

A war on prejudice: The role of media salience in reducing ethnic prejudice

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Abstract

Introduction: Ethnic prejudice poses a great challenge to the cohesion of current multicultural societies. Prior research has found that media portrayals of immigration-related issues might skew individual attitudes and feelings toward ethnic minorities. While these studies have focused on negative representations of ethnic minorities, less is known about the effects of media reports of unfortunate events affecting the victims of war, as in the case of the Ukrainian group in the Russia–Ukraine war. Therefore, the current research aims to examine whether media salience of this situation might change adolescents' ethnic prejudice against the Ukrainian minority.

Methods: A total of 1016 ethnic-majority Italian adolescents ($M_{\text{age}} = 15.66$, $SD_{\text{age}} = 1.17$, 49.61% females) completed online questionnaires during school hours before (T1: January/February 2022) and after (T2: April/May 2022) the Russia–Ukraine war onset. Additionally, the media salience of the war was quantified separately for the national newspaper and Twitter.

Results: Levels of prejudice significantly decreased from T1 to T2 for multiple ethnic minority groups but especially so for the Ukrainian group. The results of bivariate Latent Change Score models highlighted that increased salience of the war in the national newspaper was significantly associated with decreased prejudice against Ukrainians, regardless of adolescents' levels of self-reported newspaper consumption. Conversely, changes in the salience of the war on Twitter were not associated with changes in prejudice.

Conclusions: These findings highlight the importance of media attention for the war's victims in skewing individuals' outgroup perceptions and feelings.

KEYWORDS

ethnic prejudice, longitudinal, media, Ukrainian minority, war

1 | INTRODUCTION

Nowadays adolescents are constantly online, and their digital experiences play a major role in influencing the development of identity, group attitudes, and well-being (e.g., Odgers & Jensen, 2020). Media represent a “window” through which youth can not only access a wide range of information about far-away places but also come into contact with the experiences of others. Can the mediatic recount of current events influence adolescents' thoughts and feelings about outgroup others? Since February 2022, the unprecedented event of the Russia–Ukraine war has been striking the European continent and intruding on the life of youth. Additionally, this war is being continuously documented and commented upon not only by traditional media (e.g., newspapers, television) but also through social media sources (e.g., Twitter), which allow a detailed and timely recount of what is happening in Ukraine. While prior research (e.g., Czymara & Dochow, 2018) has highlighted the crucial

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role of media in shifting adults' thoughts and feelings about ethnic outgroups, less is known about the effect of these influences on adolescents.

Adolescence is a crucial phase for the development of social (e.g., empathic competences; see Smetana, 2011) and cognitive competences (e.g., more complex representation of reality; see Kuhn, 2009). In turn, these might contribute to short- and long-term changes in youth's beliefs and attitudes toward diverse others (Rekker et al., 2015). Additionally, these changes are situated in and influenced by the specific physical, interpersonal, cultural, and temporal contexts within which adolescents are embedded (Bronfenbrenner, 1992, 2005). In line with this, the current longitudinal study aimed to examine whether and how the media salience of the Russia–Ukraine war influenced changes in adolescents' ethnic prejudice against Ukrainians as compared to other ethnic minority groups in the Italian society. The study included native Italian participants only, because all of these groups can be considered outgroups from a majority perspective. Moreover, majority–minority relations are different from inter-minority relations, partly because other ethnic groups could experience solidarity for each other due to a shared minority group identity (e.g., Cortland et al., 2017; Meeusen et al., 2019).

1.1 | Ethnic prejudice in adolescence: development and correlates

Ethnic prejudice entails a set of negative feelings, beliefs, and behaviors against members of a specific group (i.e., the outgroup) because of their different cultural or ethnic background (Allport, 1954; Brown, 2011). As can be inferred from this definition, ethnic prejudice has a multidimensional nature that encompasses an affective (i.e., negative emotions) and a cognitive (i.e., negative beliefs and stereotypes) facet, which in turn orient individuals' behaviors (e.g., avoidance, discrimination) in intergroup contexts. This social phenomenon poses great challenges to the cohesion of current and future societies, where diversity is becoming as much the rule as the exception (Miklikowska & Bohman, 2019). Therefore, it is crucial to deepen our understanding of developmental changes and correlates of ethnic prejudice, especially among the younger generations.

