

Has the terrorist attack on Charlie Hebdo fuelled resistance towards Muslim immigrants in Europe? Results from a natural experiment in six European countries

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Abstract

In recent years, Europe witnessed several terrorist attacks by Islamist terrorists. To date, crucial questions are whether and how such events influence the European public's resistance towards Muslims, and if such influence depends on the level of intergroup competition, both at the contextual and individual level. Using the European Social Survey (ESS7), we were able to compare respondents interviewed shortly before and after the terrorist attack on Charlie Hebdo in January 2015. While we found no support for a moderating role of intergroup competition, our study shows that the levels of resistance towards Muslim immigrants were higher shortly after the attacks in Ireland and Czech Republic, however, lower in France. For Austria, Finland and Germany we found no influence. Our findings indicate that one cannot be too careful with generalizing conclusions from single countries.

Keywords

Resistance towards Muslim immigrants, terrorist attacks, Charlie Hebdo, Europe

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Introduction and research questions

On January 7, 2015, France witnessed a terrorist attack on the Charlie Hebdo offices in Paris with twelve casualties, claimed by Al Qaeda. During the next two days, a policewoman and four people in a Jewish supermarket were killed by terrorists. These incidents were the first large-scale terrorist attacks on European soil by groups purporting to speak in the name of Islam since the attacks in Madrid (2004) and London (2005). It turned out to be the first of a long list of attacks in the following years in European cities like Berlin, Brussels, Manchester and Nice.

To what extent have terrorist attacks by Islamist terrorists directly influenced the European public's resistance towards Muslims? Empirical studies on the impact of terrorism on public opinion largely concentrated on related outcomes rather than on anti-Muslimism. Previous research linked terrorist attacks with conservative stances (e.g. Brouard et al., 2018; Vasilopoulos et al., 2018) and perceptions of *safety* and *ethnic* threat (e.g. Boomgaarden and De Vreese, 2007; Finseraas and Listhaug, 2013; Huddy et al., 2002). Studies focusing on general outgroup derogation yielded mixed conclusions (Böhmelt et al., 2020; Castanho Silva, 2018; Larsen et al., 2020; Nussio et al., 2019; Nussio, 2020). Yet, given the broad measures of outgroup derogation used in these studies, they might underestimate the impact of terrorist attacks, particularly on resistance towards Muslims (Czymara and Schmidt-Catran, 2017; Nägel and Lutter, 2020).

We propose that *if* terrorist attacks by Islamist terrorists affect prejudice and outgroup derogation, this is most likely the case with regard to Muslims (cf. Czymara and Schmidt-Catran, 2017), which calls for more precise measures directly linked to terrorist attacks. To date, there are, however, only few studies focussing on the impact of terrorist attacks on resistance towards Muslims or closely linked outcomes.

The latter line of research – focusing on the impact of terrorist attacks on outcomes closely related to resistance towards Muslims – yielded mixed conclusions. Whereas support was found for an effect of terrorist attacks on e.g., anti-Arab attitudes and decreased levels of support for Islam in schools (Echebarria-Echabe and Fernández-Guede, 2006; Fetzer and Soper, 2003), no impact was found on general views on Islam (Larsen et al., 2020; Nussio, 2020).¹ Yet, as these studies do not explicitly refer to Muslims, it remains unclear whether their focus is precise enough to validly capture an effect of terrorist attacks and whether their conclusions hold equally for people's resistance towards Muslims in particular.

Only few studies explicitly addressed the relationship between terrorist attacks by Islamist terrorists and negative attitudes towards Muslims. These studies found support for increased levels of negative attitudes towards Muslims in France (Goodwin et al., 2017), the UK (Abrams et al., 2017; Van de Vyver et al., 2016) and Ireland (Fahey, McGinnity and Grotti, 2019). Yet, as the timespan between the (pre-attack and/or post-attack) measures and the terrorist attack was relatively large (e.g. Abrams et al., 2017; Goodwin et al., 2017; Van de Vyver et al., 2016) other influences cannot be fully ruled out. Moreover, given their focus on *only* one country, these studies leave the question unanswered whether such impact holds generally across larger numbers of countries. Drawing on the same data as Fahey and colleagues (2019), Castanho Silva (2018) compared respondents from 11 European countries interviewed before and after the Charlie Hebdo attack, without finding an effect of this attack on resistance towards Muslims.

The contribution we aim to make is threefold. First, we aim to shed light on whether terrorist attacks by Islamist extremists influence the public's resistance towards *Muslims*. We take advantage of the European Social Survey (ESS, round 7), containing measures of resistance towards Muslims shortly before and after the Charlie Hebdo attack took place.² This allows us to apply a natural experimental design (cf. Muñoz et al., 2020) to empirically assess to what extent resistance towards Muslim immigrants has increased immediately after the Charlie Hebdo attack. We propose that our focus on an outcome more closely related to the event might enable us to find an impact of terrorism which studies using broader measures of outgroup derogation might not be able to detect (Czymara and Schmidt-Catran, 2017).

Second, rather than focussing on single countries (e.g. Abrams et al., 2017; Fahey et al., 2019; Van de Vyver; 2016; but see Castanho Silva, 2018), we will assess to what extent this impact holds *generally* across countries, including those not directly affected (i.e. spill over effects; Larsen et al., 2020). Given the cross-national perspective, we are also able to exploratorily assess whether proximity plays a role, like suggested in previous contributions (Böhmelt et al., 2020; Nussio et al., 2019).

