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To cite this article: Jelena Matić, Ajana Löw & Denis Bratko (2019) Personality and ideological bases of anti-immigrant prejudice among Croatian youth, Journal of Ethnic and Migration Studies, 45:13, 2387-2406, DOI: [10.1080/1369183X.2018.1444470](https://doi.org/10.1080/1369183X.2018.1444470)

To link to this article: <https://doi.org/10.1080/1369183X.2018.1444470>



Published online: 01 Mar 2018.



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# Personality and ideological bases of anti-immigrant prejudice among Croatian youth

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## ABSTRACT

In this paper, we explore the relationship between personality, right-wing authoritarianism (RWA), social dominance orientation (SDO) and anti-immigrant prejudice of Croatian youth ( $N = 1050$ ). We base our hypotheses on the Dual-process motivational model of ideology and prejudice (DPM) and the meta-theoretical framework of McCrae and Costa's five-factor theory of personality (FFT), assuming that dispositions (basic tendencies) relate to ideological attitudes (characteristic adaptations) that further relate to prejudice (objective biography). The present study contributes to the existing literature by disentangling the mechanism of the personality–prejudice relation in thus far under-researched anti-immigrant prejudice domain. In addition, as one of the rare examinations of the personality–prejudice relation conducted outside the Western Europe and North America, the study offers valuable insight about the cross-cultural stability of the current findings. On the present sample, extraversion and openness to experience exerted direct effects on anti-immigrant prejudice. Indirect effects via RWA were found for extraversion, agreeableness, conscientiousness and openness, and indirect effects via SDO were found for agreeableness, neuroticism and openness. Intriguingly, indirect effects of agreeableness on prejudice via RWA and SDO operated in opposite directions. Overall, the results support the DPM and FFT assumptions and provide fair replication of the existing empirical evidence.

## ARTICLE HISTORY

Received 17 April 2017

Accepted 18 February 2018

## KEYWORDS

Anti-immigrant prejudice; Big Five personality; right-wing authoritarianism; social dominance orientation; Croatia

## Introduction

Despite the long-standing tradition of dispositional theories of prejudice, personality factors have been largely neglected in the literature about anti-immigrant prejudice (see, e.g. Ackermann and Ackermann 2015; Esses et al. 2015; Gallego and Pardos-Prado 2014). A notion about dispositional basis of prejudice dates back to 1950s, when Adorno et al. (1950) and Allport (1954) introduced the concepts of authoritarian and prejudiced vs. tolerant personalities. According to these authors and more recent work built upon the classical endeavours (e.g. Altemeyer 1981; Duckitt 2001; Sidanius and Pratto 1999), there are some dispositional characteristics that affect one's inclination towards

prejudice. These characteristics can explain prejudice towards a particular out-group, even when considered within a broader framework that includes well-documented socio-cognitive determinants of prejudice (e.g. perceived threat; Akrami 2005; Akrami and Ekehammar 2004). Individual differences in proneness to prejudice remain largely stable across time and situations and can be held responsible for the rank-order stability of prejudice (Akrami et al. 2009), as well as for the generality of prejudice, i.e. proneness to prejudice towards different groups (e.g. Akrami, Ekehammar, and Bergh 2011; Ekehammar and Akrami 2003).

The question *how* dispositions translate to prejudice represents the central concern of this paper. Generally speaking, there is now abundance of evidence showing that dispositions (as basic tendencies) relate to ideological attitudes (as characteristic adaptations) that further relate to prejudice, ethnocentrism or discrimination (as objective biography; see McCrae and Costa 2008). However, the empirical examinations of the mechanism underlying the relationship between personality traits and attitudes towards immigrants are rather scarce (Freitag and Rapp 2015; Gallego and Pardos-Prado 2014). The main goal of this paper is to disentangle the mechanism of the personality–prejudice relation in this under-researched prejudice domain.

The present research represents one of the rare examinations of the personality–prejudice relation outside Western Europe and North America (see Sibley and Duckitt 2008), and might be a valuable contribution to cross-cultural comparison. Due to the contextual variety surrounding the topic of immigration in particular country, one cannot simply assume that findings hold across countries, measures and samples (Cohrs and Stelzl 2010). In fact, recent data suggest that specific social context, such as heightened in-group threat, low cultural or ethnic diversity or economic decline, may largely shape public opinion regarding immigration (Ackermann and Ackermann 2015; Dancygier and Donnelly 2013; Newman 2012). There is additional evidence that individual differences interact with contextual or situational factors, producing changes in attitudes towards different out-groups (Dinesen, Klemmensen, and Nørgaard 2016; Jugert and Duckitt 2009; Van Assche et al. 2014). Thus, the paper contributes to the literature by offering insight into empirical findings from less-researched country such as Croatia, i.e. by providing test of whether the results hold beyond the developed countries.

Finally, because it appears that personality exerts its strongest effects on prejudice in the late adolescence/young adulthood (e.g. see findings for agreeableness and openness to experience in Sibley and Duckitt 2008), we believe it is especially relevant to study the topic of personality underpinnings of prejudice on representative youth samples. With respect to this, we see our sample consisting of secondary school students (aged 17–20) as more representative of general youth population than university students samples that research often relied on (see Sibley and Duckitt 2008, 254). At the university level, the restriction of range is at place for many (possibly) relevant variables, such as social background and different conative or cognitive characteristics, making the university student sample a rather non-representative sub-group of youth population. Contrary to that, secondary school students usually mirror the general youth population considerably better. This is especially true for Croatia that has distinctly low drop-out rate at the secondary school level, especially compared to many international educational systems (see European Commission 2013).