Prior research has found that ethnic prejudice remains relatively stable in adolescence. Specifically, meta-analyses (Crocetti et al., 2021; Raabe & Beelmann, 2011) have highlighted no significant mean-level changes, which might be the result of competing processes. For example, adolescents may display lower levels of prejudice thanks to progressive advancements in their cognitive and moral competences (e.g., multiple categorization; Albarello et al., 2020) but also become more negative about immigrants due to a decrease in social trust and an increase in threat perceptions (Flanagan & Stout, 2010). Additionally, youth's prejudice is characterized by high levels of rank-order stability. This means that adolescents tend to maintain their standing relative to their peers based on their levels of ethnic prejudice (Bornstein et al., 2017). Overall, these general patterns characterized by no mean level changes and high rank-order stability do not preclude that individuals display different developmental trajectories in ethnic prejudice (Bobba et al., 2022).

Interestingly, rank-order stability levels were lower for the affective (i.e., negative emotions and disliking) rather than the cognitive (i.e., negative beliefs and stereotypes) dimension of prejudice (Crocetti et al., 2021). Therefore, the affective component might be more susceptible to modifications due to external conditions. That is, shifts and fluctuations in prejudice may occur as a consequence of the interactions, experiences, and opportunities youth have (Miklikowska & Bohman, 2019). The current study aimed to examine whether and how such changes occur and to unravel their interplay with changes in socio-contextual conditions.

The ecological model of development (Bronfenbrenner, 1992, 2005) provides a useful framework for studying the multiple micro-, meso-, exo-, and macro-contextual influences on adolescents' prejudice against ethnic minority groups. According to this theoretical approach, individual development is shaped by multiple proximal (e.g., family, peers, school) and distal (e.g., culture, norms, historical events) factors that, independently and combined, can mold the conditions to which youth are exposed. For instance, extensive research has examined the role of the microcontexts of development (e.g., family, school) in shaping adolescents' attitudes (e.g., Miklikowska et al., 2019; van Zalk et al., 2013) because of their proximity and relevance in adolescents' life. Less is known, however, about distal factors such as the media, culture, and historical events that might influence not only individual development directly but also the configurations of the micro-contexts within which adolescents are embedded.

1.2 | Macro- and chrono-systemic influences: the role of media

Media play an important role in influencing the development and consolidation of ethnic emotions, cognitions, and behaviors by representing groups in stereotypical ways (for reviews, see Mastro, 2009). Several theories (e.g., media priming effect; Bissell & Parrott, 2013) have outlined the processes through which media can shape intergroup perceptions and attitudes. Great attention has been paid to the actual exposure to media content, which influences viewers' memory and shapes the lenses through which individuals evaluate and approach the world and others (Bissell & Parrott, 2013). In brief,

when media offer stereotypical representations of particular groups (e.g., Black as perpetrators of crimes), these are acquired by the audience and become immediately available for later judgments and decisions (i.e., a priming effect).

Several studies have provided empirical evidence for these assumptions. For instance, prior research has found that ethnic minority groups are usually overrepresented in the reporting of crime news (Kakavand & Trilling, 2022) and are depicted in more threatening terms compared to ethnic majority crime perpetrators (Jacobs, 2017). Moreover, experimental research has found that adults and college students exposed to negative portrayals of outgroup members reported higher levels of intergroup anxiety and outgroup threat perceptions (Conzo et al., 2021) and higher dehumanization of immigrants (Esses et al., 2013). Similarly, higher levels of exposure to news (Dixon, 2008b; Intravia & Pickett, 2019), as well as to immigration-related issues (Fuochi et al., 2020) and to representations of Blacks as criminals on US local news (Dixon, 2008a) were linked to negative stereotypical representations of the target outgroup (i.e., immigrants and African Americans). However, prior research has highlighted more nuanced associations between news consumption and attitudes. For instance, mass media news about immigration was not significantly associated with intergroup attitudes among participants who had prior intimate direct contact with the outgroup (Fuochi et al., 2020, Study 1). Additionally, social media news consumption was linked to more, while Internet news consumption was associated with less stereotypical representations of African Americans (Intravia & Pickett, 2019). Moreover, news representations appear to exert an influence on ingroup favoritism among ethnic minority groups as well. Specifically, the higher the negative representations of Blacks and Latinos on US prime-time television programs, the lower ingroup favoritism these ethnic minority participants displayed (Tukachinsky et al., 2017).

Media are also powerful sources of information about historical events and changes, including those in faraway countries. In this vein, specific chrono-historical events (e.g., terrorist attacks, migration waves, unemployment rates) might shape feelings, attitudes, and worries of the general adult population. For instance, the public acceptance of immigrants was found to significantly decrease over periods of time characterized by negative events involving ethnic minority groups, such as terrorist attacks (Czymara & Schmidt-Catran, 2017; Legewie, 2013) or ethnic riots (de Rooij et al., 2015). The news recount of these events contributed to perceptions of threat (de Rooij et al., 2015), which in turn translated into higher prejudice against the ethnic minority groups involved. Additionally, in periods of higher salience of immigration-related issues, concerns about migration were found to be high, especially among those living in highly ethnic homogeneous areas (Czymara & Dochow, 2018).