Third, we aim to increase our understanding of the impact of terrorist attacks by Islamist extremists on resistance towards Muslims, by assessing conditions under which such an impact might be more likely or stronger. Previous research proposed that terrorist attacks may increase the salience of the immigration issue and intergroup competition (Böhmelt et al., 2020; Hopkins, 2010; Legewie, 2013). According to intergroup conflict theory (e.g. Blalock, 1967; Coser, 1956, Scheepers et al., 2002), intergroup competition is an important driver of prejudice. Empirical evidence for this proposition has been found for both general indicators of outgroup derogation and anti-Muslim attitudes in particular (e.g. Quillian, 1995; Savelkoul et al., 2011; Scheepers et al., 2002; Strabac and Listhaug, 2008). In this contribution, we will assess whether people facing more intergroup competition – both at the regional as well as individual level – react more fiercely on terrorist attacks. Only few studies (e.g. Castanho Silva, 2018; Legewie, 2013; Nussio et al., 2019) addressed the moderating role of indicators of intergroup competition, yet only with regard to general measures of prejudice, which are, however, sensitive for underestimating the impact of terrorist attacks (Czymara and Schmidt-Catran, 2017; Nägel and Lutter, 2020).

Summarizing, we set out to answer the following research questions:

1. *To what extent has the Charlie Hebdo attack influenced resistance towards Muslim immigrants among European natives?*
2. *To what extent is the impact of the Charlie Hebdo attack on resistance towards Muslim immigrants influenced by intergroup competition at the (a) regional and (b) individual level?*

Theories and hypotheses

The impact of terrorist attacks on prejudice and resistance towards Muslims is often explained from two theoretical perspectives. According to system justification theory (SJT) (e.g. Jost and Hunyady, 2003; Jost et al., 2004) perceptions of *safety* threat such as activated by terrorist attacks are supposed to foster prejudice (Echebarria-Echabe and Fernández-Guede, 2006; Jost et al., 2004). Earlier research has repeatedly reported high levels of perceived safety threat after terrorist attacks by Islamist terrorists (Abrams et al., 2017; Bozzoli and Müller, 2011; Finseraas and Listhaug, 2013; Huddy et al., 2002). Other studies have shown that perceptions of safety threat are positively related with prejudice towards Muslims (Abrams et al., 2017; Wike and Grim, 2010).

A second line of theoretical reasoning – often labelled as ‘intergroup conflict theory’ – draws on realistic group conflict theory (Blalock, 1967; Coser, 1956; Quillian 1995) and ethnic competition theory (e.g. Scheepers et al., 2002) and links terrorist attacks to perceptions of *ethnic* threat. These theories propose that competition with regard to scarce resources (e.g. at the labour market) or conflicting values, fosters perceptions of ethnic threat which, in turn, increase prejudice. Intergroup conflict theory has also been applied to explain negative attitudes towards Muslims, showing that perceptions of *ethnic* threat are positively related with prejudice towards Muslims (Abrams et al., 2017; González et al., 2008; Savelkoul et al., 2011). However, evidence for the derived proposition that perceptions of ethnic threat might also be triggered by terrorist attacks, is mixed. Several studies found no (unconditional) impact of terrorist attacks by Islamist terrorists on perceptions of ethnic threat (Castanho Silva, 2018; Larsen et al., 2020; Legewie, 2013), while others showed that these perceptions increased after such events (Abrams et al., 2017; Boomgaarden and De Vreese, 2007).

Although both theoretical approaches point at different underlying explanations for a link between terrorist attacks and resistance towards Muslims, both lead to the expectation that such resistance will have increased in the aftermath of an attack. Hence, we expect that:

(H1) *Levels of resistance towards Muslim immigrants were higher among European citizens shortly after the Charlie Hebdo attack took place.*

The moderating role of intergroup competition

We are not only interested in whether or not terrorist attacks increase negative attitudes towards Muslims, but will also assess whether the impact of terrorism is dependent on the level of intergroup competition, both at the contextual and individual level. According to previous insights (e.g. Blalock, 1967; Coser, 1956; Scheepers et al., 2002), competition over scarce resources between ethnic / religious groups is a central driver of negative attitudes towards Muslims. At a contextual level, competition increases if the relative size of the outgroup is larger. Conflicting values become more visible if the relative outgroup size is larger, while natives compete more strongly with outgroup members for the scarce resources available at the labour or housing market. In a similar vein, one can expect that competition increases if the available resources become more scarce. With higher unemployment rates, competition between natives and outgroup members will intensify. Earlier research assessed the impact of the relative outgroup size and unemployment in people's living environment on their perceptions of ethnic threat and prejudice towards Muslims (e.g. Pottie-Sherman and Wilkes, 2017; Savelkoul et al., 2011; Strabac and Listhaug, 2008).

Yet, the level of intergroup competition in people's living environment might not only induce resistance towards Muslim immigrants directly, it might also moderate the impact of the Charlie Hebdo attack. Terrorist attacks increase the salience of the immigration issue (Böhmelt et al., 2020; Hopkins, 2010) and, as we propose, also the salience of intergroup competition. According to Legewie (2013: 1205), terrorist attacks "[...] direct attention toward existing fears related to potential intergroup conflicts such as those that result from a sizable immigrant population or changing economic conditions". In line with Legewie (2013), we propose that people who live in an environment which is characterized by high levels of intergroup competition (i.e. with larger shares of outgroup members and higher levels of unemployment), will react more fiercely to an attack, displaying higher levels of resistance towards Muslim immigrants as compared to people living in less competitive environments.³