### *Big Five personality dimensions and anti-immigrant prejudice*

In the present paper, we examine the core personality traits (as conceptualised under the Big Five model) as antecedents of prejudice. Meta-analysis by Sibley and Duckitt (2008) revealed agreeableness and openness to experience (denoted 'openness' further in the text) as robust predictors of various types of prejudice. People who score high on openness feel at ease with unconventionality and express curiosity, both in intellectual and in social realms. Those who score higher on agreeableness tend to be sympathetic, warm and demonstrate greater levels of interpersonal trust. Consequently, people who score high on openness and agreeableness tend to exert less prejudice than people who score low on these dimensions. In the meta-analysis, bivariate correlations of openness and agreeableness with prejudice were negative, moderate ( $r = -.30$ ,  $N = 4713$  and  $k = 25$ ) and weak to moderate in size ( $r = -.22$ ,  $N = 4713$  and  $k = 25$ ), respectively. On the other hand, the association of neuroticism, conscientiousness and extraversion with prejudice was negligible (Sibley and Duckitt 2008). However, it is important to bear in mind that the magnitudes of personality–prejudice correlations can vary across the prejudice domains (Ekehammar and Akrami 2007; Sibley and Duckitt 2008).

Relatively few papers reported the association of personality traits and anti-immigrant prejudice. Akrami, Ekehammar, and Bergh (2011) found substantial correlation between agreeableness and openness with anti-immigrant prejudice in Sweden ( $r_s = -.34$  and  $-.39$ , respectively). Onraet et al. (2011) investigated only openness and reported its strong correlations with subtle and blatant racism directed towards immigrants in Belgium ( $r_s = -.54$  and  $-.55$ ). Bergh, Akrami, and Ekehammar (2010) found moderate correlations of openness and agreeableness with anti-immigrant prejudice. Several other studies reported significant, albeit weak correlations of anti-immigrant prejudice with openness (Ekehammar et al. 2004; Hodson, Hogg, and MacInnis 2009; see also Dinesen, Klemmensen, and Nørgaard 2016) and agreeableness (Ekehammar et al. 2004; Gallego and Pardos-Prado 2014; see also Ackermann and Ackermann 2015; Dinesen, Klemmensen, and Nørgaard 2016).

While the above-mentioned findings might lead to the conclusion that anti-immigrant prejudice relates only to openness and agreeableness, some studies indicate that other personality traits could also play a relevant role. For example, Ekehammar et al. (2004) reported low but significant correlation of modern racial prejudice with conscientiousness ( $r = .16$ ; see also Ackermann and Ackermann 2015; Dinesen, Klemmensen, and Nørgaard 2016). Gallego and Pardos-Prado (2014) found that all Big Five factors were significantly related to attitudes towards immigrants. However, with the exception of agreeableness–prejudice correlation, remaining correlations were rather low and practically irrelevant. The authors additionally highlighted the unexpectedly low correlation of openness and attitudes towards immigrants. Similarly, Freitag and Rapp (2015) found low and/or non-significant association of openness and anti-immigrant attitudes on Swiss sample. In their examination of personality correlates of political tolerance, the authors identified agreeableness and extraversion as predictors of anti-immigrant attitudes, and openness and extraversion as precursors supporting immigrants' voting rights. Lastly, Satherley and Sibley (2016) found that HEXACO agreeableness, honesty–humility, openness, neuroticism and extraversion correlate weakly with New Zealanders' warmth to Chinese immigrants ( $r_s = .16$ ,  $.14$ ,  $.12$ ,  $-.10$  and  $.07$ , respectively).

In conclusion, though openness and agreeableness seem to be the most robust prejudice correlates from the personality domain (Sibley and Duckitt 2008), the relations between personality dimensions and prejudice are far from simple and not easy to generalise, since they depend on the prejudice domain and specific social context.

### *Dual-process motivational model of ideology and prejudice*

Within last two decades, most of the research examining the relationship between personality and prejudice relied on the Dual-process motivational model of ideology and prejudice (DPM; Duckitt 2001, 2005; Duckitt and Sibley 2017). The DPM integrates both dispositional and contextual antecedents of ideology and prejudice and provides basis for integrative approach to the study of prejudice. The theoretical model is substantiated by solid empirical support (see Duckitt and Sibley 2017). The causal order of its components was supported both experimentally (Duckitt 2009) and longitudinally (Asbrock, Sibley, and Duckitt 2010; Perry and Sibley 2012).

According to the DPM, the exposure to punitive and cold socialisation practices in childhood, as well as threatening and competitive social surroundings, result in the development of social conformity (vs. personal autonomy) and toughmindedness (vs. tender-mindedness). Within the Big Five domain, social conformity can be understood as low openness and high conscientiousness, while toughmindedness can be regarded as low agreeableness (Duckitt 2009; Duckitt and Sibley 2009). A person with high levels of social conformity relies heavily on social norms and is eager to protect these at any costs. Consequently, this person is more sensitive to signs of realistic and/or symbolic threat. On the other hand, toughminded individuals perceive the world as dog-eat-dog place with zero-sum allocation of resources and tend to be unattached, cynical and interpersonally aversive. These characteristics and worldviews evoke motivational goals for security and power, expressed in the form of right-wing authoritarianism (RWA) and social dominance orientation (SDO). The latter ultimately lead to prejudice (Duckitt 2001, 2005, 2009; Duckitt and Sibley 2009, 2017; Satherley and Sibley 2016; Sibley and Duckitt 2008).

According to the DPM, both RWA and SDO predict prejudice towards groups that are perceived as threatening and inferior, as it is usually the case with immigrants (see also Cohrs and Stelzl 2010). Results of Cohrs and Stelzl's (2010) meta-analysis offer support for this assumption, revealing a strong association of RWA and SDO with negative attitudes towards immigrants ( $r_s = .46$  and  $.45$ , respectively).