Overall, these findings point toward the crucial role of media in providing an information environment where specific issues are salient and might cause shifts at the macro-contextual level (Boomgaarden & Vliegthart, 2009; Weimann & Brosius, 1994), which in turn can influence the micro- and individual contexts of development. While prior studies have supported this notion among adult and young adult populations, less is known about the effects of media salience on adolescents' group prejudice. Additionally, research has paid great attention to events that involve ethnic minority members as either perpetrators of crimes and violence or threats. Can salient negative events happening to an ethnic minority group affect levels of prejudice against members of this group?

1.3 | Ethnic prejudice in current times: the case of the Russian–Ukrainian war

Since February 2022, offline and online news agencies have broadcasted the first Russian attacks on and the invasion of Ukraine and the violence perpetrated against the Ukrainian population. The Russian–Ukrainian war has become a salient issue and has been at the core of social and political discourses and actions. Through newspapers, online videos, and tweets, adults and adolescents have been constantly updated about the progression of the conflict and the sufferings of the Ukrainian population. Can these depictions create an information environment that influences adolescents' feelings and thoughts about the Ukrainian ethnic minority group? For instance, the public might be moved by the negative events occurring in Ukraine and display increased concern and sympathy toward the victims of the war. Feelings for the Ukrainian population might in turn extend to the members of the Ukrainian ethnic minority group in the host country. Higher levels of empathic concern in adolescence have been previously linked to reduced ethnic prejudice (Bobbà & Crocetti, 2022). In line with this, the media salience of the war might contribute to decreased levels of ethnic prejudice against the Ukrainian minority before and after the war onset. Additionally, this effect might be stronger for youth who keep themselves updated about current events through traditional and modern media sources.

2 | THE PRESENT STUDY

The purpose of the current study is threefold. First, it aims to examine whether (and how) adolescents' affective ethnic prejudice against the Ukrainian group compared to the other most represented ethnic minorities in the Italian society (ISTAT, 2020) changes before and after the Russia–Ukraine war onset. In light of prior meta-analysis (Crocetti et al., 2021), ethnic prejudice against all the ethnic groups is expected to remain stable and to display a significant decrease for the

Ukrainian minority. Consequently, as a second aim, the current study examines whether changes in the salience of the Ukrainian situation in traditional (i.e., national newspaper) and modern (i.e., Twitter) media outlets would be linked to changes in prejudice against the Ukrainian group. Specifically, we expect to identify a significant association between reduced prejudice against this ethnic minority and increased salience of the war in both media outlets. Third, the current study would test the moderating role of direct media consumption on these associations. That is, in line with prior research (Dixon, 2008b; Intravia & Pickett, 2019), the links between the salience of the war and ethnic prejudice would be stronger and significant among adolescents who more often rely on these media outlets as a source of information.

3 | METHOD

3.1 | Participants

Participants in this two-wave longitudinal study were 1016 adolescents ($M_{\text{age}} = 15.66$, $SD_{\text{age}} = 1.17$, 49.61% females) attending the first (49.01%) and third (50.99%) year (at the beginning of the study) from several high schools located in the Northern part of Italy (i.e., Emilia-Romagna region). Since the focus was on prejudice against ethnic minorities, only Italian adolescents were included in the current study (i.e., youth of immigrant descent were excluded). At baseline, most students reported their parents were married (82.50%), while 15.50% reported their parents were separated or divorced. Most of the adolescents' mothers (48.93%) and fathers (48.13%) had a medium educational level (i.e., high school diploma). Among mothers, some of the remaining (34.33%) had a high (i.e., university degree or higher) and a few (16.74%) a low (i.e., up to middle school diploma) educational level. As for fathers, the remaining had a low (27%), followed by those with a high (24.87%) educational level.

Most adolescents (74.80%) participated in both assessments. Within each assessment, the completion rate was high (79.23% at T1 and 80.41% at T2), and missingness was mostly due to participants not filling out the questionnaire because they were not in school on the day of data collection. Little (1988) Missing Completely at Random (MCAR) test yielded a normed χ^2 ($\chi^2/df = 778.68/490$) of 1.59, indicating that data were likely missing completely at random. Therefore, the total sample of 1016 participants was included in the analyses, and missing data were handled with the Full Information Maximum Likelihood procedure available in *Mplus* (Kelloway, 2015).