So far, studies focusing on intergroup competition to address the spatial conditionality of the impact of terrorist attacks on prejudice, are scarce and restricted to general measures of intergroup attitudes, not related to Muslims. Legewie revealed that the impact of the 2002 Bali terrorist attack induced ethnic threat perceptions among natives more strongly in European regions where the increase of the unemployment rate was higher. Castanho Silva showed that the 2015 Bataclan attack in Paris induced anti-immigrant and anti-refugee sentiments more strongly if unemployment rates in people's country were higher. Yet, Nussio et al. (2019) found that the positive impact of the 2015 Bataclan attack on outgroup derogation was stronger in countries with lower shares of immigrants. In the present study, we will focus on intergroup competition at the *regional level* – which we assume to reflect people's direct living environment better than the national level – and will assess whether this alters the impact of terrorism on resistance towards Muslim immigrants. In sum, we hypothesize that:

(H2) *The higher the regional level of intergroup competition – i.e., the higher the (2a) percentage of foreigners or (2b) unemployment rate – the stronger the increase of resistance towards Muslim immigrants shortly after the Charlie Hebdo attack.*

Next to intergroup competition at the *contextual* level, we will also consider the impact of competition at the *individual* level: we will assess whether the effect of the Charlie Hebdo attack differs between social groups who compete more or less directly with immigrants and Muslims in particular. According to intergroup conflict theory (Blalock, 1967; Coser, 1956; Scheepers et al., 2002), intergroup competition is higher between social groups in similar social positions. In many European countries, the majority of the Muslim population is located in the lower strata of society, having relatively low levels of

educational attainment. Consequently, lower educated natives will compete more directly with Muslims at the labour- and housing market as compared to natives with higher levels of education. Indeed, previous research has repeatedly shown that lower educated people display higher levels of prejudice towards Muslims as compared to higher educated people (e.g. Schlueter et al., 2020; Strabac and Listhaug, 2008). As terrorist attacks by Islamist terrorists make the issue of immigration and intergroup competition more salient (Böhmelt et al., 2020; Hopkins, 2010; Legewie, 2013), we expect that lower educated natives will react more strongly to terrorist attacks as compared to higher educated natives given that they compete more directly with Muslims in society.

Empirical evidence regarding the moderating role of educational attainment is scarce, restricted to general prejudice measures and inconclusive. Whereas Schüller (2016) showed that only lower educated people became more negative towards immigration in the aftermath of 9/11, Nägel and Lutter (2020) found no support for a moderating effect of educational attainment regarding the impact of the 2016 Berlin attack on attitudes towards refugees. In this study, we will assess the moderating role of educational attainment focusing on resistance towards Muslims and hypothesize that:

(H3) The higher people's level of educational attainment, the less their levels of resistance towards Muslim immigrants increased shortly after the Charlie Hebdo attack.

Exploratory analyses: The role of duration and proximity

Although we are mainly interested in the direct impact of the Charlie Hebdo attack on resistance towards Muslim immigrants and the moderating role of intergroup competition, we will exploratorily address two additional questions: to what extent was the impact of the Charlie Hebdo attack short-lived and did proximity play a role? Previous studies focusing on the impact of terrorist attacks on related outcomes, like perceptions of ethnic threat or prejudice towards immigrants and North-Africans, provided circumstantial evidence for a short-lived effect (Boomgaarden and De Vreese, 2007; Cohu et al., 2016; Hopkins, 2010). In our study, we will exploratorily take the temporal dimension into account, to avoid underestimating the impact of the Charlie Hebdo attack, should this effect be short-lived.

Moreover, we will exploratorily consider the role of proximity (i.e. physical distance). Previous studies also pointed at proximity as an alternative factor explaining spatial conditionality of the impact of terrorist attacks on attitudes, however, yielding mixed conclusions (Böhmelt et al., 2020; Bove et al., 2021; Nussio et al. 2019). According to Braithwaite (2013: 97) “[...] physical proximity to attacks may heighten emotional arousal and personal sense of vulnerability in a manner that separates this population from the rest in terms of perceived threat”. As proximity makes an event more meaningful for a country and its audiences, it also influences the news coverage (Galtung and Ruge, 1965; Ruigrok and Van Atteveldt, 2007), which might, in turn, influence people's attitudes towards Muslims. Hence, we will exploratorily assess whether the impact of the Charlie Hebdo attack is strongest in France.

Data and measurements

Data

To test our hypotheses, we used data derived from the seventh wave of the European Social Survey (ESS) with random samples from 20 European countries (European Social Survey Round 7 Data, 2014).⁴ We restricted the sample to people aged between 18 and 80 years old and living in private households. The data were collected by face-to-face interviews. We included native non-Muslim respondents, i.e., those who: a) were born in the country under survey, b) had the countries' citizenship, c) had parents who were also born in that particular country, and d) do not adhere to Islam.

The fieldwork period of data collection varied across countries. In twelve countries, the survey was fielded before and after the Charlie Hebdo attack. To have statistically meaningful results we created

3 groups, each holding at least 50 respondents per country, which was possible for six countries. To achieve this, we constructed one group before the shootings took place, with respondents interviewed between 6 weeks and 1 day before the attacks. Next, we constructed two post-attack groups. As the attack on the Charlie Hebdo offices was followed by two days of shootings by terrorists in and around Paris, the first post-attack group refers to respondents interviewed from January 10 onwards, which is immediately after the series of attacks. This group includes respondents interviewed 3 to 18 days after the first attacks (on January 7), while the second post-attack group includes respondents interviewed between 19 and 42 days after the first attacks. This construction is a reasonable trade-off between number of observations and timespan but it may also be somewhat arbitrary. However, previous research indicates that – should the effect be (very) short-lived – we should be able to detect it within this timespan (see Boomgaarden and De Vreese, 2007; Cohu et al., 2016). To check the robustness of our findings, we re-analyzed our models over ten times with different cut-off points for the three groups, leading to substantially similar conclusions. We will come back to this in our results section. After these time-related selections we ended up with a total of 4795 respondents from six European countries: Austria, the Czech Republic, Finland, France, Germany, and Ireland. In Figure S.1 (supplementary files) we summarised the actual numbers of respondents per week per country in the given time period.

