Child Development, 2026, 1–13
https://doi.org/10.1093/chidev/aacaf006
Published: February 3, 2026
Empirical Article

OXFORD Society for Research in Child Development

Intergroup contact informs children's perceptions of social inequalities

Laura Elenbaas[1*], Kelly Lynn Mulvey[2], Christia Spears Brown[3], Jane Singman[1], and Megan N. Norris[1]

[1]Department of Human Development and Family Science, Purdue University, West Lafayette, IN, United States
[2]Department of Psychology, North Carolina State University, Raleigh, NC, United States
[3]Department of Psychology, University of Kentucky, Lexington, KY, United States
*Corresponding author: Department of Human Development and Family Science, Purdue University, 1202 Mitch Daniels Blvd., West Lafayette, IN 47907-2055, United States. Email: lelenbaa@purdue.edu

Abstract

Applying intergroup contact theory to children's thinking about social inequalities, this study investigated whether and why 8- to 12-year-old American children ($N = 379$, 50% girls, 48% white, SSS $M = 6.92$, in 2023–2024) who experienced more direct or indirect intergroup contact with immigrants also treated immigrants more fairly in a scenario reflecting a social inequality. Older children and children with more indirect intergroup contact were more likely to detect and negatively evaluate discrimination, because they knew more about what it means to be an immigrant and had stronger social preferences for immigrants, respectively; βs .39–.16. Children who perceived immigrants faced more barriers in society distributed more resources to immigrants; $\beta = .10$. Intergroup contact can inform children's thinking about societal intergroup relations.

Keywords intergroup contact theory, anti-immigrant bias, social inequality

Lay summary

This study looked at 8- to 12-year-old self-identified American children's face-to-face (e.g., friends) and third-hand (e.g., books) contact with immigrants, what disparities they perceived, how they felt about immigrants, and what they would do in a situation where immigrants received fewer resources than Americans. Older children and children with more third-hand contact (e.g., online) were more likely to detect discrimination and think it was not okay, because they knew more about what it means to be an immigrant and liked immigrants more. Children who perceived immigrants faced more challenges in society also directed more resources to them. Overall, exposure to diversity may raise children's awareness that not all groups are treated equally in society.

Positive direct intergroup contact can reduce prejudice and increase intergroup inclusion in childhood (Tropp et al., 2022). Yet, new evidence suggests that these experiences may have even more impacts than current theory supposes. Specifically, intergroup contact may affect children's views on *societal* as well as interpersonal relations between social groups (Elenbaas, 2019). If this is true, then there is considerable unexplored potential for intergroup contact to inform children's critical thinking about their societies and early interests in beneficial changes such as reducing social inequalities, in addition to fostering interpersonal changes such as greater peer inclusion. To begin to address this question, this study investigated whether 8- to 12-year-old children who experience more intergroup contact in their everyday lives also show greater support for the fair treatment of an outgroup in a situation reflecting a social inequality, and if so, why. We tested these questions in the context of American children's direct (e.g., with classmates) and indirect (e.g., through media) intergroup contact with immigrant peers, a topic of both theoretical and applied importance. The U.S. is home to the largest immigrant population in the world (Ward & Batalova, 2023), and American children's attitudes already inform how they treat their immigrant peers on an interpersonal level (Gönültaş & Mulvey, 2019). As investigated here, American children's thinking about immigrants on a *societal* level may likewise have long-term implications for the economic, social, and political wellbeing of this increasingly diverse society.

Intergroup contact in childhood

Positive and constructive interactions between children from different social group backgrounds, such as playing together or working on a project together, can reduce prejudice and increase

Handling Editor: Audun Dahl
Editor: Shauna Cooper
Received: August 6, 2024. **Revised:** August 20, 2025. **Accepted:** October 7, 2025

intergroup inclusion, particularly among children from more privileged social groups (Allport, 1954; Dovidio et al., 2017). There are many pathways through which direct intergroup contact can achieve those goals, including by reducing intergroup anxiety, increasing empathy, and changing social norms (Beelmann & Heinemann, 2014). That is, intergroup contact can alleviate children's negative expectations about outgroup members and cross-group interactions, leading to more positive attitudes and greater interest in future interactions (Aboud & Brown, 2013; Tropp et al., 2022).

Children's neighborhoods, schools, and other social environments vary in diversity, and not all children have ample opportunities for direct (i.e., face-to-face) intergroup contact. In these cases, children may still form attitudes based on indirect intergroup contact, or third-hand exposure to information or attitudes about an outgroup (White et al., 2021). There are many forms of indirect contact. For instance, extended contact entails knowing that one's ingroup friends have other cross-group friendships (Zhou et al., 2019) and vicarious contact involves observing cross-group friendships via media such as books or movies (Vezzali et al., 2014). When it is constructive, indirect intergroup contact can also alleviate anxiety about intergroup interactions, increase empathy, and challenge exclusive social norms, subsequently reducing prejudice and increasing inclusion intentions (e.g., personally wanting to befriend outgroup peers), particularly among children from more privileged social groups (Jones & Rutland, 2018; Turner & Cameron, 2016).

