foundations, fear of immigrants); this research could consequently lead to practical information of relevance to the weapons debate.

In summary, we propose a serial mediation model in which (a) NFC, both chronic and experimentally induced, would be associated with the endorsement of the binding foundations; (b) the endorsement of the binding foundations would increase the fear of immigrants based on threat perception; (c) this would, in turn, lead to a positive view of owning weapons for self-defence purposes.

1.2 | The present research

As noted above, previous work has suggested that individuals who pursue epistemic stability and certainty (i.e., those high in NFC; see also Roets et al., 2015) have concerns for their group's security and support binding moral foundations that incline them to be hostile toward salient outgroups such as immigrants (Baldner & Pierro, 2019a, 2019b; Baldner et al., 2020). In the present article, we extend this line of research by proposing that these individuals would also seek literally to defend themselves and their culture, from these outgroups. Specifically, we hypothesize that high NFC individuals will be: (a) more likely to endorse binding moral foundations, and therefore (b) fear immigrants assumed to pose danger to the ingroup, and therefore (c) be more likely to perceive weapon ownership as helpful and important.

To address these issues, we initially conducted two studies in Italy. Specifically, we tested a serial mediation model in which NFC was treated both as a chronic need measured via a scale (Study 1) and as an experimentally induced need (Study 2). We entered participants' gender, age and political orientation as covariates. We also entered their scores on the endorsement of the individualizing foundations to control for their effect in the model. To estimate the sample size needed to test our model, we used the Monte Carlo power analysis for indirect effects tool developed by Schoemann et al. (2017). Parameters were set to 1,000 replications and 20,000 Monte Carlo draws per replication. Assuming moderate effect sizes (all paths r = .30), a sample size of a minimum of 245 participants was suggested to obtain sufficient power of 0.80. Finally, we conducted a third study to investigate whether the model is generalizable to another culture (i.e., the United States). In Study 3 we also tested the mediating role of strength of attitudes towards weapon ownership. We conducted a third study with a sample of US residents, in order (1) to increase the generalizability of the tested model to another population of participants; (2) to exclude the possibility that general fear and negative emotions, potentially linked to a high need for certainty, could induce a stronger fear of immigrants; (3) to exclude the possibility that participants' possession or otherwise of weapons in and of itself could affect their reported attitudes towards weapons and (4) to test the mediating role of strength (importance) of attitudes towards weapon ownership. Accordingly, negative emotions, whether or not participants owned a weapon, were included as covariates. Furthermore, after conducting additional analyses in the previous studies on the relationship between NFC and extreme attitudes towards weapons, we measured another index of attitudes strength, that is, the "personal importance" (Wojcieszak, 2012) attached to the right to own a weapon. We also observed whether this importance would mediate the relationship between fear of immigrants and support for weapons. Finally, participants' perception that immigrants themselves owned weapons was added to the measure of fear of immigrants. All details of the present studies are reported below.

1.3 | Analytic strategy

For each of the three studies, Pearson correlation coefficients were used to examine associations between the study variables. The hypothesis of serial mediation, for each study, was tested according to Hayes' (2017) recommendations (model 6). In the serial mediation analysis, the variables presumed as causally prior were modelled as affecting all successive variables in the causal sequence. In Studies 1 and 2, we hypothesized a two-mediator model in which NFC, both as a chronic need (Study 1) and a situationally induced need (Study 2), was portrayed as affecting attitudes towards weapons through four pathways. One pathway was indirect and ran from NFC to attitudes towards weapons through the first mediator (i.e., NFC→binding moral foundations→attitudes towards weapons), a second indirect path ran through the second mediator (i.e., NFC→ fear of immigrants→attitudes towards weapons), and a third indirect influence passed through both mediators with the first affecting the second (i.e., NFC→binding moral foundations→fear of immigrants→attitudes towards weapons). The remaining effect of NFC was directly on the dependent variable (i.e., attitudes towards weapons) without passing through any mediator.

In Study 3, we hypothesized a three-mediator model in which NFC was depicted as affecting attitudes towards weapons through five pathways. One pathway was indirect and ran from NFC to attitudes towards weapons through the first mediator (i.e., NFC→binding moral foundations→attitudes towards weapons), a second indirect path ran through the second mediator (i.e., NFC→fear of immigrants plus perceived likelihood that immigrants own weapons→attitudes towards weapons), a third indirect path ran through the third mediator (i.e., NFC→perceived importance of weapon ownership→attitudes towards weapons), and a fourth indirect influence passed through all three mediators in series (i.e., NFC→binding moral foundations→fear of immigrants plus perceived likelihood that immigrants own weapons→perceived importance of weapon ownership→attitudes towards weapons). The remaining effect of NFC was directly on the dependent variable (i.e., attitudes towards weapons) without passing through the mediators. The significance of the mediating effects was ascertained using bootstrapping procedures with 5,000 samples, following recent recommendations (MacKinnon & Fairchild, 2009). Significant indirect effects were evaluated through the confidence interval; specifically, an effect is considered significant if the confidence interval does not include 0.

2 | STUDY 1

2.1 | Method

2.1.1 | Participants and procedure

We tested our hypothesis using a sample of 286 university students (213 females, 73 males, M_{age} = 23.03, SD_{age} = 4.56). A segment of the participants was recruited via Prolific Academic and received monetary compensation for participating, and another segment was recruited through social networks or university platforms for voluntary participation in the survey. Participants gave their informed consent to participate in the study. All study materials were presented in Italian. Participants completed an online questionnaire that included the measures described below.

Need for closure

Participants responded to the Italian version of the Revised Need for Closure Scale (RevNfCS; Pierro & Kruglanski, 2005), a brief 14-item self-report instrument designed to assess stable individual differences in NFC (e.g., "Any solution to a problem is better than remaining in a state of uncertainty"). Items were responded to on a six-point Likert scale from "1" (strongly disagree) to "6" (strongly agree). A composite NFC score was computed by averaging the responses to each item. The nomological validity and satisfactory reliability of the RevNfCS were demonstrated previously (Pierro & Kruglanski, 2005). In the present sample, the reliability of the RevNfCS was also satisfactory (Cronbach's $\alpha = .77$).