3.2 | Procedure

The present study was approved by the Ethics Committee of the Alma Mater Studiorum University of Bologna (Italy) as part of the ERC-Consolidator project IDENTITIES "Managing identities in diverse societies: A developmental intergroup perspective with adolescents". This ongoing longitudinal research involves adolescents from several high schools in the North-East part of Italy, together with their parents and teachers. Schools were selected through a stratified (by track and level of urbanization) randomized method, and principals were approached to present the project. Upon their approval, the study was presented to students and their parents who also received written and detailed information. Active consent from parents was obtained before their children's participation. Active consent was also obtained from adolescents of age, while their underage peers provided their assent to participate in the project. Participation in the study was voluntary, and students were informed that they could withdraw their consent at any time.

The IDENTITIES project started in 2022 and includes multiple annual, monthly, and daily assessments. For the present study, only adolescents' data from the first (T1: January/February 2022; before the war onset) and second (T2: April/May 2022; during the war) assessments were used. At each wave, adolescents completed an online questionnaire during class hours. They were required to create a personal code to ensure confidentiality and pair their answers over time.

3.3 | Measures

3.3.1 | Demographics

Participants' sociodemographic information (e.g., age, gender) was collected at the first assessment.

3.3.2 | Affective prejudice

Feelings toward the Ukrainian and the other most represented ethnic minority groups in the Italian context (i.e., Albanian, Romanian, Moroccan, Chinese; ISTAT, 2020) were measured at each time point using the feeling thermometer scale

(Haddock et al., 1993; for use of the Italian version, see Bobba & Crocetti, 2022). This measure asks participants to rate how much they like members of different ethnic groups on a scale from 0° (*not at all*) to 100° (*very much*). Item scores were reversed so that the higher the score, the higher the level of affective prejudice against each minority group. This single-item scale is one of the most used assessment methods for evaluating the affective component of attitudes (Dovidio et al., 2001). This measure has been previously adopted by researchers studying ethnic prejudice among adolescents (e.g., Bratt et al., 2016; Weber, 2019; Wölfer et al., 2016; ten Berge et al., 2017; for a review, see Crocetti et al., 2021), also in the Italian context (Vezzali et al., 2020).

3.3.3 | Media salience of the Ukrainian situation

The salience of the war topic was assessed in two different media sources: the national newspaper *La Repubblica* and Twitter. In both media outlets, the number of occurrences/tweets containing the Italian terms “Ucrain*” or “ucrain*” (Italian for “Ukrain*” and “ukrain*,” respectively) were counted for each day separately from early January to early June 2022. The search string exclusively focused on the Ukrainian group because of the main goal of the current study (i.e., examining the interplay between media salience and ethnic prejudice against the Ukrainian minority) and, thus, other terms related to the war (e.g., Putin) were not included. For the national newspaper, the researcher screened the newspaper and manually counted keywords' occurrences. For Twitter, data were retrieved using the API portal, which enables access to tweet counts and other features for research purposes. To capture an individual value for newspaper salience of war-related issues, two mean scores of the newspaper occurrences on the 7 days before each questionnaire completion day were computed separately for T1 and T2 assessments. A similar procedure was adopted for the number of tweets. This resulted in two scores of newspaper salience and two scores of Twitter salience. Twitter salience scores were additionally rescaled by dividing them by 1000 to avoid any convergence problems when estimating the models. Newspaper salience and Twitter salience were strongly correlated at both the first ($r = .82$) and the second ($r = .97$) time points.

3.3.4 | Newspaper consumption

The extent to which adolescents relied on newspapers as a source of information was assessed at T1, with two items asking how often they used this media outlet to keep themselves updated on daily news. Ratings were expressed on a 7-point Likert type scale from 1 (*never*) to 7 (*many times a day*).

3.3.5 | Social media consumption

The extent to which adolescents relied on social media (e.g., Twitter, WhatsApp) as a source of information was assessed at T1 with two items asking how often they used these online resources to keep themselves updated on the daily news. Ratings were expressed on a 7-point Likert type scale from 1 (*never*) to 7 (*many times a day*).

4 | RESULTS

4.1 | Preliminary analyses

Descriptive analyses, rank-order stability, and repeated measures analyses were conducted using IBM SPSS Version 28.0 for Windows. Means, SDs, and correlations among study variables are reported in Supporting Information: Table S1 of the Supplemental Materials. Latent Change Score (LCS) models were conducted in *Mplus* 8.6 (Muthén & Muthén, 1998–2017), using Maximum Likelihood Robust (MLR) estimator (Satorra & Bentler, 2001). Data, analyses codes, and outputs can be retrieved from <https://osf.io/njehw/>.