RWA, as conceptualised within the DPM, encompasses conventionality, authoritarian aggression and authoritarian submission (Altemeyer 1981). People high on RWA value safety, order and control (Duckitt 2005). According to Sibley and Duckitt's meta-analysis (2008), RWA is in moderate negative correlation with openness ( $r = -.36$ ,  $N = 15\,570$  and  $k = 48$ ) and in weak positive correlation with conscientiousness ( $r = .15$ ,  $N = 14\,383$  and  $k = 43$ ). SDO reflects preference towards egalitarian or hierarchically arranged group relations within the society (Pratto et al. 1994). Sibley and Duckitt (2008) found moderate negative correlation of SDO with agreeableness ( $r = -.29$ ,  $N = 11\,669$  and  $k = 31$ ) and weak negative correlation of SDO with openness ( $r = -.16$ ,  $N = 11\,319$  and  $k = 30$ ). Furthermore, high SDO was found to predict unfavourable attitudes towards immigrants (Leong 2008), rejection of multicultural ideology (Ward and Masgoret 2006) and support for policies

that favour domination over immigrants (Pratto and Lemieux 2001). RWA and SDO were traditionally regarded as personality traits (Altemeyer 1998; Pratto et al. 1994). However, there is a robust evidence of (at least partially) malleable nature of these constructs due to situational influences and manipulations, socialisation effects, changes in the identity salience, etc. (Guimond et al. 2003; Reynolds et al. 2001; Sibley and Duckitt 2008). Consequently, most of the contemporary scholars agree with the conceptualisation of RWA and SDO as ideological attitudes rather than core personality traits (e.g. Akrami and Ekehammar 2006; Bergh et al. 2016; Duckitt and Sibley 2017; Sibley and Duckitt 2008).

The DPM predicts that openness (i.e. social conformity) relates to prejudice only indirectly via RWA, while agreeableness (i.e. toughmindedness) relates to prejudice only indirectly via SDO. No other mechanisms linking personality with prejudice are specified within the DPM. For people low in openness and low in agreeableness, the ideological positions (RWA and SDO) serve as justifications for their prejudice (see Cohrs, Kämpfe-Hargrave, and Riemann 2012). People low in openness and high in RWA react negatively to immigrants because they perceive them as a challenge to the established social order and values, or as a threat to collective security. Those low on agreeableness and high in SDO hold negative sentiment towards immigrants because they usually occupy low-status positions in the society and might be seen as potential competitors for economic or status-relevant resources. Indeed, in Sibley and Duckitt's (2008) meta-analysis, RWA is found to mediate the effect of openness on prejudice and SDO is found to mediate the effect of agreeableness on prejudice.

However, the empirical evidence suggests that, along with the robustly found openness-RWA-prejudice and agreeableness-SDO-prejudice effects, other mechanisms underlying the link between personality traits and prejudice might also be at work (see, e.g. Cohrs, Kämpfe-Hargrave, and Riemann 2012 for openness-SDO-prejudice effect; Cohrs, Kämpfe-Hargrave, and Riemann 2012; Ekehammar et al. 2004 for extraversion-RWA-prejudice effect; Cohrs, Kämpfe-Hargrave, and Riemann 2012; Ekehammar et al. 2004; Kalebić Maglica and Vuković 2016 for conscientiousness-RWA-prejudice effect). Therefore, the possibility of alternative mechanisms between personality traits and anti-immigrant prejudice will be thoroughly examined in this paper.

Finally, it is important to note that the present research does not strictly follow Duckitt's comprehensive approach to the study of prejudice, as it did not include measures of all the relevant factors integrated within the DPM framework (e.g. the worldview element). However, its hypotheses largely align with the DPM predictions.

### **Overview of the country context**

In contrast to many developed countries in Europe and beyond, Croatia has not been very appealing destination for immigrants, especially not for economic immigrants. Less than 1% of Croatian population is of immigrant origin (for more information see Gregurović, Kutli, and Župarić-Iljić 2016). This is one of the reasons Croatian citizens' attitudes towards immigrants have not been systematically examined and data on the issue has been rather scarce.

A handful of studies conducted in Croatia suggest the immigration was predominantly perceived in negative light. For example, results of 2002 study by Franc, Šakić, and Kaliterna-Lipovčan (2010) and 2009 study by Čačić-Kumpes, Gregurović, and Kumpes (2012)

revealed high levels of perceived socio-economic and socio-cultural threats from immigrants, opposition to the immigrant arrival, as well as high social distance towards immigrants. Furthermore, Centre for Peace Studies' (2013) study revealed that, although citizens expressed declarative support to multiculturalism, they were reluctant when considering whether to grant Croatian nationality to a foreigner. Similar conclusions arise from studies on the perception of asylum seekers. In 2011, students reported high perception of social, cultural, health and economic threat from asylum seekers (Župarić-Iljić and Gregurović 2013). More recent findings from the 2013 study by Gregurović, Kuti, and Župarić-Iljić (2016) revealed that 20–35% of participants perceive cultural threat from immigrant workers, as well as security and economic threat from asylum seekers. The present study is, to the best of our knowledge, the first one to examine personality bases of anti-immigrant prejudice in Croatia.

### **The present study**

The present study aims to examine Croatian youth anti-immigrant prejudice in the aftermath of (or during) the, so-called, migration 'crisis' that first affected Croatia in late 2015. It further aims to explore the relationship between Big Five personality dimensions, RWA, SDO and anti-immigrant prejudice. Bearing in mind both theoretical background and empirical evidence, we expect anti-immigrant prejudice to be negatively correlated with openness and agreeableness, and uncorrelated to other Big Five personality factors (extraversion, neuroticism and conscientiousness). Additionally, by exploring the under-investigated structural relations between variables, this paper aims to analyse possible mediating effects of RWA and SDO in the association of personality traits with anti-immigrant prejudice. Acknowledging that the significant result of the mediation analysis does not exclude alternative causal models (see Fiedler, Schott, and Meiser 2011), we rely on the theoretical framework of the DPM and the five-factor theory of personality (Duckitt 2001; McCrae and Costa 2008), as well as the conclusions of the longitudinal and experimental studies, thus only testing the plausibility of the *personality* → *ideology* → *prejudice* regression sequence within our model. Namely, theoretical and empirical bases suggest that personality traits act as antecedents of ideological attitudes and prejudice, while ideological attitudes act as antecedents of prejudice, with scanty support for the reversed order of causation (e.g. Asbrock, Sibley, and Duckitt 2010; Guimond et al. 2003; Kteily, Sidanius, and Levin 2011; Perry and Sibley 2012; Sibley and Duckitt 2010). Based on the meta-analytic evidence (Sibley and Duckitt 2008), we expect RWA to mediate the relationship between openness and anti-immigrant prejudice and SDO to mediate the relationship between agreeableness and anti-immigrant prejudice. However, we approach this research question in fully exploratory manner, allowing the test for mediation via both RWA and SDO for all Big Five personality dimensions.