Individualizing and binding moral foundations

Participants completed the Italian version (Bobbio et al., 2011) of the 30-item Moral Foundations Questionnaire (MFQ-30; Graham et al., 2013), assessing participants' endorsement of individualizing foundations (with subfactors for harm/care, e.g., "Compassion for those who are suffering is the most crucial virtue" and fairness/reciprocity, e.g., "Justice is the most important requirement for a society") and binding foundations (with subfactors for ingroup/loyalty, e.g., "It is more important to be a team player than to express oneself"; authority/respect, e.g., "If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway because that is my duty", and purity/sanctity, for example, "Chastity is an important and valuable virtue"). The questionnaire has two parts. The first consists of 15 items that measure the perceived relevance of different considerations in deciding whether something is right or wrong. The participants answered these items using a six-point Likert scale ranging from "1" (Not at all relevant) to "6" (Extremely relevant). The second part consists of 15 items that measure their agreement with sentences about morality, to which participants responded through a six-point Likert scale ranging from "1" (Strongly disagree) to "6" (Strongly agree). In the present sample, internal reliability was satisfactory for both the individualizing (Cronbach's $\alpha = .73$) and binding (Cronbach's $\alpha = .87$) foundations scales.

Fear of immigrants

We administered five items from Paxton and Mughan (2006), which assess individual perceptions of the material threats posed by immigrants (i.e., "immigrants take jobs from Italians", "immigrants lower the quality of education in schools", "immigrants bring disease into the country", "immigrants raise taxes for Italians", "immigrants increase crime"). We have also included three items of other perceived threats from immigrants that natives may fear (Kosic, 2020, i.e., "Italy is a country invaded by immigrants"; "a multiethnic society could be fatal and destroy Italian culture", "I fear that immigrants can increase the likelihood of terrorism"). All items were responded on a seven-point Likert scale ranging from "1" (totally disagree) to "7" (totally agree). The total reliability was highly satisfactory (Cronbach's $\alpha = .92$).

Attitudes towards weapons

Participants' attitudes towards owning weapons (Cronbach's $\alpha = .94$) were assessed by six bipolar adjectives on a seven-point semantic differential scale, on which the participants rated their general attitude towards weapon ownership (e.g., "favourable–unfavourable"). High scores corresponded to favourable attitudes towards weapons ownership. Participants further responded to four items (Cronbach's $\alpha = .87$) that measured their approval on the self-defensive use of weapons (e.g., "The use of weapons in self-defence is not punishable") on a seven-point Likert scale ranging from "1" (totally disagree) to "7" (totally agree). High scores corresponded to favourable attitudes towards self-defensive use of weapons. The two sets of items revealed a high correlation ($r = .68$, $p < .001$) between them; we then averaged the items into a single index of attitudes towards weapons (Cronbach's $\alpha = .94$).

Demographics

Participants were asked to indicate their gender and age. Additionally, they indicated their political orientation with a single item responded to on a Likert scale from "1" (left wing) to "7" (right wing).

Attitude extremity

As mentioned above, people who are high on NFC generally "seize" and "freeze" on their position (Kruglanski & Webster, 1996), with the possible consequence of embracing more extreme positions. We were interested in observing whether NFC was related to more extreme positions, both regarding binding moral foundations and weapon ownership, regardless of valence (i.e., strong endorsement or opposition to binding moral foundations, and strong support or opposition to weapon ownership). To deal with this concern, we calculated scores of "attitude extremity" (Wojcieszak, 2012) for measures of binding moral foundations and attitudes towards weapon ownership and use by subtracting each participant's score from the neutral midpoint and considering the absolute value. Given the nature of our treatment of attitude extremity, participants with high NFC and very low valence (i.e., strong opposition to binding moral foundations and/or weapon ownership) have very high extremity, as did those with high NFC and high valence. Consequently, participants with high NFC and low valence would reduce the "valence correlation" whereas they would increase the "extremity correlation". However, given that NFC is generally positively correlated with the valence of these variables, in order to assess if the NFC is particularly associated with extremity, we would expect the extremity correlations to be of greater magnitude than the valence correlations, and in the same direction as those correlations, thus indicating that, although NFC is positively associated with both support for moral foundations and support for weapon ownership, it is even more strongly associated with extreme attitudes on these topics. Bivariate correlations between NFC scores and extremity towards both moral foundations and weapons are presented in the supplemental material and will be discussed briefly in the discussion section.

2.2 | Results and discussion

Descriptive statistics and correlations between variables are presented in Table 1. As expected, NFC was positively and significantly correlated with the endorsement of the binding (and not individualizing) foundations ($r = .315$, $p < .001$). There was also a positive and significant correlation between NFC and both fear of immigrants ($r = .271$, $p < .001$) and favourable attitudes toward weapons ($r = .249$, $p < .001$). The endorsement of the binding foundations was positively and significantly correlated with endorsement of individualizing foundations ($r = .198$, $p = .001$) and both fear of immigrants ($r = .444$, $p < .001$) and attitudes towards weapons ($r = .340$, $p < .001$). Fear of immigrants was positively and significantly correlated with attitudes towards weapons ($r = .467$, $p < .001$). The endorsement of the individualizing foundations was significantly negatively correlated with fear of immigrants ($r = -.156$, $p < .01$) and attitudes towards weapons ($r = -.161$, $p < .01$), and uncorrelated with NFC.

TABLE 1 Bivariate correlations and descriptive statistics, Study 1

		1	2	3	4	5	6	7	8	M (SD)
1.	Gender	–								–
2.	Age	−.003	–							23.03 (4.56)
3.	Political	−.021	−.218***	–						3.16 (1.32)
4.	IND	.244***	.062	−.215***	(.73)					4.86 (.56)
5.	NFC	.034	−.082	.247***	.037	(.77)				3.19 (.68)
6.	BIND	.135*	−.099	.386***	.198***	.315***	(.87)			3.48 (.76)
7.	Fear	−.068	−.158**	.546***	−.156**	.271***	.444***	(.92)		2.09 (1.18)
8.	Weapons	−.117*	−.184**	.483***	−.161**	.249***	.340***	.467***	(.94)	3.29 (1.34)

BIND, endorsement of the binding foundations; Fear, fear of immigrants; IND, endorsement of the individualizing foundations; NFC, need for closure; Political, political orientation (high scores indicate Right wing); Weapons, attitudes towards weapons. Gender (0 = male; 1 = female). $^{*}p \leq .05$ $^{**}p \leq .01$ $^{***}p \leq .001$. In brackets (Cronbach's α). $N = 286$

TABLE 2 Binding foundations, fear of immigrants and attitudes towards weapons regressed on NFC and covariates (Study 1)