4.2 | Changes in prejudice against ethnic minority groups

The first goal of the present study was to examine whether affective prejudice against different ethnic minority groups changed in the transitions from the months right before the Russia–Ukraine war onset (T1) to the following months (T2). To this end, we study both mean-level changes and intra-individual patterns of stability of adolescents' ethnic prejudice levels.

TABLE 1 Mean-level changes and rank-order stability of prejudice.

Prejudice against	Mean-level changes		<i>F</i> -test (η^2)	Cohen's <i>d</i> [95% CI]	Rank-order stability T1 \rightarrow T2
	<i>M</i> _{T1} (SD)	<i>M</i> _{T2} (SD)			
Romanians	44.48 (33.23)	40.50 (32.66)	13.89*** (0.02)	-0.12 [-0.18, -0.06]	0.62***
Albanians	42.05 (33.99)	37.50 (33.00)	18.09*** (0.03)	-0.14 [-0.20, -0.07]	0.63***
Moroccans	44.39 (34.00)	41.91 (33.97)	5.45* (0.01)	-0.07 [-0.13, -0.01]	0.65***
Chinese	40.93 (34.28)	36.85 (32.92)	13.76*** (0.02)	-0.12 [-0.19, -0.06]	0.62***
Ukrainians	45.15 (34.89)	33.28 (31.86)	83.04*** (0.11)	-0.35 [-0.43, -0.28]	0.47***

Note: The bolded rank-order coefficient is significantly different from all others.

Abbreviations: *M*, mean; *T*, time.

* $p < .05$; *** $p < .001$.

4.2.1 | Mean-level changes

Mean-level changes in prejudice against different ethnic minority groups were examined by conducting five repeated measures analyses of variance (ANOVAs), separately for each target outgroup. The means were then used to compute Cohen's *d* as an estimate of the dimension of change from T1 to T2. Cohen's *d* values around |0.20|, |0.50|, and |0.80| can be interpreted as indicative of small, medium, and large effect sizes, respectively (Cohen, 1988). Results are reported in Table 1. Overall, adolescents' prejudice levels against the five ethnic minority groups were lower than the scale mid-point. Additionally, they also displayed a significant decrease over time across all ethnic groups. However, these decreases were marginal for the Romanian, Albanian, Moroccan, and Chinese groups but small to medium for the Ukrainian minority.

4.2.2 | Rank-order stability

Pearson's test-retest correlations were computed to assess the rank-order stability of prejudice against the five ethnic minority groups examined. Coefficients equal to or higher than 0.60 can be interpreted as indicative of high stability (Mroczek, 2007). Results are reported in Table 1. Rank-order coefficients were indicative of high stability for prejudice against all ethnic minority groups except for the Ukrainian group. Additionally, the significance of differences in rank-order stability across the five target outgroups was tested using the Fisher *r*-to-*z* transformation to convert correlation coefficients into *z*-scores and compare them for statistical significance ($p < .05$). The only significant difference was found in levels of rank-order stability of prejudice against the Ukrainian group. This value was significantly lower than the values of all the other ethnic groups. Specifically, ethnic prejudice levels against this ethnic minority were found to be significantly less stable than levels of prejudice against other ethnic groups.

4.3 | Multivariate LCS models

The second goal of the present study was to examine whether changes in ethnic prejudice against the Ukrainian group could be traced back to changes in the salience of the war in the national newspaper and on Twitter. To this end, two multivariate LCS models were performed (e.g., McArdle, 2009; McArdle & Nesselroade, 1994). This procedure estimates a latent change factor characterized by two parameters that account for the average change (i.e., mean parameter) and the interindividual variation in change (i.e., variance parameter), respectively. The multivariate version of LCS allows to estimate one latent change factor for each variable included in the model and to examine the correlations among them. Two multivariate models were estimated separately for changes in media salience in the newspaper (model [a]) and on Twitter (model [b]).¹ All the analyses were performed using the *Type = Complex* feature available in *Mplus* (Muthén & Muthén, 2017), which allows to estimate robust standard errors accounting for the nested structure of the data (i.e., participants nested within classes). Unstandardized estimates of the mean and variance of the LCSs are reported in Table 2. The models are represented in Figure 1.

¹Sensitivity analyses were conducted to check whether expanding or reducing the search string used to quantify the salience of the war on Twitter could influence the results, but it did not (see Supporting Information: Table S2 of the Supplemental Materials).

TABLE 2 Unstandardized estimates of the two multivariate Latent Change Score models.