## **Method**

### **Participants**

The study was conducted on the representative sample of students in their final year of secondary schooling in the City of Zagreb (capital of Croatia) and Zagreb county. In order to



determine the sampling framework and select the representative sample, we obtained the updated information on the population of students from the relevant educational stakeholders. We focused on students who attend public schools with classes in Croatian. The sample did not include students attending private secondary schools, art schools, schools for national minority members or schools for students with developmental difficulties, as these represent a small share in the overall population of secondary school students. Without including the latter categories of students, the size of the population of students enrolled in their final year of secondary school in City of Zagreb and Zagreb county was around 11,000. We performed proportional stratified cluster sampling procedure, by taking into account the ratio of students attending different types of school programme (3-year vocational, 4-year vocational, 5-year vocational or grammar school), and the location of the school (City of Zagreb or Zagreb county). Within each stratum, we randomly selected schools and classes. In total, 1050 students from 51 classes in 26 schools participated in the research. Within 3-year vocational programmes, students attending third grades were surveyed; within 4-year vocational programmes and grammar schools, students attending fourth grades were surveyed; and within 5-year vocational programmes, students attending fifth grades were surveyed. We excluded the data of the 16 students that identified as immigrants. Of the remaining 1034 participants, 54.4% were female, 21.2% were attending 3-year vocational schools, 43.7% were attending 4- and 5-year vocational schools (categories combined due to the small share of students attending 5-year vocational, i.e. medical schools) and 35.1% were attending grammar schools. Participants were between 17 and 20 years old.

## Measures

*Personality factors* of extraversion, agreeableness, conscientiousness, neuroticism and openness were assessed using Croatian adaptation of the Big Five Inventory (BFI; John and Srivastava 1999). BFI consists of 44 statements that describe one's personal characteristics (e.g. 'I see myself as someone who is considerate and kind to almost everyone.'). Participants' answers were expressed on a 5-point Likert-type scale (from '1 – strongly disagree' to '5 – strongly agree'). The scale was translated, back-translated and validated by Kardum and his collaborators (see Schmitt 2004) and is routinely used as Croatian BFI equivalent (e.g. Bratko et al. 2014; Marušić and Matić 2017).

RWA was assessed using Zakrisson's (2005) short version of RWA scale. The scale consists of 15 items (e.g. 'Our country needs a powerful leader, in order to destroy the radical and immoral currents prevailing in society today.') with accompanying 7-point Likert-type scale (from '1 – strongly disagree' to '7 – strongly agree'). The scale was translated, back-translated and used in the earlier research by Tomić, Huić, Kamenov, Čepulić and Račevska (Jelić, Huić, and Kamenov 2014; Račevska, Tomić, and Huić 2014; Tomić, Huić, and Čepulić 2013).

SDO was assessed via translated and adapted version of Sidanius and Pratto's (1999) SDO<sub>5</sub> scale. The adapted scale consists of 13 items (e.g. 'Some groups of people are simply not equals to others.') with accompanying 5-point Likert-type scale (from '1 – strongly disagree' to '5 – strongly agree'). During translation and adaptation of this scale for use in Croatian context, Skokandić (2013) excluded the item '10. Equality.' from the original 14-item scale, considering it largely redundant with other statements in the scale, e.g. '8. Increased economic equality.' and '9. Increased social equality.' Additionally, the order of the items was changed to ensure the alternating order of pro-



and con-trait items, and the format of the scale was modified, from original 7-point to 5-point scale. A back-translation procedure was not performed, however, the quality of the translation was assessed by several independent researchers. In addition, Skokandić's (2013) version of Sidanius and Pratto's (1999) SDO<sub>5</sub> scale functioned adequately in the pilot study we conducted with 403 participants (see Matić 2018).

*Anti-immigrant prejudice* was assessed via scale that was constructed by the first author and pilot-tested on the comparable sample of 332 secondary school students in winter 2015/2016 (for more information, see Matić 2018). The scale consists of 12 balanced items (e.g. 'I would love to make friends with an immigrant.'; reverse coded), accompanied by 5-point Likert-type scale (from '1 – strongly disagree' to '5 – strongly agree'). The items depict different cognitive, emotional and behavioural responses towards a general category of an immigrant (no particular immigrant category, e.g. economic immigrant or refugee, nor any specific nationality were mentioned in the items). A similar approach was taken in previous research (e.g. Ekehammar and Akrami 2003; Hodson, Hogg, and MacInnis 2009; Van Assche et al. 2014). However, using data on social distance towards members of 14 different nationalities (which was also collected in our research, but not reported in detail within this paper), we found that anti-immigrant prejudice most strongly correlated with social distance towards Syrian people ( $r = .58, p = .00$ ). This is not to say this construct only refers to prejudice towards the most prominent refugee group of the recent migration wave. Rather, it corroborates the presumption that students' responses to the items of the prejudice scale were indeed affected by current migration flows. All items of the anti-immigrant prejudice scale are listed in the [appendix](#).

Results on all measures were coded so that the higher results on each scale indicate a greater extent of the underlying construct.

Within the structural model, all latent variables were attached to three balanced parcels of manifest variables. We created balanced parcels based on the procedure described by Little et al. (2002), taking into consideration saturations of the items with the respective constructs and the number of pro- and con-trait items, where possible. We modelled latent factor of extraversion with parcels E\_1, E\_2 and E\_3; agreeableness with A\_1, A\_2 and A\_3; conscientiousness with C\_1, C\_2 and C\_3; neuroticism with N\_1, N\_2 and N\_3; openness with O\_1, O\_2 and O\_3; RWA with RWA\_1, RWA\_2 and RWA\_3; SDO with SDO\_1, SDO\_2 and SDO\_3 and anti-immigrant prejudice with PREJUDICE\_1, PREJUDICE\_2 and PREJUDICE\_3.