	Binding foundations					Fear of immigrants				
	B	*SE*	95% CI		*p*	*B*	*SE*	95% CI		*p*
			LL	*UL*				*LL*	*UL*	
Gender	.13	.09	−.05	.31	.160	−.20	.13	−.46	.05	.122
Age	−.002	.01	−.02	.01	.807	−.01	.01	−.03	.02	.503
Political	.22	.03	.16	.29	<.001	.33	.05	.24	.43	<.001
IND	.35	.07	.20	.49	<.001	−.25	.11	−.46	−.04	.022
NFC	.23	.06	.11	.35	<.001	.15	.09	−.02	.32	.077
BIND	–	–	–	–	–	.47	.08	.30	.63	<.001
Fear	–	–	–	–	–	–	–	–	–	–

	Attitudes towards weapons				
	B	*SE*	95% CI		*p*
			LL	*UL*	
Gender	−.31	.16	−.62	−.002	.048
Age	−.02	.01	−.05	.01	.170
Political	.26	.06	.14	.39	<.001
IND	−.18	.13	−.43	.08	.177
NFC	.17	.10	−.04	37	.111
BIND	.25	.11	.04	.46	.021
Fear	.24	.07	.10	.38	.001

Regression coefficients are unstandardized. BIND, endorsement of the binding foundations; Fear, fear of immigrants; IND, endorsement of the individualizing foundations; NFC, need for closure; Political, political orientation. Gender (0 = male; 1 = female).

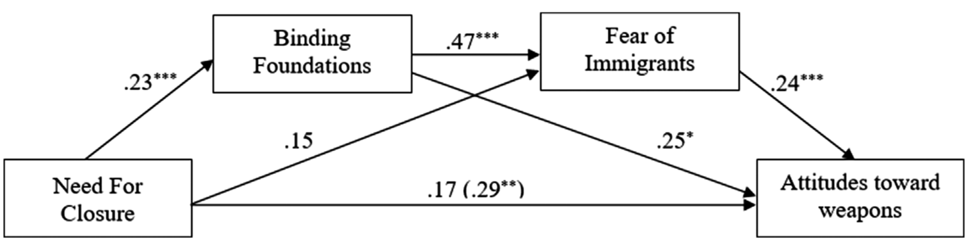

FIGURE 1 A serial mediation model showing the effects of NFC on attitudes towards weapons sequentially via the endorsement of the binding moral foundations and fear of immigrants. All coefficients are unstandardized. Single-starred associations are significant at the $p \leq .05$ level. Double-starred associations are significant at the $p \leq .01$ level. Triple-starred associations are significant at the $p \leq .001$ level. The total effect is given in parentheses. All effects were obtained controlling for gender, age, political orientation, and the endorsement of the individualizing foundations. Covariates are not included in the figure

2.2.1 | Serial mediation analysis

As decided a priori, we conducted a serial mediation analysis (Process Macro, Model 6; Hayes, 2017) with 5,000 bootstrap samples and unstandardized regression coefficients. Gender, age, political orientation, and the endorsement of the individualizing foundations were included as covariates. Results are presented in Table 2 and Figure 1.[1]

In accordance with previous findings, the endorsement of the binding foundations was positively and significantly predicted by NFC, $b = .23$, $SE = .06$, 95% CI [.114, .346], $r_{sp} = .20$, $p < .001$. Subsequently, the endorsement of the binding foundations positively and significantly predicted fear of immigrants, $b = .47$, $SE = .08$, 95% CI [.300, .635], $r_{sp} = .26$, $p < .001$, and fear of immigrants positively and significantly predicted attitudes towards weapons, $b = .24$, $SE = .07$, 95% CI [.098, .380], $r_{sp} = .16$, $p = .001$. Most important, the total indirect effect of NFC on attitudes towards weapons via the endorsement of the binding

[1] Our sample consisted of two segments of differently recruited participants, so we included the sub-sample covariate (coded as 1 = volunteers, 2 = paid recruits) in the model. The indirect effect of NFC on attitudes towards weapons via the mediators was unchanged. We also tested the moderation of sub-sample on the relationship between NFC and variables (model 85). In this case, the indirect effect of NFC on attitudes towards weapons through mediators was unchanged in the two conditions.

TABLE 3 Indirect effects (Study 1)

Pathway	Coefficient	BootSE	95% BootCI
NFC → BIND → Weapons	.06	.03	[0.01; 0.13]
NFC → Fear → Weapons	.04	.02	[0.00; 0.10]
NFC → BIND → Fear → Weapons	.03	.01	[0.01; 0.06]
Total	.12	.04	[0.05; 0.21]

BIND, endorsement of the binding foundations; Fear, fear of immigrants; NFC, need for closure; Weapons, attitudes towards weapons.

foundations and fear of immigrants was significant, $b = .12$, BootSE = .04, 95% BootCI [.052, .212]. Moreover, the indirect effects (95% bias corrected bootstrap confidence) were significant (see Table 3). Thus, the proposed serial mediation model was supported.

Notably, political orientation also had a positive and significant total indirect effect on attitudes towards weapons via the endorsement of the binding foundations and fear of immigrants, $b = .16$, BootSE = .04, 95% BootCI [.094, .247], which was consistent with previous findings linking political conservatism with the endorsement of binding moral foundations, as well as previous findings linking high NFC to political conservatism.

To summarize, the results of Study 1 demonstrated that NFC was positively and significantly associated with positive attitudes towards weapons ownership, sequentially mediated first through the endorsement of the binding moral foundations and then through fear of immigrants. However, this first study, based on a cross-sectional design, tells us little about the causality of the relationships found. For this reason, we tested the same model, in an independent sample, by experimentally manipulating high versus low NFC in Study 2.

3 | STUDY 2

3.1 | Method

3.1.1 | Participants and procedure

Participants were 320 university students, 30 of whom were excluded from the analysis (9.4%) for failing to respond appropriately to the instructions, in which they were asked to give short examples for three situations where high or low NFC was likely (adapted from Avnet & Higgins, 2003); participants who only answered "yes" or "no" for all three situations were not considered in the analysis.[2] This resulted in a final sample of 290 (188 females, 102 males, M_{age} = 22.57 SD_{age} = 2.81) university students. A segment of the participants was recruited via Prolific Academic and received monetary compensation for participating, whereas another segment of the participants was recruited through social networks or university platforms for voluntary participation. Participants gave their informed consent to participate in the study. All study materials were presented in Italian. After responding to the NFC manipulation, the participants responded to the same measures of the endorsement of binding (Cronbach's $\alpha = .88$) and individualizing (Cronbach's $\alpha = .70$) foundations (MFQ-30; Graham et al., 2013), fear of immigrants (Cronbach's $\alpha = .87$) and attitudes towards weapons (Cronbach's $\alpha = .94$), as in Study 1. Participants also responded to the same covariate measures as in Study 1.