Dependent variable: Resistance towards Muslim immigrants

This round of the ESS includes a measure explicitly tapping into resistance towards Muslim immigrants. Our dependent variable is measured asking respondents “Using this card, please tell me to what extent you think [country] should allow Muslims from other countries to come and live in [country]?” The answer categories are “allow many to come and live here” (code 1), “allow some” (2), “allow a few” (3) and “allow none” (4), next to “don’t know”. A higher score reflects more resistance towards Muslim immigrants. Respondents with no valid answer (2.7%) were excluded from further analyses.

Independent variables

At the regional level, we use two measures of intergroup competition, i.e., the percentage of foreigners and unemployment rate (Eurostat, 2017a; 2017b).⁵ We excluded one region for which no information on the level of unemployment was available. At the individual level, we use the respondents’ level of *educational attainment* as a proxy of intergroup competition, which is measured by the number of years of full-time education completed. Respondents lacking valid information on this variable were excluded (1.2%). Previous research has repeatedly shown that educational attainment is negatively correlated with negative attitudes towards Muslims (e.g. Schlueter et al., 2020). This finding makes it relevant to include educational level as a control variable, in case there is also a correlation between time of interview and education (known as “reachability bias”, Muñoz et al., 2020). We will come back to this below.

Control variables

To further control for potential reachability bias and composition effects, we take into account age, gender and employment status. Previous research has indicated that these indicators are important predictors of negative attitudes towards Muslims (e.g. Schlueter et al., 2020; Strabac and Listhaug, 2008). In addition, age, gender, and employment status may be related to the time of interview during the fieldwork (e.g. Legewie, 2013; Muñoz et al., 2020). Below, we will discuss whether this also holds in our case. We use a straightforward measure of *age* calculated from year of birth. *Gender* is measured with males as reference category. Respondents with missing values (0.3%) were excluded. Moreover, we measured *employment status* based on information on the respondents’ main activity during the last seven days before the interview. We distinguished the following categories: “paid work” (reference category), “student”, “unemployed”, “retired”, “housework” and “other”. The

latter category included, for instance, respondents who are permanently sick or disabled or are in community or military service. Respondents with no valid information on this variable (0.3%) were excluded from the analysis. *Intergroup contact* is measured with a dummy variable indicating whether the respondent has close friends from another ethnic group (0 = no, 1 = yes). Respondents with no valid information on this variable were excluded (0.2%). To control for unobserved time-varying variables correlated with the event and resistance towards Muslim immigrants, we use the variable time measured as the number of days the interview took place before or after the attack. To measure the within-country effect of the Charlie Hebdo attack, we control for unobserved country differences by including dummy variables for each country in a fixed effect design (Bell and Jones, 2015; Te Grotenhuis et al., 2015).

Descriptive statistics and balance tests

After excluding respondents without valid answers on one or more variables, our working sample contains 4577 respondents from six countries. Descriptive statistics of all variables are shown in Table 1. Additionally, descriptive statistics for each country separately can be found in Table S.1 (supplementary

Table 1. Descriptive statistics individual-level and contextual-level variables ($n_{\text{individual}} = 4577$; $n_{\text{region}} = 86$).

	min.	max.	mean / %	std. dev.
Dependent variable				
Resistance towards Muslim immigrants	1	4	2.79	1.00
Independent variables				
Groups				
Group 1: before attack (-42 days to -1 day)	0	1	50.58%	
Group 2: after attack (+ 3 day to + 18 days)	0	1	28.42%	
Group 3: after attack (+ 19 to + 42 days)	0	1	21.00%	
Education ¹	2	32	13.58	3.27
Controls				
Time between interview and event (in days) ¹	-42	42	-5.20	24.26
Age ¹	18	80	47.97	16.19
Female (ref. = male)	0	1	51.80%	
Employment status				
Paid job (ref)	0	1	57.26%	
Unemployed	0	1	5.48%	
Housework	0	1	6.88%	
Student	0	1	6.14%	
Retired	0	1	21.87%	
Other	0	1	2.32%	
Intergroup contact (ref. = no)	0	1	41.91%	
Countries				
Austria	0	1	6.88%	
Czech Republic	0	1	34.89%	
France	0	1	18.42%	
Finland	0	1	6.99%	
Germany	0	1	17.15%	
Ireland	0	1	15.67%	
Contextual variables				
Unemployment rate (%) per region ¹	2.5	13.80	8.15	2.67
Percentage foreigners per region ¹	2.5	30.59	10.10	6.48

Sources: European Social Survey (round 7); Eurostat (2017a; 2017b).

¹Variable is mean-centered for further analyses.

files). For the pre-attack group and both post-attack groups, descriptive statistics of all control variables are shown in Table S.2 (supplementary files). For most control variables, means or proportions are relatively stable across the three groups.