	<i>M</i> (SE)	Variance (SE)
Model (a): Prejudice and Newspaper		
Latent change in prejudice against Ukrainian group	-11.75*** (1.49)	1192.11*** (81.91)
Latent change in newspaper salience	55.50*** (2.60)	493.12*** (46.52)
Model (b): Prejudice and Twitter		
Latent change in prejudice against Ukrainian group	-11.89*** (1.49)	1192.42*** (81.75)
Latent change in Twitter salience	31.30*** (2.00)	387.56*** (73.98)

Abbreviations: *M*, mean; SE, standard error.

****p* < .001.

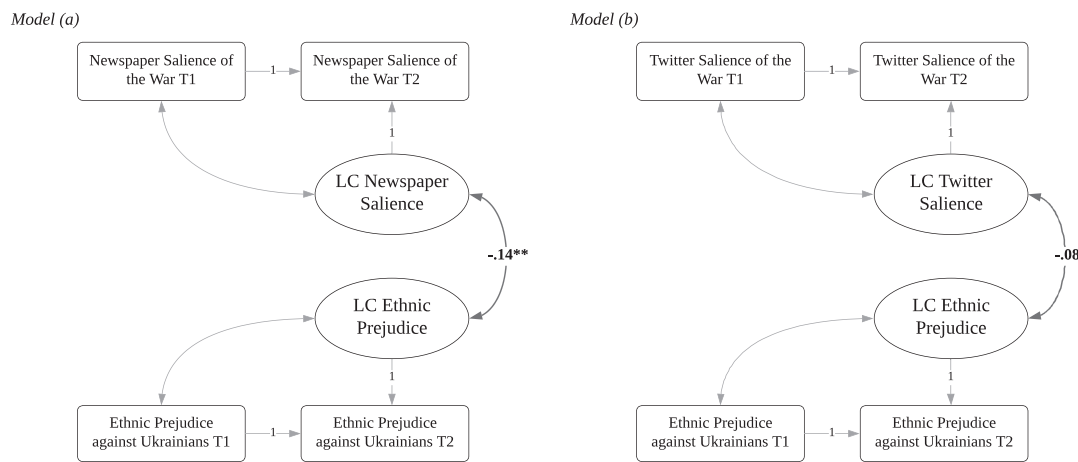


FIGURE 1 Standardized results of the two multivariate Latent Change Score models. LC, latent change; T, time. ***p* < .01.

Means and variances of the estimated LCSs were all significant. While prejudice against the Ukrainian ethnic group significantly decreased over time, the salience of the war in both national newspaper and Twitter increased. The change in prejudice levels was significantly and negatively associated with a change in newspaper salience but not with a change in Twitter salience. That is, as the media salience of the war increased in the newspapers (but not on Twitter), adolescents' prejudice levels against the Ukrainian group significantly decreased.

4.3.1 | Multigroup analyses

The third goal of the present study was to examine possible differences in the associations between changes in prejudice against the Ukrainian group and changes in salience of war-related news on the two media outlets considered between adolescents with low and those with high levels of media consumption. To this end, adolescents were first assigned to either a low or a high consumption group (mean-split) separately for newspaper and social media consumption. Next, following suggestions by McArde (2009), multigroup analyses were conducted separately for each model, and the Wald test statistic was applied to identify significant differences in the associations examined.² Results highlighted that the extent to which adolescents consumed newspapers (Wald = 0.01, *p* = .936) or social media (Wald = 0.89, *p* = .344) did not moderate the link between changes in media salience of the war in these two outlets and changes in ethnic prejudice.

²Following indications from an anonymous reviewer, we conducted additional analyses to examine the moderating role of media consumption by means of a latent/manifst interaction test. To this end, the baseline models were tested again, separately, by regressing the latent change score of affective prejudice on (a) the latent change score of the salience of the war (in the newspaper and Twitter, separately); (b) the observed score of media consumption (for newspaper and social media separately), which was previously rescaled using a natural log transformation to control for skewness; and (c) their interaction. These analyses were conducted using *Algorithm=Integration* and *Type=Random*. However, these models did not converge.