Need for closure manipulation

As mentioned above, we used a modified version of the behavioural recall paradigm developed by Avnet and Higgins (2003). The manipulations were based on items from the NFC scale (Webster & Kruglanski, 1994) and it was successfully used in previous research (e.g., De Cristofaro et al., 2019; Di Santo et al., 2020). Participants were randomly assigned to either the condition of high (N = 152) or low (N = 138) NFC. In both groups, participants were shown three prompts to induce either a high or low NFC. In the high NFC group, participants were prompted with, "Think back to a time in which you believed that orderliness and organization are among the most important characteristics of a good student"; "Think back to a time in which you quickly became impatient and irritated when you did not find a solution to a problem immediately" and "Think back to a time in which you felt irritated when one person disagreed with what everyone else in a group believed." In the low NFC group, participants were prompted with, "Think back to a time in which, even after you made up your mind about something, you were eager to consider a different opinion"; "Think back to a time in which, when thinking about a problem, you considered as many different opinions on the issue as possible" and "Think back to a time in which you disliked the routine aspects of your work or studies." For each of the situations mentioned, participants were asked to write about these situations by giving a short example.

Manipulation check

To verify our NFC manipulation, participants were asked to respond to two statements evaluating individual levels of NFC (i.e., "In case of uncertainty, I prefer to make an immediate decision, whatever it may be," "'Any solution to a problem is better than remaining in a state of uncertainty") from the Italian version of RevNfCS (Pierro & Kruglanski, 2005), on a six-point Likert scale from "1" (strongly disagree) to "6" (strongly agree). The individual scores on the two items were significantly and positively correlated (r = .35, p < .001); we therefore averaged them to form a single score as a manipulation check.

Attitude extremity

Following the same procedure as in Study 1, we calculated scores of attitude extremity towards both moral foundations and weapons. Bivariate correlations between NFC scores and extremity both towards moral foundations and weapons are presented in the supplemental material and are briefly considered in the discussion section.

[2] Including these participants, the results maintain the expected direction and the total indirect effect of manipulated NFC on attitudes toward weapons via the binding foundations and fear of immigrants is also significant.

TABLE 4 Bivariate correlations and descriptive statistics (Study 2)

		1	2	3	4	5	6	7	8	M (SD)
1.	Gender	–								–
2.	Age	.012	–							22.57 (2.81)
3.	Political	.034	.039	–						3.12 (1.27)
4.	IND	.288***	−.028	−.113§	(.70)					4.85 (.53)
5.	NFC	.151**	.020	.072	.092	–				–
6.	BIND	.056	.048	.549***	.221***	.180**	(.88)			3.35 (.76)
7.	Fear	−.081	.048	.552***	−.172**	.149*	.389***	(.87)		1.94 (.96)
8.	Weapons	−.050	.017	.451***	−.039	.133*	.371***	.383***	(.94)	3.15 (1.37)

Notes: BIND, endorsement of the binding foundations; Fear, fear of immigrants; IND, endorsement of the individualizing foundations; NFC, manipulated need for closure; Political, political orientation (high scores indicate Right-wing); Weapons, attitudes towards weapons. Gender (0 = male; 1 = female), NFC (low = 1; high = 2).

§$p = .06$.

*$p \leq .05$.

**$p \leq .01$.

***$p \leq .001$; In bracket (Cronbach's A). $N = 290$.

3.2 | Results and discussion

3.2.1 | Manipulation check

We performed a one-way ANOVA to compare ratings on the participants' levels of NFC across the two conditions of high and low NFC. The one-way ANOVA showed a significant effect of the NFC manipulation on the participants' levels of NFC, F (1,288) = 4.277, $p = .040$. Participants reported higher levels ($d = .24$) of NFC in the high NFC condition ($M = 3.33$, $SD = 1.19$) and lower levels of NFC in the low NFC condition ($M = 3.03$, $SD = 1.22$).

3.2.2 | Correlations

Correlations between variables and descriptive statistics are presented in Table 4. In line with Study 1, manipulated NFC was positively and significantly correlated with the endorsement of the binding, and not individualizing, foundations ($r = .180$, $p < .01$), fear of immigrants ($r = .149$, $p < .05$), and favourable attitudes towards weapons ($r = .133$, $p < .05$); the endorsement of the binding foundations was positively and significantly correlated with the endorsement of the individualizing foundations ($r = .221$, $p < .001$), fear of immigrants ($r = .389$, $p < .001$), and attitudes towards weapons ($r = .371$, $p < .01$); fear of immigrants was positively and significantly correlated with attitudes towards weapons ($r = .383$, $p < .001$). Again, individualizing foundations were uncorrelated with NFC but, unlike in Study 1, also with attitudes towards weapons. As in Study 1, however, individualizing foundations were negatively and significantly correlated with fear of immigrants ($r = -.172$, $p < .01$).

3.2.3 | Serial mediation analysis

As in Study 1, we conducted a serial mediation analysis (Process Macro; Model 6; Hayes, 2017) with 5,000 bootstrap samples and unstandardized regression coefficients, with gender, age, political orientation and the endorsement of the individualizing foundations as covariates. Results are presented in Table 5 and Figure 2.

Consistent with the results of Study 1, the endorsement of the binding foundations was positively and significantly predicted by manipulated NFC, $b = .18$, $SE = .07$, 95% CI [.044, .325], $r_{sp} = .12$, $p = .010$. The endorsement of the binding foundations positively and significantly predicted fear of immigrants, $b = .20$, $SE = .08$, 95% CI [.052, .357], $r_{sp} = .13$, $p = .009$. Fear of immigrants, in turn, positively and significantly predicted attitudes towards weapons $b = .22$, $SE = .09$, 95% CI [.039, .399], $r_{sp} = .12$, $p = .017$. Importantly, and consistent with Study 1, the total indirect effect of manipulated NFC on attitudes towards weapons via the endorsement of the binding foundations and fear of immigrants was also significant, $b = .10$, BootSE = .04, 95% BootCI [.033, .215]. Moreover, the indirect effects (95% bias corrected bootstrap confidence) were significant (see Table 6). Thus, as in Study 1, the proposed serial mediation model was supported.