A test of (im-)balance (see Muñoz et al., 2020) for our control variables can be found in Tables S.3a and S.3b (supplementary files). As we have both categorical and interval control variables, we follow Nägel and Lutter's (2020) approach: we consider our treatment variable as dependent variable and assess whether our control variables can significantly explain the probability to belong to a specific group. A significant effect points at an unequal distribution of the groups with regard to the specific variable. In that case, taking into account covariates related to the reachability of respondents in survey research is a common strategy to control for imbalances between treatment and control groups due to reachability bias (e.g. Legewie, 2013; Muñoz et al., 2020).

As we have one pre-attack group (group 1) and two post-attack groups (group 2 and 3), we conduct multinomial logistic regression analyses considering three contrasts: group 2 versus group 1, group 3 versus group 1 and group 3 versus group 2. The results of our analyses indicate that higher educated people are less likely to belong to group 3 (vs. both other groups). Older people are less likely to belong to group 3 versus group 2, while retired people are less likely to belong to group 2 (vs. group 1) as compared to people having a paid job. For other categories of employment status we found no significant relationship with group, which also holds for age.

Analysis strategy

To test our hypotheses we conducted multilevel linear regression analyses (random intercept), while random slopes were added to test both cross-level interactions.⁶ Our analyses enabled us to rule out several possible biases. Firstly, the ESS fieldwork was not carried out in all regions within the six European countries at the same time. To rule out this regional sampling bias (Legewie, 2013) as much as possible, we use a mixed model with individuals at the first level and regions at the second level in subsequent analyses. Moreover, we used fixed effects for all countries to measure the average within-country effect of the attacks net of possible between-country effects (Te Grotenhuis et al., 2015). Secondly, we cannot rule out the possibility that other time-varying variables related to both the events in Paris and the levels of resistance towards Muslim immigrants confound the effects of the Charlie Hebdo attack (Naumann, 2014). To minimize this bias, we controlled for unobserved time-varying variables by including a linear effect of time measured by the number of days the interview took place before or after the attack.⁷ The effects of the Charlie Hebdo attack may also be biased due to the fact that certain social categories have been interviewed at a later point in time than others (see Tables S3.a and S3.b; supplementary files). To minimize this reachability bias (while simultaneously controlling for regional composition effects), we included age, gender, educational level and employment status (cf. Legewie, 2013; Muñoz et al., 2020). Finally, we included the regional percentages of unemployment and foreigners at the contextual level. To have a meaningful intercept, we mean-centered age, education, time, unemployment rates and the percentage of foreigners.

Results

The results of our multilevel regression analyses with country fixed effects are shown in Table 2. In Model 1, we assessed the impact of the Charlie Hebdo attack on resistance towards Muslim immigrants taking all control variables into account. We applied repeated contrasts to exploratorily take into account duration effects, meaning that we compare groups 1 and 2, as well as groups 2 and 3.

When it comes to the impact of the Charlie Hebdo attack, our results for the pooled sample (including six countries) indicate that the level of resistance towards Muslim immigrants is significantly .12 points higher directly after the attack took place, corroborating hypothesis 1. The level of resistance towards

Table 2. Results multi-level regression analyses (individuals nested within regions; including country fixed effects) predicting resistance towards muslim immigrants ($n_i = 4577$; $n_r = 86$).

	Model 1 ^a		Model 2 ^b		Model 3 ^b		Model 4	
	b	p-value	b	p-value	b	p-value	b	p-value
Intercept	2.48	0.00***	2.48	0.00***	2.46	0.00***	2.48	0.00***
Group 2 (post-attack)	0.12	0.04**	0.12	0.05*	0.16	0.02**	0.12	0.04**
Group 3 (post-attack)	-0.03	0.48	0.09	0.26	0.11	0.21	0.10	0.22
Education	-0.05	0.00***	-0.05	0.00***	-0.06	0.00***	-0.05	0.00***
Time	0.00	0.23	0.00	0.24	0.00	0.18	0.00	0.22
Age	0.00	0.75	0.00	0.73	0.00	0.76	0.00	0.73
Female (ref. = male)	0.05	0.05*	0.05	0.05*	0.05	0.05*	0.05	0.05*
Empl. Status (ref. = paid job)								
Student	-0.33	0.00***	-0.33	0.00***	-0.33	0.00***	-0.33	0.00***
Unemployed	0.00	0.99	0.00	0.97	0.00	0.97	0.00	0.98
Retired	0.04	0.28	0.04	0.30	0.04	0.31	0.04	0.28
Housework	0.00	0.98	0.00	1.00	0.00	0.97	0.00	1.00
Other	-0.12	0.13	-0.12	0.14	-0.11	0.15	-0.12	0.12
Intergroup contact (ref. = no)	-0.32	0.00***	-0.32	0.00***	-0.32	0.00***	-0.32	0.00***
<i>Interactions</i>								
Group 2 * % foreigners			0.00	0.79				
Group 3 * % foreigners			0.00	0.87				
Group 2 * unempl. rate					0.02	0.17		
Group 3 * unempl. rate					0.00	0.78		
Group 2 * education							0.00	0.58
Group 3 * education							0.00	0.61
<i>Regional-level</i>								
Unemployment rate	0.00	0.66			0.00	0.74	0.00	0.65
% foreigners	-0.01	0.02**	-0.01	0.03**			-0.01	0.02**
<i>Country fixed effects</i>								
France (ref.)								
Austria	0.20	0.03**	0.16	0.03**	0.16	0.08*	0.20	0.03**
Czech Republic	0.94	0.00***	0.93	0.00***	0.98	0.00***	0.95	0.00***
Germany	-0.17	0.03**	-0.18	0.00***	-0.21	0.00***	-0.17	0.03**
Finland	0.31	0.00***	0.30	0.00***	0.36	0.00***	0.31	0.00***
Ireland	0.52	0.00***	0.51	0.00***	0.41	0.00***	0.52	0.00***

Sources: European Social Survey (round 7); Eurostat (2017a; 2017b).