5 | DISCUSSION

Adolescence is a crucial period for the development and consolidation of views about the self, others, and society (Meeus, 2019). Changes and stability in these individual characteristics result from multiple contextual influences (Bronfenbrenner, 2005). While great attention has been paid to proximal factors (e.g., family), less is known about the role of macro- and chrono-contextual influences (e.g., historical events) on youth's ethnic prejudice. By taking an ecological and historical perspective (Bronfenbrenner & Morris, 2007) and building upon prior research with adults (e.g., Czymara & Dochow, 2018; Fuochi et al., 2020), the current study advanced our understanding of how the recount of current events, such as the Russia–Ukraine conflict, by traditional (i.e., newspaper) and modern (i.e., Twitter) media can influence adolescents' ethnic prejudice in current digitalized and multicultural societies. Overall, ethnic prejudice against the Ukrainian group significantly decreased after the war onset together with an increased salience of the war topic in the newspapers, but not on Twitter. These findings highlight for the first time the role of the macro- and chrono-contexts in shaping adolescents' attitudes, suggesting the need to account for timely historical events when studying the development of ethnic prejudice as embedded in context.

5.1 | The twists and turns of ethnic prejudice in times of war

The first goal of the present study was to examine whether (and how) prejudice against Ukrainians versus other ethnic minority groups changed after the Russia–Ukraine war onset. Medium-sized reductions in mean levels and low interindividual stability were detected in ethnic prejudice against the Ukrainian minority. Although significant decreases also emerged in levels of ethnic prejudice against the other outgroups, the changes observed for the Ukrainian group were stronger. These shifts and fluctuations might be a consequence of the macro- and chrono-contexts youth are embedded in (Bronfenbrenner & Morris, 2007). That is, historical events and the zeitgeist of current times might influence adolescents' life in ways that skew their beliefs and attitudes and ultimately shape their development. More research is needed to examine the generalizability of current findings across several contexts (e.g., varying in their proximity to and views on specific historical events) since these characteristics might modulate the effects observed in the current study.

Additionally, the low rank-order stability coupled with a high and significant variance in the LCS of ethnic prejudice against the Ukrainian population suggest that adolescents might display different trajectories of change. In other words, it might be that ethnic prejudice against this outgroup decreased for some, remained stable, or even increased for other youth. Future research should strive to adopt person-oriented approaches (Bergman et al., 2003; Von Eye & Bogat, 2006) to deepen our understanding of the patterns of change and stability and possibly identify different developmental trajectories within the general groups of adolescents (Bobba et al., 2022).

5.2 | A window onto the world: how the media frame adolescents' ethnic prejudice

The second and third goals of this research were to understand whether the anticipated reduction in ethnic prejudice against the Ukrainian group might be traced back to the attention given to the Russia–Ukraine situation by both traditional and modern media outlets and whether these associations would be moderated by how much adolescents rely on these media sources for information. Regarding the national newspaper, increased media salience of the situation in Ukraine was significantly associated with decreased levels of ethnic prejudice against Ukrainians. This finding is in line with prior research with adults highlighting the role of media (e.g., Conzo et al., 2021; McLaren et al., 2017) and recounts of historical events (e.g., Czymara & Schmidt-Catran, 2017; de Rooij et al., 2015) in framing perceptions of and prejudice against specific outgroups. However, while previous studies have mostly focused on negative portrayals of ethnic minority groups, the current research extends available findings by highlighting similar effects of presumably positive and empathy-enhancing representations of the outgroup. Although in the current study we examined the media salience without specifically tackling the valence of media content, it should be noted that the main narrative of the Italian national newspaper offered a clear-cut distinction between the victim of war sufferings (i.e., the Ukrainian population) and the unlawful invader (i.e., the Russian army). Consequently, the mediatic recount of the sufferings of the Ukrainian population might have increased empathetic feelings toward them, which in turn are known antecedents of prejudice reductions in adolescence (e.g., Miklikowska, 2018). Interestingly, the significant association between newspaper salience of the news on the Russia–Ukraine situation and ethnic prejudice against the Ukrainian minority held regardless of adolescents' actual consumption of newspapers. This finding supports the notion that the media provide an information environment able to affect the public at large rather than reaching only those who are directly exposed to specific news. When certain issues are highly salient and dominant in the news, as in the case of the Russia–Ukraine war in the Italian

newspapers, they can shift public opinion through both direct (i.e., actual exposure to the news) and indirect (i.e., via interpersonal communication) encounters with the topic being discussed and the representations being conveyed (Boomgaarden & Vliegenthart, 2009).