As in Study 1, political orientation also revealed a positive and significant total indirect effect on attitudes towards weapons via the endorsement of the binding foundations and fear of immigrants, $b = .18$, BootSE = .05, 95% BootCI [.071, .290].

In line with the results of Study 1, manipulated NFC was found to be positively associated with positive attitudes towards weapons, sequentially mediated first through the endorsement of the binding foundations and then through fear of immigrants.

TABLE 5 Binding foundations, fear of immigrants and attitudes towards weapons regressed on NFC and covariates (Study 2)

	Binding foundations					Fear of immigrants				
			95% CI					95% CI		
	B	*SE*	*LL*	*UL*	*p*	*B*	*SE*	*LL*	*UL*	*p*
Gender	−.11	.08	−.26	.05	.168	−.16	.10	−.36	.04	.109
Age	.01	.01	−.02	.03	.479	.01	.02	−.03	.04	.716
Political	.35	.03	.29	.40	<.001	.33	.04	.24	.42	<.001
IND	.43	.07	.29	.57	<.001	−.26	.10	−.46	−.07	.007
NFC	.18	.07	.04	.32	.010	.22	.09	.03	.40	.021
BIND	–	–	–	–	–	.20	.08	.05	.36	.009
Fear	–	–	–	–	–	–	–	–	–	–
	Attitudes towards weapons									
	B	*SE*	95% CI		*p*					
			LL	*UL*						
Gender	−.19	.16	−.50	.12	.228					
Age	−.004	.02	−.05	04	.865					
Political	.31	.08	.16	.46	<.001					
IND	−.005	.15	−.30	.29	.973					
NFC	.20	.15	−.09	.49	.169					
BIND	.27	.12	.03	.50	.028					
Fear	.22	.09	.04	.40	.017					

Regression coefficients are unstandardized. BIND, endorsement of the binding foundations; Fear, fear of immigrants; IND, endorsement of the individualizing foundations; NFC, manipulated need for closure; Political, political orientation; Gender (0 = male; 1 = female), NFC (1 = low; 2 = high).

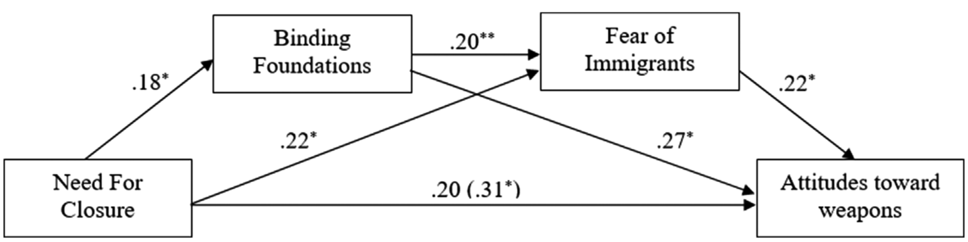

FIGURE 2 A serial mediation model showing the effects of manipulated NFC on attitudes towards weapons sequentially via the endorsement of the binding moral foundations and fear of immigrants. All coefficients are unstandardized. Single-starred associations are significant at the $p \leq .05$ level. Double-starred associations are significant at the $p \leq .01$ level. The total effect is given in parentheses. All effects were obtained controlling for gender, age, political orientation, and the endorsement of the individualizing foundations. Covariates are not included in the figure

TABLE 6 Indirect effects (Study 2)

Pathway	Coefficient	BootSE	95% BootCI
NFC → BIND → Weapons	.05	.03	[0.00; 0.14]
NFC → Fear → Weapons	.05	.03	[0.00; 0.13]
NFC → BIND → Fear → Weapons	.01	.01	[0.00; 0.03]
Total	.10	.04	[0.03; 0.21]

BIND, endorsement of the binding foundations; FC, need for closure; Fear, fear of immigrants; Weapons, attitudes towards weapons.

4 | STUDY 3

4.1 | Method

4.1.1 | Participants and procedure

Two hundred and ninety-three US citizens, residing in that country at the time of their participation (172 females, 121 males, M_{age} = 38.24, SD_{age} = 13.72) were recruited online via Prolific Academic and received monetary compensation for participating. All participants gave their informed consent to participate in the study. A criterion for inclusion was not to consider oneself an immigrant. In total, 0.7% of participants had less than high school education, 12.6% had a high school degree or equivalent, 25.3% had some college or university experience, 38.2% had a bachelor's degree or equivalent, 17.7% had a master's degree or equivalent, 5.5% had a doctorate degree, 80.5% of participants identified as White, 6.1% as Black or African American, 4.1% as Hispanic/Latino/Latina, 6.1% as Asian, and 3.1% as "other". Participants were also asked if they owned a weapon (codified as 0 = no, 1 = yes): 23.5% answered "'yes", 71.3% answered "no", and 5.1% did not answer. In considering weapon ownership in our analysis as a covariate, only participants who answered this question were included in the analysis. The final sample therefore resulted in 278 participants (162 females, 116 males, $M_{age} = 38.33$, $SD_{age} = 13.75$).

Participants responded to an online survey with the English versions of the measures of NFC (Cronbach's $\alpha = .88$), endorsement of binding (Cronbach's $\alpha = .93$) and individualizing (Cronbach's $\alpha = .80$) foundations (MFQ-30; Graham et al., 2013), fear of immigrants (Cronbach's $\alpha = .96$; items were adapted to the American population, e.g., "Immigrants take jobs from Americans") and attitudes towards weapons (Cronbach's $\alpha = .95$), as in Study 1. Participants also indicated their sex (codified as 0 = male, 1 = female), age, and via a single item (i.e., "How would you describe your political views?") their political orientation on a seven-point Likert scale from 1 ("very liberal") to 7 ("very conservative") (see also Koleva et al., 2012). We also included the following measures.

Fear of immigrants

Participants answered the question "'How likely are immigrants to carry defensive weapons?" on a seven-point Likert scale from "1 = extremely unlikely" to "7 = extremely likely". Given the high correlation ($r = .545$, $p < .001$) with the measure of fear of immigrants (Studies 1 and 2), we conducted a one-factor principal components analysis using the correlation matrix as input. Factor loadings ranged from 0.60 to 0.91; collectively, the items explained 73.35% of the variance. This new item was therefore included in our measure for fear of immigrants in this study; it was shown to have a highly satisfactory level of reliability (Cronbach's $\alpha = .95$).