## Procedure

The data collection took place in spring 2016. The survey was administered during regular school hours and lasted around 45 minutes. The survey was of classical, paper-pencil type. Students' informed consents were obtained. No material compensation was provided for participants, however, they could sign up for the feedback on their personal results, contrasted to the results of the whole sample.

## Results

Table 1 contains descriptive statistics for the variables used in the present study. As evident, the average overall result on the scale of anti-immigrant prejudice is 3.01. The

**Table 1.** Means, standard deviations and reliabilities for the personality dimensions, RWA, SDO and anti-immigrant prejudice ( $N = 1034$ ).

	<i>M</i>	<i>SD</i>	Cronbach's $\alpha$
Extraversion	3.58	0.66	.78
Agreeableness	3.50	0.58	.72
Conscientiousness	3.37	0.65	.81
Neuroticism	2.75	0.73	.80
Openness	3.51	0.63	.78
RWA	3.92	0.70	.68
SDO	2.30	0.56	.76
Prejudice	3.01	0.85	.90

Note: RWA, Right-wing authoritarianism; SDO, Social dominance orientation and Prejudice, Anti-immigrant prejudice.

distribution of the overall results is normal, with a majority of the sample having moderate levels of anti-immigrant prejudice.

However, at the item level, the results reveal somewhat ambivalent group sentiment towards immigrants. Roughly, 63% of participants said the arrival of a larger number of immigrants should be prevented. In addition, despite the history of economic emigration of Croats, as well as the 90's war experience, less than 20% of participants perceived that Croats have a lot in common with immigrants. Seeing immigrants considerably different from the host society members provides the basis for prejudice and discrimination. The tendency towards the latter is assessed with the item that refers to giving priority to a job candidate from Croatia rather than to a candidate of immigrant origin. More than half of the sample (strongly) agreed with this statement. At the same time, several indicators of positive sentiment towards immigrants can be observed. More than 50% of participants agreed they would help an immigrant to settle in Croatia, little less than half declared to sympathise with immigrants because of the problems they could face in Croatia and/or disagreed with the item claiming that immigrants should abandon their customs after arriving in Croatia. Moreover, above 40% of participants reported they would enjoy getting to know other cultures through the contact with immigrants.

Table 2 contains bivariate correlations of the variables used in the present study.

As evident from Table 2, four out of five personality dimensions (with the exception of conscientiousness;  $r = .06$ ,  $p = .08$ , 95% confidence interval (CI) estimated through bootstrapping with 1000 resamples  $[-.01, .12]$ ) have statistically significant correlations with anti-immigrant prejudice. The strongest association can be observed between openness and prejudice ( $r = -.29$ ,  $p = .00$  and 95% CI  $[-.34, -.23]$ ), indicating that students who

**Table 2.** Correlations of personality dimensions, RWA, SDO and anti-immigrant prejudice ( $N = 1034$ ).

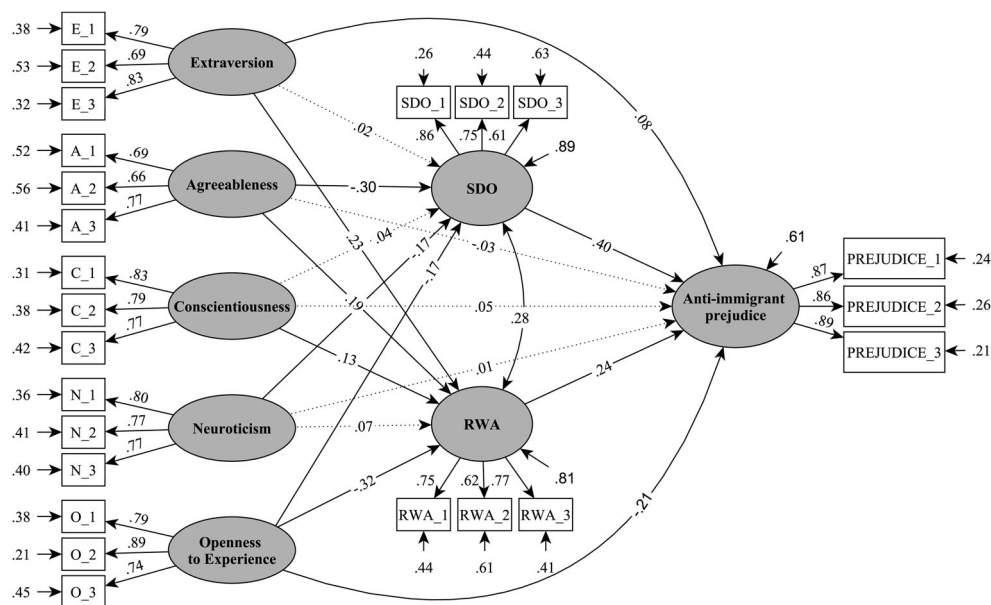
	1.	2.	3.	4.	5.	6.	7.	8.
1. Extraversion	–							
2. Agreeableness	.05	–						
3. Conscientiousness	.26**	.24**	–					
4. Neuroticism	–.25**	–.35**	–.26**	–				
5. Openness	.10**	.07*	.15**	.00	–			
6. RWA	.17**	.14**	.16**	–.10**	–.21**	–		
7. SDO	.01	–.20**	–.04	–.04	–.17**	.20**	–	
8. Prejudice	.11**	–.07*	.06	–.07*	–.29**	.34**	.44**	–

Note: RWA, Right-wing authoritarianism; SDO, Social dominance orientation and Prejudice, Anti-immigrant prejudice.