Conversely, despite the strong correlation between newspaper and media salience, increased attention to the situation in Ukraine on Twitter was not linked to changes in ethnic prejudice against the Ukrainian group. This finding is in contrast with previous research highlighting the role of social media news consumption in increasing stereotypical representations of minorities (Intravia & Pickett, 2019). However, it might be explained in relation to two main features of the social media examined. First, Italian adolescents have been found to rarely resort to Twitter as their preferred social media platform (Marengo et al., 2022), which might mitigate the ability of this outlet to contribute to the information environment to which youth are exposed. Second, while the national newspapers can be assumed to provide a relatively consistent recount of the war (i.e., Ukrainians being described as victims of the Russian invasion), Twitter is a wide platform where opposing views and perceptions coexist (i.e., Ukrainians as victims of the war or Russians rightfully claiming a certain territory). Therefore, tweet counts might not be enough to capture the dominant opinion or sentiment in a given period of time (Rodrigues & Chiplunkar, 2022). Future research might benefit from combining quantitative assessment (i.e., tweet count) with an analysis of emerging opinions (i.e., sentiment analysis) of important historical events on social media.

5.3 | Theoretical and practical implications

Overall, the current findings have important theoretical and practical implications. From a theoretical perspective, they highlight for the first time the role of media salience in skewing adolescents' perceptions of and prejudice against ethnic minority groups. Extant research has highlighted the implication of media and the news for youth's well-being (for a systematic review, see Keles et al., 2020) and interpersonal adjustment (for review, see Uhls et al., 2017). Additionally, the media have been found to increase youth's interest in political and social issues (Moeller et al., 2018). Along this line, the current study provides evidence of how media salience of current historical events can shape adolescents' views of others, which are fundamental for the stability of current and future diverse society (Titzmann & Jugert, 2019).

From a practical standpoint, incorporating macro- and chrono-systemic influences might improve the quality and effectiveness of interventions aimed at reducing ethnic prejudice levels (McKeown et al., 2019). That is, the information environment and public discourses youth are exposed to might undermine the positive effects of prejudice reduction interventions by broadly influencing the multiple contexts of adolescents' development. Consequently, these programs should expand their focus by tackling ethnic prejudice as an individual characteristic embedded in and shaped by several ecological contexts (Beelmann & Lutterbach, 2021; Bronfenbrenner, 2005).

5.4 | Limitations and suggestions for future research

The current findings should be read in light of some limitations. First of all, this study examined longitudinal changes in ethnic prejudice over a relatively short period of time (i.e., 4 months) and included only two assessment points. This design limited the understanding of the short- and long-term effects of media as well as the possible mechanisms of associations. Future research should include additional assessments over a longer period and examine other intergroup factors (e.g., direct contact with the outgroup, ingroup identification) that could mediate or moderate the processes at play. This would make it possible to examine whether and how the effects of media salience would generalize to other ethnic groups not directly involved in the events reported in the news and whether direct experiences with the outgroup can contribute to steeper decreases in prejudice. Second, the current study focused on two media outlets, mainly national newspaper and Twitter. Future research could benefit from examining other social media platforms (e.g., TikTok, Instagram) as well as incorporating a qualitative evaluation of the general sentiment toward specific issues. However, at the present moment, Twitter is the only platform providing data mining opportunity for research. Third, the measure for ethnic prejudice used in the current study tackles its affective dimension, whereas there is a need to account for its multifaceted nature (Bobba & Crocetti, 2022; Brown, 2011). Moreover, the scale was formulated in terms of liking, and technically, the absence of liking is not the same as disliking. Still, the latter certainly implies the former. Moreover, the lower anchor point (0°) suggests cold rather than neutral feelings. Lastly, this study focused on majority adolescents (native Italians) only. It is also important to study how ethnic minority groups evaluate other ethnic minority groups to tackle both the positive and negative sides of inter-minority relationships, such as solidarity and threat dynamics.

6 | CONCLUSION

Media have the potential to influence adolescents' well-being and interpersonal adjustment and to shape adults' and young adults' attitudes. However, no prior research has examined how the media salience of current historical events, such as the Russia–Ukraine war, can mold youth's ethnic prejudice levels. By taking an ecological developmental perspective, the current two-wave longitudinal study examined changes in adolescents' ethnic prejudice before and after the war onset and whether media salience of this event in the newspaper and Twitter would be associated with changes in prejudice against the Ukrainian minority. Prejudice levels significantly decreased over time for all ethnic groups, but especially so for the Ukrainians. Additionally, increased salience of the war in the national newspaper, but not on Twitter, was significantly associated with decreased prejudice against Ukrainians, regardless of adolescents' levels of self-reported media consumption. These findings expand our understanding of the distal determinants of ethnic prejudice and suggest the importance of accounting for timely historical events when building interventions for improving intergroup relations.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data, analysis codes, and outputs that support the findings of this study are openly available in Open Science Framework at <https://osf.io/njehw/>.

ETHICS STATEMENT

All procedures performed in this study involving human participants were in accordance with the ethical standards of the Ethics Committee of the Alma Mater Studiorum University of Bologna (Italy) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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