Importance of weapon ownership

Participants were asked to indicate on a 10-point Likert scale from 1 ("strongly disagree") to 10 ("strongly agree") their degree of agreement with the statement "Weapon ownership rights are personally important to me." This was readapted from Wojcieszak (2012).

4.1.2 | Additional covariates

Weapon ownership

Participants answered the question "Do you own a weapon?" (1 = yes; 0 = no).

General fear and negative emotions

Participants were asked to indicate the extent to which they felt the following emotions at the moment: fearful, afraid, scared, worried, nervous, anxious, distressed. Participants responded to the items on a five-point Likert scale (1 = very slightly or not at all; 2 = a little; 3 = moderately; 4 = quite a bit; 5 = extremely). A total score for negative emotions (general fear) was computed by averaging the responses to each item. The internal reliability was highly satisfactory ($\alpha = .93$).

Attitude extremity

Following the same procedure as in Studies 1 and 2, we calculated scores of attitude extremity both towards moral foundations and weapons. Bivariate correlations between NFC scores and extremity towards both moral foundations and weapons are presented in the supplemental material and are briefly discussed in the discussion section.

4.2 | Results and discussion

Descriptive statistics and correlations between variables are presented in Table 7. Need for closure was positively and significantly correlated with fear and negative emotionality generally ($r = .133$, $p = .026$). Confirming the results of Studies 1 and 2, NFC was positively and significantly correlated with the endorsement of the binding (and not individualizing) foundations ($r = .431$, $p < .001$). Need for closure was also positively and significantly correlated with both fear of immigrants ($r = .302$, $p < .001$) and the perceived likelihood that immigrants carry defensive weapons ($r = .329$, $p < .001$). The correlation between NFC and combined fear of immigrants and likelihood that immigrants carry weapons was positive and significant ($r = .320$, $p < .001$). Notably, NFC was also positively and significantly correlated with importance of weapon ownership rights ($r = .195$, $p = .0001$) and favourable attitudes towards weapons ($r = .287$, $p < .001$). The endorsement of the binding foundations did not significantly correlate with the endorsement of the individualizing foundations ($r = -.076$, $p = .208$), whereas it was positively and significantly correlated with fear of immigrants ($r = .598$, $p < .001$), the perceived likelihood that immigrants carry defensive weapons ($r = .468$, $p < .001$), combined fear of immigrants and perceived likelihood that immigrants carry weapons ($r = .612$, $p < .001$), and favourable attitudes towards weapons ($r = .555$, $p < .001$). Both fear of immigrants ($r = .584$, $p < .001$) and the perceived likelihood that immigrants carry defensive weapons ($r = .509$, $p < .0001$) were positively and significantly correlated with favourable attitudes towards weapons. Combined fear of immigrants and perceived likelihood that immigrants carry weapons was also positively and significantly correlated with importance of weapon ownership rights ($r = .596$, $p < .001$) and favourable attitudes toward weapons ($r = .604$, $p < .001$). The possession of a weapon was positively and significantly correlated with combined fear of immigrants and perceived likelihood that immigrants carry weapons ($r = .359$, $p < .001$), importance of weapon ownership rights ($r = .483$, $p < .001$), and favourable attitudes toward weapons ($r = .394$, $p < .001$). Importance of weapon ownership rights was strongly positively correlated with favourable attitudes towards weapons ($r = .741$, $p < .001$). The endorsement of the individualizing foundations was significantly negatively correlated with combined fear of immigrants and perceived likelihood that immigrants carry weapons ($r = -.389$, $p < .001$) and attitudes towards weapons ($r = -.288$, $p < .001$).

TABLE 7 Bivariate correlations and descriptive statistics, Study 3

		1	2	3	4	5	6	7	8	9	10	11	12	13	M(SD)
1.	Gender	–													–
2.	Age	.061	–												38.33 (13.75)
3.	Political	−.112	.307***	–											2.95 (1.75)
4.	IND	.219***	−.075	−.371***	(.80)										4.76 (.69)
5.	Emotions	.182**	−.117*	−.032	.053	(.93)									1.67 (.80)
6.	Ownership	−.105	.085	.312***	−.378***	.052	–								–
7.	NFC	.028	−.085	.223***	−.092	.133*	.079	(.88)							3.05 (.85)
8.	BIND	−.077	.248***	.608***	−.076	.048	.169**	.431***	(.93)						3.16 (1.05)
9.	Fear	−.073	.265***	.692***	−.395***	.075	.357***	.302***	.598***	(.96)					2.20 (1.46)
10.	Likelihood	.109	.132*	.438***	−.179**	.077	.222***	.329***	.468***	.545***	–				3.25 (1.46)
11.	Fear + Likelihood	−.055	.262***	.696***	−.389***	.079	.359***	.320***	.612***	.995***	.624***	(.95)			2.32 (1.39)
12.	Importance	−.040	.235***	.551***	−.339***	−.101	.483***	.195***	.470***	.589***	.406***	.596***	–		4.68 (3.15)
13.	Weapons	−.117§	.194***	.622***	−.288***	−.081	.394***	.287***	.555***	.584***	.509***	.604***	.741***	(.95)	4.18 (1.50)

Notes: BIND, endorsement of the binding foundations; Emotions, negative emotions; Fear, fear of immigrants; IND, endorsement of the individualizing foundations; Likelihood, perceived likelihood that immigrants carry defensive weapons; NFC, need for closure; Ownership, own possession of a weapon; Political, political orientation (high scores indicate conservative views); Weapons, attitudes towards weapons. Gender (0 = male; 1 = female). In brackets (Cronbach's α). $N = 278$.

§$p = .051$.

*$p \leq .05$.

**$p \leq .01$.

***$p \leq .001$.

4.2.1 | Preliminary serial mediation analysis

We first tested the same model as in Studies 1 and 2; serial mediation analysis was conducted with the Process Macro (Model 6; Hayes, 2017) with 5,000 bootstrap samples and unstandardized regression coefficients, with gender, age, political orientation and the endorsement of individualizing foundations as covariates. We used the same measures as in Studies 1 and 2. As in Studies 1 and 2, the endorsement of binding foundations was positively and significantly predicted by NFC, $b = .41$, $SE = .05$, 95% CI [.307, .523], $r_{sp} = .32$, $p < .001$. Subsequently, the endorsement of the binding foundations positively and significantly predicted fear of immigrants, $b = .41$, $SE = .08$, 95% CI [.261, .568], $r_{sp} = .21$, $p < .001$, and fear of immigrants positively and significantly predicted favourable attitudes toward weapons, $b = .19$, $SE = .07$, 95% CI [.056, .331], $r_{sp} = .12$, $p = .006$. The indirect effect of NFC on attitudes towards weapons via the endorsement of binding foundations and fear of immigrants was significant, $b = .03$, BootSE = .02, 95% BootCI [.009, .079]. The total indirect effect of NFC on attitudes towards weapons via the endorsement of binding foundations, and fear of immigrants was also significant, $b = .18$, BootSE = .06, 95% BootCI [.089, .316].