\* $p < .05$ , \*\* $p < .01$ .

scored higher on openness tended to score lower on prejudice and vice versa. This correlation is of medium effect size (cf. Cohen 1992). All other correlations are of small effect size. Correlations of prejudice with extraversion ( $r = .11$ ,  $p = .00$  and 95% CI [.05, .17]), agreeableness ( $r = -.07$ ,  $p = .03$  and 95% CI [-.13, .00]), and neuroticism ( $r = -.07$ ,  $p = .03$  and 95% CI [-.13, .00]) might well be significant because of the large sample size. Moderate to strong correlations were found between anti-immigrant prejudice and RWA ( $r = .34$ ,  $p = .00$  and 95% CI [.29, .40]), and anti-immigrant prejudice and SDO ( $r = .44$ ,  $p = .00$  and 95% CI [.39, .49]).

We also analysed structural relations between personality traits, RWA, SDO and anti-immigrant prejudice of Croatian youth. We conducted the analysis in R *lavaan* (R Core Team 2017; Rosseel 2012), using the MLR estimator, i.e. maximum likelihood parameter estimation procedure that accounts for non-independence within the clustered data. Parameter estimates are shown in Figure 1. The structural model adequately fits the data:  $\chi^2 = 784.00$ ,  $p = .00$ ;  $\chi^2/df = 3.50$ ; CFI = 0.941 and RMSEA = 0.049 (90% CI [0.046, 0.053]); SRMR = 0.045 (cf. Hu and Bentler 1995; Tabachnick and Fidell 2013). Since all the correlations between latent variables were estimated, the above-mentioned fit indices are equal to fit indices for the measurement model. As evident from Figure 1, personality traits and ideological variables account for almost 40% of the variance in anti-immigrant prejudice, with SDO, RWA and openness as the strongest predictors. Estimated direct, indirect and total effects of personality traits on prejudice via RWA and SDO are shown in Table 3.



**Figure 1.** Structural relations between personality dimensions, ideological variables and anti-immigrant prejudice among Croatian youth ( $N = 1034$ ). Latent variables are shown in ovals, manifest variables in rectangles. Parameters are standardised, estimated with MLR. Non-significant paths are shown with dotted lines.

Note: SDO, Social dominance orientation; RWA, Right-wing authoritarianism.

**Table 3.** Estimated standardised direct, indirect and total effects of personality dimensions on anti-immigrant prejudice among Croatian youth ( $N = 1034$ ).

Predictor	Mediator	Criterion	Direct effect	Indirect effect	Total effect
Extraversion	RWA	Anti-immigrant prejudice	.08*	.06**	.14**
Agreeableness			−.03	.05**	.01
Conscientiousness			.05	.03*	.08*
Neuroticism			.01	.02	.03
Openness			−.21**	−.08**	−.28**
Extraversion	SDO		.08*	.01	.09*
Agreeableness			−.03	−.12**	−.15**
Conscientiousness			.05	.02	.07
Neuroticism			.01	−.07**	−.06
Openness			−.21**	−.07**	−.28**

Note: RWA, Right-wing authoritarianism; SDO, Social dominance orientation.

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

As evident from [Figure 1](#) and [Table 3](#), extraversion has direct and indirect effects, mediated via RWA, on anti-immigrant prejudice. These effects suggest that more extraverted students tend to have slightly more anti-immigrant prejudice, partly because of their somewhat greater inclination towards right-wing authoritarian tendencies. The effect of agreeableness on anti-immigrant prejudice is fully mediated by ideological variables. Interestingly, mechanisms underlying the effect of agreeableness on anti-immigrant prejudice operate in opposite directions. Agreeable students seem to lean towards right-wing ideas and consequently are somewhat more prone to prejudice. However, their preference for harmony and egalitarian social relations ‘cancels’ their prejudice. The indirect effect of agreeableness on anti-immigrant prejudice mediated by SDO is somewhat larger than the one mediated by RWA. Conscientiousness seems to exert its weak indirect effect on anti-immigrant prejudice through RWA, so that students that are more conscientious exert slightly more prejudice than students that describe themselves as less conscientious. Neuroticism has weak to moderate negative indirect effect on anti-immigrant prejudice via SDO, implying that students with higher neuroticism (often, female students) tend to have somewhat less pronounced anti-immigrant prejudice. Finally, openness translates into anti-immigrant prejudice both directly and indirectly via RWA and SDO, through proneness of people high on openness to reject right-wing attitudes and social hierarchies. In our sample, the strong effect size is obtained for the direct effect of openness on prejudice, and moderate effect sizes are obtained for its indirect effects via RWA and SDO ([Kenny 2012](#)).

## Discussion

Moderate levels of anti-immigrant prejudice that our participants demonstrated on average, as well as the item-level responses, suggest emerging immigration has both invasion and enrichment potential (cf. [Leong 2008](#)) in the eyes of Croatian youth. This finding seems plausible bearing in mind that the projections of the immigrant inflow and the impact it might have in Croatia have remained rather vague since the beginning of the migration wave. Albeit Gregurović, Kuti, and Župarić-Iljić’s ([2016](#)) study might seem as valuable starting-point for the comparison of attitudes pre- and post-2015 migrations, direct comparison of our findings is not possible because of two important reasons. Firstly, we focus on different populations (adults from eastern Croatia vs. youth from

Zagreb area), and secondly, we use different measures. The present findings cannot be directly contrasted to the results of Čačić-Kumpes, Gregurović, and Kumpes (2012) or Franc, Šakić, and Kaliterna-Lipovčan (2010), either. These studies used considerably distinct measures of anti-immigrant prejudice (i.e. social distance or one-item measure) compared to the present study, as well as a significantly different definition of ‘an immigrant’ (Franc, Šakić, and Kaliterna-Lipovčan 2010). Though hardly comparable to the results of previous studies, the present findings shed light onto moderate levels of prejudice and thus appear to be more positive than results of the existing empirical data on Croatian citizens’ attitudes towards immigrants. However, it is worth noting here that this might be due to the fact that the present research examined youth’ attitudes that are systematically found to be more positive than adults’ attitudes. In addition, it focused on Zagreb area youth that might substantially differ in attitudes compared to youth from other, especially rural, parts of Croatia or from areas that were more affected by immigrant inflow (e.g. eastern Croatia). Moreover, it might as well be the consequence of the use of a different measures compared to those used in previous national studies, with social distance and different types of threats immigrants might pose to the host society being more pronounced in earlier studies (Čačić-Kumpes, Gregurović, and Kumpes 2012; Župarić-Iljić and Gregurović 2013). Because of this, we refrain from the conclusion about change or stability of attitudes towards immigration in Croatia. In order to be able to address this question, studies comparable to those already existing should be conducted, i.e. a systematic periodical tracking of this topic at the national level is needed. Nonetheless, our results capture an important picture and contribute to the understanding of Croatian youth perception of immigrants and immigration.