* significant at $\alpha = .10$; ** significant at $\alpha = .05$; *** significant at $\alpha = .01$ (two-tailed).

^aIn Model 1, we applied repeated contrasts and tested group 2 against group 1, and group 3 against group 2. In all other models (including interaction effects with group), group 1 was used as reference category.

^bModel includes cross-level interaction effects with random slopes (Group 2 and Group 3).

Muslim immigrants dropped with .03 points during the weeks thereafter, but this is a non-significant decrease (group 3 compared to group 2). Note, that comparing group 3 to group 1 shows a non-significant increase of .10 (not shown in Table 2) which means that there is no clear support for a persistent impact of the Charlie Hebdo attack on resistance towards Muslim immigrants.

The results of our control variables educational attainment and intergroup contact are in line with previous findings (Table 2, Model 1): higher educated people and those with intergroup contact display lower levels of resistance towards Muslim immigrants as compared to lower educated people and those who lack intergroup contact (e.g. Schlueter et al., 2020; Strabac and Listhaug, 2008). The highest levels of resistance can be found in the Czech Republic, Ireland, and Finland after taking all other control variables into

account. The effects of the other control variables are rather small and in most cases do not reach the boundary of significance.

Next, we considered the moderating influence of intergroup competition, both at the regional and individual level. Our results indicate that the impact of the Charlie Hebdo attack on people's level of resistance towards Muslim immigrants is not influenced by the percentage of foreigners in their region (Model 2), nor by the regional unemployment rate (Model 3), refuting hypotheses 2a and 2b. Moreover, the impact of the Charlie Hebdo attack is not dependent on respondents' level of educational attainment (Model 4) which means that we have to refute hypothesis 3 as well. As such, our results lend no support to the idea that terrorist attacks increase the salience of intergroup competition, inducing particularly those people who face high levels of intergroup competition to react more fiercely in terms of resistance towards Muslim immigrants.

Finally, we re-estimated the model for each country separately to test whether the pattern found in Table 2 is present in all six countries or was driven by a few countries only. This also enabled us to exploratorily test whether proximity plays a role and whether the rise in resistance towards Muslim immigrants was strongest in France. The results of our analyses per country are summarized in Table 3. Again, we included age, gender, educational level and employment status to minimize reachability bias (Muñoz et al., 2020) and additionally controlled for intergroup contact. A linear effect of time was included to control for unobserved time-varying variables. Finally, we applied a mixed model with individuals at the first level and regions at the second level, to rule out regional sampling bias (Legewie, 2013) as much as possible.

Interestingly, the results show that in France the level of resistance towards Muslim immigrants did not rise but dropped significantly with .28 points directly after the shootings. Note, that Castanho Silva (2018) also found a negative impact of the Charlie Hebdo attack on resistance towards Muslim immigrants in France, however, just below conventional levels of significance.

However, we do find evidence for increased levels of resistance towards Muslim immigrants after the attack in other countries. Our findings show that the effect of the attack is strongest in Ireland: compared to the pre-attack group, the level of resistance towards Muslim immigrants lies .69 points higher in the group interviewed in the first weeks after the attack. Previous studies assessing the impact of the Charlie Hebdo attack on resistance towards Muslim immigrants were inconclusive in this respect. Whereas Castanho Silva (2018) found no support for such an effect in Ireland, Fahey et al. (2019) reached substantially similar conclusions as in Table 3. A similar pattern as was found for Ireland, was also detected in the Czech Republic. This also indicates that it is not very likely that our results are plagued by ceiling effects in other countries, as the level of resistance towards Muslim immigrants in the pre-treatment group was highest in Czech Republic. Summarizing, the effect of the shootings is in line with our first hypothesis, however, only in Ireland and the Czech Republic. In Austria, Germany and Finland, the effect did not reach significance, while in France we found an opposite effect which lends no support for the role of proximity.

Our analyses yield mixed findings with regard to the duration of effects found. For Ireland, the higher level of resistance towards Muslim immigrants remained stable after the attack. However, for France and Czech Republic we did not find support for a persistent effect of the Charlie Hebdo attack.

Robustness analyses

We employed several additional analyses, testing whether our results are sensitive for the way our control and treatment groups were defined. In line with earlier studies (e.g. Castanho Silva, 2018; Echebarria-Echabe and Fernández-Guede, 2006), we used a smaller time-window, comparing respondents interviewed one month before and after the attacks. As we did not find clear support for the role of duration, we also grouped both post-attack groups to have more power when comparing the pre- and post-attack groups. Both robustness analyses led to substantially similar conclusions (see Table S.4; supplementary files). Next, we re-estimated our model 13 times with both post-attack

Table 3. Results multi-level regression analyses per country (individuals nested within regions) predicting resistance towards Muslim immigrants.