4.2.2 | Serial mediation analysis

Subsequently, we tested the model including all variables; serial mediation analysis was conducted with Process Macro (Model 6; Hayes, 2017) with 5,000 bootstrap samples and unstandardized regression coefficients. Covariates in the model were participants' gender, age, political orientation, the endorsement of the individualizing foundations, negative emotions (general fear) and the possession of a weapon.[3] We used the combined measure of likelihood and fear of immigrants. All the results are presented in Table 8. Below we provide a description of the key findings of the model (see also Figure 3). We also tested this model considering separately fear of immigrants (Study 3a) and the perceived likelihood that immigrants carry defensive weapons (Study 3b). Results are presented in the supplementary material.

In accordance with previous findings, the endorsement of the binding foundations was positively and significantly predicted by NFC, $b = .41$, $SE = .05$, 95% CI [.300, .518], $r_{sp} = .32$, $p < .001$. Subsequently, the endorsement of the binding foundations positively and significantly predicted combined fear of immigrants and perceived likelihood that immigrants carry weapons, $b = .40$, $SE = .07$, 95% CI [.255, .541], $r_{sp} = .21$, $p < .001$, and combined fear of immigrants and perceived likelihood that immigrants carry weapons positively and significantly predicted the importance of weapon ownership, $b = .62$, $SE = .15$, 95% CI [.319, .927], $r_{sp} = .17$, $p < .001$. Finally, importance of weapon ownership positively and significantly predicted favourable attitudes toward weapons, $b = .24$, $SE = .02$, 95% CI [.193, .290], $r_{sp} = .36$, $p < .001$. The total indirect effect of NFC on attitudes towards weapons via the endorsement of the binding foundations, combined fear of immigrants and perceived likelihood that immigrants carry weapons, and importance of weapon

[3] We also tested both models on the total sample ($N = 293$). All the direct effects in the models remained significant. The indirect effects of NFC on attitudes towards weapons via the mediators and the total indirect effects of NFC on attitudes towards weapons via the mediators were also significant.

TABLE 8 Binding foundations, combined likelihood and fear of immigrants, importance of weapon ownership and attitudes towards weapons regressed on NFC and covariates (Study 3)

	Binding foundations					Fear of immigrants + likelihood				
			95% CI					95% CI		
	B	*SE*	*LL*	*UL*	*p*	*B*	*SE*	*LL*	*UL*	*p*
Gender	–.17	.10	–.36	.02	.079	.13	.11	–.10	.35	.273
Age	.01	.003	.003	.02	.006	.01	.004	–.002	.01	.166
Political	.33	.03	.27	.39	<.001	.30	.04	.22	.39	<.001
IND	.29	.07	.15	.44	<.001	–.38	.09	–.56	–.19	<.001
Emotions	.05	.06	–.06	.17	.374	.12	.07	–.01	.26	.082
Ownership	.05	.11	–.17	.28	.637	.35	.14	.08	.62	.011
NFC	.41	.05	.30	.52	<.001	.12	.07	–.02	.26	.097
BIND	–	–		–	–	.40	.07	.25	.54	<.001
F+L	–	–		–	–	–	–		–	–
Importance	–	–		–	–	–	–		–	–
	Importance					**Attitudes towards weapons**				
	B	*SE*	95% CI		*p*	*B*	*SE*	95% CI		*p*
			LL	*UL*				*LL*	*UL*	
Gender	.48	.29	–.09	1.05	.101	–.17	.12	–.40	.06	.156
Age	.01	.01	–.01	.03	.592	–.004	.004	–.01	.005	.413
Political	.24	.12	.002	.47	.048	.18	.05	.08	.28	<.001
IND	–.29	.24	–.76	.19	.234	.07	.10	–.12	.26	.473
Emotions	–.59	.18	–.93	–.24	.001	–.08	.07	–.22	.07	.288
Ownership	2.21	.35	1.51	2.90	<.001	.16	.15	–.14	.46	.285
NFC	–.03	.18	–.39	.33	.882	.13	.07	–.02	.27	.085
BIND	.52	.19	.14	.90	.007	.17	.08	.01	.33	.032
F+L	.62	.15	.32	.93	<.001	.07	.06	–.06	.19	.286
Importance	–	–		–	–	.24	.02	.19	.29	<.001

Regression coefficients are unstandardized. BIND, Endorsement of the binding foundations, F+L, combined perceived likelihood that immigrants carry defensive weapons and fear of immigrants; IND, endorsement of the individualizing foundations; NFC, need for closure; Ownership, own possession of a weapon; Political, political orientation. Gender (0 = male; 1 = female).

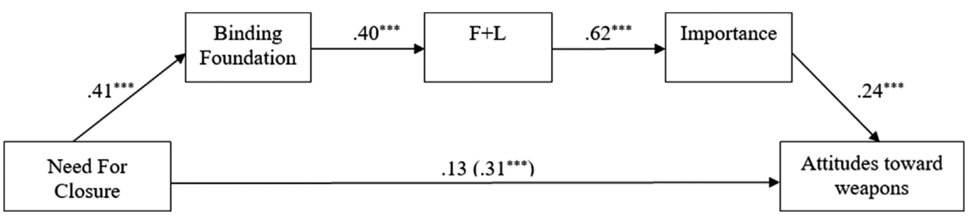

FIGURE 3 A serial mediation model showing the effects of NFC on attitudes towards weapons sequentially via the endorsement of the binding moral foundations, combined likelihood and fear of immigrants, and importance of weapon ownership. All coefficients are unstandardized. Triple-starred associations are significant at the $p \leq .001$ level. The total effect is given in parentheses. All effects were obtained controlling for gender, age, political orientation, the endorsement of the individualizing foundations, general fear (negative emotions) and the possession of a weapon (no = 0, yes = 1). To simplify the figure, covariates were not included

ownership was significant, $b = .18$, BootSE = .07, 95% BootCI [.036, .321]. All indirect effects in the model are presented in Table 9.