As expected, we found a moderate negative correlation between openness and anti-immigrant prejudice. Consistent with the findings of earlier studies (e.g. Akrami, Ekehammar, and Bergh 2011; Bergh, Akrami, and Ekehammar 2010; Onraet et al. 2011; Sibley and Duckitt 2008), there is a link between being open-minded and having less prejudice towards immigrant population. Our predictions considering other personality dimensions’ relations to prejudice were less or not at all true. The exception is conscientiousness–prejudice relation for which we did not predict significant coefficient. This finding is consistent with results obtained by Hodson, Hogg, and MacInnis (2009), Satherley and Sibley (2016), and Sibley and Duckitt (2008). However, unexpectedly low negative correlation was observed between agreeableness and anti-immigrant prejudice. Majority of the studies examining this variable’s relationship with prejudice found somewhat higher negative correlations (e.g. Ekehammar et al. 2004; Gallego and Pardos-Prado 2014; Satherley and Sibley 2016; Sibley and Duckitt 2008). However, at the same time, a significant number of recent studies failed to find the agreeableness–prejudice relationship (see, e.g. Bergh and Akrami 2016; Bergh et al. 2016; Cohrs, Kämpfe-Hargrave, and Riemann 2012 - Study 1; Kalebić Maglica and Vuković 2016). Our finding might partly be caused by our (and some of the authors’ of the earlier studies; e.g. Kalebić Maglica and Vuković’s 2016) use of BFI agreeableness, for which Sibley and Duckitt (2008) found weaker correlations with prejudice compared to NEO-PI-R and NEO-FFI agreeableness. Miller et al. (2011) argue that the different conceptualisations of agreeableness affect the extent to which BFI and NEO-inventories relate to measures of other constructs. Namely, BFI agreeableness does not include content related to a honesty–humility that was found to be correlated with prejudice towards groups perceived as dangerous and

derogated (Miller et al. 2011; Sibley et al. 2010). For thorough discussion about the nature of the relationship of agreeableness and prejudice, dependent on the conceptualisation of agreeableness, see Bergh and Akrami (2016). In contrast, extraversion appeared to be weakly positively related to prejudice, which is contrary to the results of previous research where a non-significant relationship was obtained (e.g. Hodson, Hogg, and MacInnis 2009; Sibley and Duckitt 2008). The result is, however, in accordance with Freitag and Rapp's (2015) finding, revealing extraversion to be related both to anti-immigrant attitudes and to unwillingness to grant voting rights to immigrants. It further corroborates the earlier finding revealing the positive correlation of extraversion with proneness to prejudice that Rebić (2014) obtained on convenient Croatian youth sample. Finally, correlation of prejudice and neuroticism appeared to be significant, which is contrary to the findings of Ekehammar et al. (2004), Hodson, Hogg, and MacInnis (2009) and Sibley and Duckitt (2008). There are some studies that found correlations between neuroticism and attitudes towards immigrants of similar size, but of different direction than the present one (Dinesen, Klemmensen, and Nørgaard 2016; Gallego and Pardos-Prado 2014; Satherley and Sibley 2016). As stated earlier, the size of our sample may have well affected the significance of the weak correlations and therefore we refrain from the further interpretation of these relationships. Evidently, this research area requires more attention and empirical support before any firm conclusions about the relationship of Big Five personality and anti-immigrant prejudice could be made.

Although the present research did not comprehensively test the DPM (Duckitt 2001, 2005; Duckitt and Sibley 2017), we largely aligned our hypothesis with the model postulates. We hypothesised that both RWA and SDO should predict prejudice towards immigrants, and that personality traits (openness and agreeableness, in the first place) should indirectly relate to prejudice, via RWA and SDO (respectively). Our findings indicate that all Big Five personality dimensions exert its effects on prejudice, directly or indirectly. Direct effects on anti-immigrant prejudice were obtained for extraversion and openness. Indirect effects on anti-immigrant prejudice via RWA were found for extraversion, agreeableness, conscientiousness and openness. Indirect effects on anti-immigrant prejudice via SDO were found for agreeableness, neuroticism and openness. Although we found some direct effects in addition to the indirect ones, the overall results are largely consistent with the DPM theoretical framework (Duckitt 2001, 2005; Duckitt and Sibley 2017). Therefore, our findings lend support to the existing empirical evidence of the validity of the DPM theory (e.g. Asbrock, Sibley, and Duckitt 2010; Duckitt and Sibley 2017; Perry and Sibley 2012).

Our results further complement the existing empirical data pointing to the dispositional antecedents that might be specific for the anti-immigrant prejudice domain. For example, consistent with our findings, Sibley and Duckitt's (2008) meta-analysis, as well as many other subsequent studies (e.g. Cohrs, Kämpfe-Hargrave, and Riemann 2012; Kalebic Maglica and Vuković 2016; Sibley and Duckitt 2010), revealed the significant direct and/or indirect effect of openness on prejudice via RWA. Other empirical examinations found that the effect of openness on prejudice is also mediated via SDO (Cohrs, Kämpfe-Hargrave, and Riemann 2012 - Study 2). In the majority of the previous studies, however, the indirect effect of agreeableness on prejudice via SDO (and not RWA) was found to be in place (see e.g. Cohrs, Kämpfe-Hargrave, and Riemann 2012; Ekehammar et al. 2004; Sibley and Duckitt 2008, 2010). To the best of our knowledge,