	Austria ($n_i = 315$; $n_r = 9$)		Czech Republic ($n_i = 1597$; $n_r = 14$)		Finland ($n_i = 320$; $n_r = 18$)		France ($n_i = 843$; $n_r = 21$)		Germany ($n_i = 785$; $n_r = 16$)		Ireland ($n_i = 717$; $n_r = 8$)	
	b	p-value	b	p-value	b	p-value	b	p-value	b	p-value	b	p-value
Intercept	2.76	0.00***	3.36	0.00***	2.87	0.00***	2.58	0.00***	2.29	0.00***	2.63	0.00***
Group 2 (post-attack) ^a	-0.16	0.56	0.19	0.02**	0.28	0.32	-0.28	0.09*	0.01	0.96	0.69	0.00***
Group 3 (post-attack) ^a	-0.25	0.12	0.00	0.97	-0.19	0.26	0.01	0.94	-0.05	0.60	0.06	0.59
Education	-0.08	0.00***	-0.03	0.00***	-0.03	0.00***	-0.07	0.00***	-0.06	0.00***	-0.05	0.00***
Time	0.01	0.03**	0.00	0.20	0.00	0.67	0.00	0.19	0.00	0.28	-0.01	0.01**
Age	0.00	0.45	0.00	0.40	0.01	0.06*	0.00	0.34	0.00	0.11	0.00	0.19
Female (ref. = male)	0.03	0.80	0.07	0.06*	-0.09	0.32	0.12	0.03**	0.03	0.59	-0.05	0.44
Empl. Status (ref. = paid job)												
Student	-1.04	0.00***	-0.28	0.00***	-0.32	0.07*	0.01	0.94	-0.45	0.00***	-0.35	0.03**
Unemployed	0.12	0.55	-0.13	0.12	-0.02	0.94	-0.01	0.89	-0.11	0.50	0.23	0.06*
Retired	0.00	0.99	0.12	0.06*	-0.01	0.95	0.08	0.42	0.02	0.86	-0.09	0.39
Housework	-0.12	0.50	-0.04	0.66	-0.11	0.72	0.16	0.29	0.21	0.10	-0.05	0.65
Other	-0.26	0.58	-0.41	0.00***	-0.45	0.07*	0.02	0.94	0.01	0.96	0.23	0.17
Intergroup contact (ref. = no)	-0.52	0.00***	-0.25	0.00***	-0.33	0.00***	-0.34	0.00***	-0.30	0.00***	-0.31	0.00***

Source: European Social Survey (round 7).

* significant at $\alpha = .10$; ** significant at $\alpha = .05$; *** significant at $\alpha = .01$ (two-tailed).

^aWe applied repeated contrasts and tested group 2 against group 1, and group 3 against group 2. All other coefficients are based on the model with group 1 as reference category.

groups spanning a shorter or longer period. Figure S.2 (supplementary files) displays the b-coefficients for group 2 versus group 1 (based on Table 3) for various cut-off values for both post-attack groups. These findings clearly show that our findings are not dependent on the cut-off values for both groups as we find positive effects for Czech Republic and Ireland, while the effect is negative in France. We also decided to re-run our analyses including additional controls for religiosity (i.e. frequency of church attendance) and denomination: our findings are robust once we control for both determinants (see Table S.4; supplementary files). Moreover, we conducted additional analyses excluding our control variable intergroup contact which yields substantially similar conclusions (Table S.4; supplementary files). Finally, to further increase our confidence in our findings, we decided to re-run our models with an alternative dependent variable referring to the respondents' ingroup instead of Muslims.⁸ In this case, one would expect no effect of the Charlie Hebdo attack, which is exactly what we find (see Table S.4; supplementary files).

Conclusion and discussion

In recent years, several European countries faced terrorist attacks by Islamist terrorists. Previous research on the impact of terrorist attacks (e.g. Böhmelt et al., 2020; Larsen et al., 2020; Nussio et al., 2019) has mainly focused on general indicators of prejudice not directly linked to the attacks, which might lead to an underestimation of effects (Czymara and Schmidt-Catran, 2017). We expect that if terrorist attacks by Islamist terrorists affect prejudice, this is most likely the case with regard to Muslims. Therefore, in this study, we assessed the impact of the Charlie Hebdo attack on the European public's attitudes towards Muslims to increase our understanding as to how terrorist attacks shape public opinion.

Drawing on two theoretical lines of reasoning – i.e., SJT (e.g. Jost and Hunyady, 2003; Jost et al., 2004) and intergroup conflict theory (e.g. Quillian, 1995; Scheepers et al., 2002) – we expected that terrorist attacks by Islamist terrorists would induce resistance towards Muslim immigrants among the European public. To answer our first research question, we took on a cross-national perspective rather than focussing on single countries. Our results indicate that the attack on Charlie Hebdo clearly has an effect on resistance towards Muslim immigrants in Europe, although there are large differences across countries. In Austria, Germany and Finland, we found no impact of the Charlie Hebdo attack, once we ruled out possible reachability and sampling bias and controlled for unobserved time-varying variables. In Czech Republic and Ireland, levels of resistance towards Muslim immigrants rose immediately after the attack and persisted, while for France, we even found that respondents interviewed in the weeks after the attack showed lower rather than higher levels of resistance towards Muslim immigrants, substantially similar to previous studies (Castanho Silva, 2018; Fahey et al., 2019).

To answer our second research question, we assessed whether the impact of the Charlie Hebdo attack on resistance towards Muslim immigrants was dependent on intergroup competition at the regional and individual level. Previous research stressed that terrorist attacks increase the salience of the immigration issue and intergroup competition (Böhmelt et al., 2020; Hopkins, 2010; Legewie, 2013). However, our findings lend no support for the relevance of these particular derivations of intergroup conflict theory as the percentage of foreigners nor the unemployment rate in European regions influenced the impact of the Charlie Hebdo attack on resistance towards Muslim immigrants. Moreover, the impact of the Charlie Hebdo attack on people's resistance towards Muslims was not dependent on their educational level.