Political orientation also revealed a positive and significant total indirect effect on attitudes towards weapons via the endorsement of the binding foundations, combined fear of immigrants, and perceived likelihood that immigrants carry weapons, and importance of weapon ownership, $b = .25$, BootSE = .04, 95% BootCI [.177, .335].

TABLE 9 Indirect effects (Study 3)

Pathway	Coefficient	BootSE	95% BootCI
NFC → BIND → Weapons	.07	.04	[0.00; 0.15]
NFC → F+L → Weapons	.01	.01	[−0.01; 0.04]
NFC → Importance → Weapons	−.01	.04	[−0.10; 0.08]
NFC → BIND → F+L → Weapons	.01	.01	[−0.01; 0.04]
NFC → BIND → Importance → Weapons	.05	.02	[0.01; 0.10]
NFC → F+L→ Importance → Weapons	.02	.01	[−0.01; 0.05]
NFC → BIND → F+L→ Importance → Weapons	.02	.01	[0.01; 0.05]
Total	.18	.07	[0.04; 0.32]

BIND, endorsement of the binding foundations, F+L, combined perceived likelihood that immigrants carry defensive weapons and fear of immigrants; NFC, need for closure; Weapons, attitudes towards weapons.

5 | GENERAL DISCUSSIONS

Although Italy historically has had very strict weapons regulations, recent Acts in the Italian Parliament represented steps to loosen these restrictions; at the same time, there is a growing perception in Italy that immigrants are dangerous. We proposed that these two trends could be related, in that the desire to own weapons could be related to the perception of immigrants as dangerous. To be sure, this is not solely an Italian problem. Consequently, we examined this issue both in Italy, where loosened weapon restrictions are a novelty, as well as in the United States, where weapon restrictions have been loose historically. Specifically, we proposed that ownership of weapons for the purpose of self-defence is more likely to be approved of by individuals who have a high stable or induced NFC, because high NFC is associated with the endorsement of the binding moral foundations, which are related to concerns and strategies aimed at the defence of the ingroup. We hypothesized that a heightened NFC would be positively associated with approval of weapons, sequentially mediated first through the endorsement of the binding foundations and then through fear of immigrants. This research thus advances the literature on NFC and how it can promote extreme defensive views in response to perceived threats from outsiders. Previous research (Dugas et al., 2018) demonstrated that a high NFC stimulates support for extreme measures against the group's perceived enemies through glorification of the ingroup and perception of ingroup victimhood. In response to intergroup hostility (i.e., fear of immigrants), high NFC individuals might adhere to pro-weapons attitudes as an extreme defensive measure, falling within the context of extreme NFC attitudes (see Roets et al., 2015).

We initially conducted two studies in Italy, after which we replicated the study in a sample of Americans. Support for the hypothesized model was found in all three independent samples utilising both dispositional (Studies 1 and 3) and experimentally induced (Study 2) NFC. We also controlled for a set of covariates. In addition to an effect of gender on attitudes towards weapons in Study 1, political orientation was shown to strongly impact our outcomes. In all studies, there was a significant indirect effect of political orientation on attitudes towards weapons through the endorsement of the binding foundations and fear of immigrants, in addition to the test of the importance of weapons ownership that was added in Study 3.

The results presented in this article expand upon previous literature examining the relationship between NFC, the endorsement of the binding moral foundations, and conservative viewpoints on various social issues. Specifically, our findings are consistent with previous studies of the association between NFC and the endorsement of the binding moral foundations as a precursor to prejudiced attitudes toward target outgroups (Baldner & Pierro, 2019a, 2019b; Baldner et al., 2020). In the present research, people who had a high stable or contingent NFC believed that favouring one's group was moral and therefore feared immigrants more, with fear essentially referring to natives' perception of immigrants as materially threatening to their interests (Paxton & Mughan, 2006) and to society as a whole. In turn, those individuals were more likely to positively value defensive means.

We also examined how NFC scores correlated with extremity of the endorsement of the moral foundations and of attitudes towards weapons. This analysis was conducted to understand if a high NFC, both chronic and manipulated, could lead to more extreme positions towards morality and towards weapons, regardless of the valence of support/opposition. The results are not inconsistent (see the supplemental material) among the three studies. In no case, however, did it appear that NFC was particularly associated with more extreme opinions; however, this investigation deserves further attention in subsequent research.

5.1 | Limitations and directions for future research

This research suggests a number of future directions, including those that can explore the present model in greater detail, in addition to those that can investigate facets we were not able to address in the current work. Most importantly, our model could lead to interesting moderation research. Each path in our meditational model has the potential to be moderated such that the effect is reduced or even reversed. Consequently, this could help researchers respond to the weapon control debate. Thus, an important question to consider is whether the model will be equally supported among different groups. For instance, researchers have generally found that women place less emphasis on weapon ownership than men (DeJong, 1997); in addition, there are cultural differences in attitudes towards weapons (Cooke & Puddifoot, 2000) that may affect the relation between NFC and support for weapons.

Furthermore, one could ask if there could be an opposite pattern of results if the weapons debate was reframed: could the NFC indirectly lead to negative attitudes towards weapons if the argument was that weapon ownership endangers the lives of citizens? This is an interesting possibility for which we cannot account in our current model. From one perspective, the latter possibility may be less likely given that the binding foundations have a focus on the importance of cultural norms and standards and are associated with opposition to outside forces that are perceived to oppose these norms and standards. Accordingly, given a high level of uncertainty (e.g., from rising immigration), individuals may be more likely to seek out and blame outside forces for the threats to their ingroup, rather than pay attention to dangers that the possession of weapons may pose to the ingroup. These issues should be investigated in subsequent research.

Maslow (1954) made it clear that security is a universal need, but the manner of ensuring people's feelings of security can be controversial and, in some cases, extreme. Many people oppose the ownership of weapons because they consider it harmful, dangerous, uncivilized, unnecessary, and therefore injurious to security. Conversely, other people see it as a useful, legitimate, and necessary means of ensuring security. Additional research is needed to address potential moderators but, as the present data attest, NFC nevertheless appears to be a key psychological factor to consider in examining attitudes towards weapons insofar as it feeds prejudice towards the outgroup, willingness to protect the ingroup, and affects the embracement of moral convictions that justify ingroup morality and justify weapons as a possible means of protecting the ingroup.

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CONFLICT OF INTEREST

On behalf of all the authors, the corresponding author states that there is no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

This study was approved by the ethics committee of the Department of Developmental and Social Psychology at Sapienza University of Rome.

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