this study is the first to observe the contrasting indirect effects of agreeableness on anti-immigrant prejudice via RWA and SDO, thus possibly identifying a context (i.e. country)-specific phenomenon. In the pilot study conducted for scale validation purposes on a comparable sample of Croatian students, BFI agreeableness had a similar relationship with ideological variables, being (non-significantly) positively correlated with RWA, and (significantly) negatively correlated with SDO. Bearing in mind the characteristics of the social moment in which the research took place, in Croatia often designated as ‘the conservative revolution’, it might appear that the agreeable students ‘struggle’ between their inclination towards the harmonious and egalitarian social relations (as evident from the negative correlation of agreeableness and SDO), and their conformistic nature tending to gravitate towards the prevalent and normative right-wing authoritarian tendencies, emphasising conventionality, compliance and other processes aimed at establishing order and security (as evident from the positive correlation of agreeableness and RWA). The positive correlation between agreeableness and RWA on Croatian youth sample (see also Kalebić Maglica and Vuković 2016) might thus be reinforced by the current socio-political moment. This explanation is in need of further scientific scrutiny, from both quantitative and qualitative approach. Osborne, Wootton, and Sibley (2013) described the similar differential prediction (via distinct ideologies) of political conservatism for agreeableness aspects of politeness and compassion. Moreover, Sibley et al. (2010) reported about the similar functioning of the honesty–humility factor when predicting different dimensions of generalised prejudice. Our finding of the indirect effect of extraversion on prejudice via RWA is consistent with results of Cohrs, Kämpfe-Hargrave, and Riemann (2012) and Ekehammar et al. (2004). However, the direct effect of extraversion might be more dependent on the specific prejudice domain. Future research should scrutinise this possibility. The indirect effect of conscientiousness on prejudice via RWA was also found in Cohrs, Kämpfe-Hargrave, and Riemann (2012), Ekehammar et al. (2004) and Kalebić Maglica and Vuković (2016). We are not aware of the studies that found significant indirect effects of neuroticism on prejudice. However, this does not seem to be domain-specific antecedent of prejudice as we observed the same effect when examining generalised prejudice (Matić 2018). Rather it seems to be a product of the fact we did not control for gender differences in neuroticism and SDO (as our subsequent analysis suggest; manuscript in preparation). Though not always considerable (in some cases even practically irrelevant), the present findings provide evidence for both personality and ideological bases of anti-immigrant prejudice.

Ultimately, due to the prominent role that social context has for the study of prejudice and its antecedents, it should be noted here that there are certain limitations to generalisability of our findings. Earlier in the text, we acknowledged the limited possibility of generalisation and comparison of the data about the prevalence of youth anti-immigrant prejudice in Croatia. We recognise the possibility that mean level of anti-immigrant prejudice might have been affected by the fact that our research did not include youth outside Zagreb wider area. Likewise, due to the previous evidence for somewhat context-dependent nature of the personality–prejudice relations (e.g. see findings for conscientiousness and neuroticism in Sibley and Duckitt 2008), one should be careful when extrapolating present conclusions to populations that were not sampled (i.e. participants from meaningfully different areas of Croatia). We tried to diminish this generalisability issue by including youth from rural areas (along with those from Zagreb urban area), as many students



we surveyed in Zagreb county live in rural surroundings and commute to several county towns to attend secondary schools. However, the issue cannot be said to be overcome in its entirety.

## Conclusion

In the present study, we examined Croatian youth anti-immigrant prejudice and its correlates from the personality and ideological domains. The data collection took place in spring 2016, in the aftermath of late 2015 migrations that affected most of Europe, including Croatia. On average, our participants demonstrated moderate levels of anti-immigrant prejudice.

Moderate negative correlation between openness and prejudice corroborated our predictions and previous empirical conclusions (e.g. Sibley and Duckitt 2008). However, agreeableness did not appear to be a more important predictor of prejudice than extraversion or neuroticism, which is in contrast with our expectations and some previous empirical evidence (incl. meta-analysis by Sibley and Duckitt 2008). By revealing that all Big Five personality factors exert their effects on anti-immigrant prejudice directly (extraversion and openness) or indirectly via RWA (extraversion, agreeableness, conscientiousness and openness) and/or SDO (agreeableness, neuroticism and openness), our study affirms the notion of personality and ideological underpinnings of anti-immigrant prejudice.

The most notable differences in effects obtained in this study, compared to prior empirical evidence, were found for agreeableness and extraversion, with former being somewhat weaker and latter being somewhat stronger predictor compared to what was usually found for broader set of prejudice domains and other social contexts. The mechanism underlying the effect of agreeableness on prejudice appears to be an especially interesting venue for future research.

## Acknowledgements

We would like to thank the editorial team, Professor Paul Statham and Dr James Hampshire, and the two anonymous reviewers for their timely and insightful review of earlier drafts of this article. We would also like to express our gratitude to Dr Branislava Baranović and Dr Saša Pužić for their assistance in data collection, as well as to Dr Iva Košutić and Dr Svjetlana Salkičević for their helpful comments on an earlier version of this manuscript.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix

**Table A1.** The items of the Anti-immigrant prejudice scale. Items marked with asterisk should be reverse coded.

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1. The arrival of a larger number of immigrants in Croatia should be prevented.
2. I sympathise with immigrants because of the problems they could experience in Croatia.*
3. I would like to make friends with an immigrant.*
4. Croats have a lot in common with immigrants.*
5. If I looked for an employee in the future, I would give priority to a candidate from Croatia rather than to an immigrant.
6. If many immigrants settled in my neighbourhood, I would consider moving away.
7. If I had chance, I would help an immigrant to settle in Croatia.*
8. I am afraid the presence of immigrants will lead to a weakened unity among Croatian people.
9. I do not like getting in contact with immigrants.
10. After moving to Croatia, immigrants should abandon their customs.
11. If I had chance, I would enjoy getting to know other cultures through contact with immigrants.*
12. Our country can benefit from the cultural diversity of the population.*

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