Our overall conclusion substantiates findings from earlier research showing that the effect of terrorist attacks on related indicators of public opinion is certainly not uniform but rather varies across countries (e.g. Fetzer and Soper, 2003; Finseraas and Listhaug, 2013; Legewie, 2013). These findings raise new questions as to why European citizens' reaction to terrorist attacks differs substantially across countries. Interestingly, previous research has shown that both countries for which we found a positive effect of the Charlie Hebdo attack (i.e. Czech Republic and Ireland), stood out in the years before the event in terms of public support for restrictive immigration policies, whereas the public climate in the other countries was milder, and particularly in France: increasingly milder (Van Setten et al., 2017). Moreover, both Czech Republic and Ireland have the lowest shares of Muslims, with .2 respectively 1.4 per cent of the

population being Muslim, which is in stark contrast with France where 8.8 per cent of the population is Muslim (PEW Research Center 2017). As a larger share of outgroup members increases the likelihood that natives become familiarized with out-group members and have actual intergroup contact (e.g. Nussio et al., 2019; Pettigrew et al., 2010; Savelkoul et al., 2011), people living in countries with a larger share of Muslims may respond less fiercely to a terrorist attack. Nussio et al. (2019) provided circumstantial evidence for this proposition: the positive effect of the 2015 Bataclan attacks on negative attitudes towards refugees and immigrants in general was less strong in European countries with a larger share of refugees and foreign born residents.

Although the relatively mild opinion climate concerning immigration policies and the presence of Muslims in France might (partly) explain the remarkable finding for this country, the situation in France also differed from other countries with regard to the immediate aftermath of the attacks. In the days after the attack, a series of rallies took place in cities across France and the slogan “Je suis Charlie” was used as a symbol of solidarity against the attacks. While demonstrations also took place in other countries, the largest rallies were held in France on January 11: across France, over 3 million people took part in these ‘unity marches’, of which more than 1.5 million in Paris, including President Hollande and over 40 world leaders (BBC, 2015). According to Mignot (2018), the call for national unity and the republican principle of equality between citizens by many French elected representatives in the aftermath of the attacks might have had deescalating effects, compensating the effect of the attack.

A limitation of this contribution is that we could only assess the impact of Charlie Hebdo on resistance towards Muslim immigrants in six European countries, hence, we were unable to disentangle country-level characteristics altering the influence of this event. Ideally, future research should incorporate a larger number of countries, to test whether, for instance, the relative size of the Muslim population and inflow of Muslim immigrants across countries, or countries’ migration histories and previous experiences with terrorist attacks alter the impact of terrorist attacks on attitudes towards Muslims. Moreover, building on our findings, it may be particularly relevant to consider media coverage on and after the attacks (e.g. Ruigrok and Van Atteveldt 2007) or responses from the political elite arenas (Mignot, 2018). Unfortunately, however, this will be no easy feat due to the scarcity of suitable available and comparable data sources across countries. Another limitation of our study relates to our exploratory analyses regarding the influence of duration. Due to data limitations, we were only able to consider a period of approximately six weeks after the attacks took place, which means that one should be careful with drawing too strong conclusions about the persistency of effects. Future research could further unravel how people’s attitudes are shaped by terrorist attacks in the *immediate* aftermath of an attack as well as over a longer period of time. However, scarcity of suitable data sources might complicate such efforts.

Summarizing, this study shows that terrorist attacks by Islamist terrorists do influence European citizens’ resistance towards Muslims, however, this impact varies strongly across countries. As such, these overall findings illuminate why previous studies, in a limited number of countries, found mixed evidence: we found no uniform effects of the attacks in different countries. This underlines that one cannot be too careful with generalizing conclusions from single countries to other countries. For the time being, we found that particularly citizens in countries already characterized by an unfavourable opinion climate towards immigrants, reacted sensitively as a consequence of the Charlie Hebdo attack.


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Supplemental material

Supplemental material for this article is available online.

Notes

1. Drawing firm conclusions on general patterns becomes further complicated by the large timespan between both measures in the study by Fetzer and Soper (2003), which means that it is difficult to rule out alternative influences. Moreover, differences between countries in their study are difficult to interpret as they focused on various policy issues across countries. As Echebarria-Echabe and Fernández-Guede (2006) focused on a small sample of about 200 Basque people, one should be careful with generalizing their findings to the general population.
2. We will refer to the terrorist attack on the Charlie Hebdo offices and the related attacks around Paris in the aftermath as ‘Charlie Hebdo attack’.
3. The impact of the relative share of outgroup members might be (partly) offset by increased (opportunities for) intergroup contact (Legewie, 2013; Nussio et al., 2019), which reduces resistance towards Muslims (e.g., Savelkoul et al., 2011; Schlueter et al., 2020). To assess the role of intergroup competition more profoundly, we will control for intergroup contact at the individual level.
4. Although we draw on the same dataset as used in the study by Castanho Silva (2018), we build on this study by assessing the moderating effect of intergroup competition at the regional and individual level and exploratorily considering the role of duration.
5. Unfortunately, comparable regional information on the relative share of Muslims is not available for all countries in this study.
6. Formal equations of our models are included in Appendix 1 (supplementary files).
7. Additionally, we reran our analyses including second and third order polynomials of time, leading to substantially similar conclusions, with some minor exceptions (see Table S.4).
8. This item is similarly phrased as our dependent variable, though refers to immigrants of the same race or ethnic group as most people in the respondent’s country.

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