Importantly, the effects of both direct and indirect intergroup contact on attitudes and behavior may be most impactful in late childhood, or the period of about 8–12 years old (Beelmann & Heinemann, 2014). By late childhood children have clearly identified most of their ingroups and outgroups, including national ingroups and outgroups (Barrett & Oppenheimer, 2011). However, their intergroup attitudes, including attitudes about immigrants, are still fluctuating and individual differences in attitudes are not as strong as they become later in adolescence (Crocetti et al., 2021).

American children's attitudes about immigrants

Over 18 million children, 26% of the child population in the U.S., are immigrants or children of immigrants (Ward & Batalova, 2023). Yet, children's attitudes about immigrants have traditionally received less attention in the U.S. relative to other countries around the world. We do know that the national identity of being American matters to American children (Brown, 2011; Brown et al., 2017; Rodriguez et al., 2016). In fact, by late childhood, many consider it one of their most important identities (Hazelbaker & Mistry, 2022). Native-born American children tend to view immigrants to the U.S. as outgroup members (Brown, 2011; Brown et al., 2017; DeJesus et al., 2018; Sierksma et al., 2022), and in general, their intergroup attitudes center on either avoidance or dislike of differences in language, culture, and lifestyle (Brown et al., 2017; Brown & Lee, 2015). On average, even in late childhood, native-born American children report somewhat limited knowledge about why people immigrate to the U.S., offering a mix of explanations about freedom, opportunity, or not knowing why at all (Brown, 2011; Brown & Lee, 2015).

Immigrant youth fare better interpersonally when they are accepted and included (rather than excluded) by their American peers (Suárez-Orozco et al., 2018). Fortunately, there is evidence that American children and adolescents with more *direct* intergroup contact with immigrants tend to express more positive attitudes and exhibit more positive behaviors with immigrant peers (Brown et al., 2017; Gönültaş & Mulvey, 2021; Hitti et al., 2023). For instance, one study on 6- to 11 year-old American children's attitudes about immigrants from Middle Eastern and North African (MENA) countries found that children who knew even one person from a MENA country felt more positive and less fearful towards this group overall than did children with no such contact (Brown et al., 2017).

Although not yet tested in the context of the U.S., there is evidence from several other countries that more *indirect* intergroup contact, or third-hand exposure to an outgroup, should likewise inform American children's attitudes and behaviors with immigrant peers (Jones & Rutland, 2018). For example, one study with Italian 8- to 11-year-olds found that children whose own best friends had befriended immigrant peers picked up on these positive attitudes and personally reported stronger interests in having immigrants as neighbors, classmates, and friends (Vezzali et al., 2017). Similarly, one study had British 5- to 11-year-olds spend 6 weeks reading about friendships between refugee and British peers; relative to a control group, children who picked up positive attitudes towards refugees by observing story characters' cross-group friendships were more interested in including these peers in their own activities (e.g., inviting them to their house; Cameron et al., 2006).

Alongside direct intergroup contact, the role of indirect intergroup contact in shaping American children's attitudes about immigrants may have increasingly important consequences for children from both backgrounds. In past generations, immigration to the U.S. was more regionally stratified, with over half (64%) of new immigrants settling in just four large coastal states (Budiman, 2020). This means that many American children outside those regions have likely been forming their attitudes about immigrants based primarily on third-hand indirect exposure, in the absence of many local (e.g., school) opportunities for direct intergroup contact. Yet, in the past decade, immigrants' destinations have been shifting, and generating relatively rapid increases in community diversity in some less traditional receiving regions of the U.S. (Ward & Batalova, 2023). This means that many American children in these regions may soon be able to translate their previously established attitudes into behavior during direct interactions with immigrant peers as their communities become more diverse.

Interpersonal attitudes and societal attitudes

Extending beyond the well-established positive effects of direct and indirect intergroup contact on interpersonal attitudes (e.g., reduced prejudice), emerging evidence suggests that intergroup contact experiences in childhood may be able to do even more than previously predicted. Specifically, intergroup contact may affect children's views on *societal* as well as interpersonal relations between groups, particularly for children from more privileged

social group backgrounds. For example, there is evidence that middle class U.S. children who have more direct intergroup contact with poor peers (e.g., as classmates) are more aware of broader economic inequalities in their society (Elenbaas, 2019). Importantly, children who are more aware of intergroup inequalities in their society are more likely to behave equitably when they have the chance to address an unfair situation that is under their control, for instance by distributing resources or opportunities between ingroups and outgroups (Elenbaas et al., 2020).

Likewise, there is now ample evidence that, for adults from more privileged social groups, direct intergroup contact with people from more marginalized social groups has a mobilizing effect on collective actions for positive social change such as petitioning, protesting, or voting (Cocco et al., 2023; Hässler et al., 2020). Emerging evidence suggests that similar effects may hold for adolescents as well (Di Bernardo et al., 2021; Kamberi et al., 2017). For example, one recent study found that Italian adolescents who experienced more direct intergroup contact with immigrants (e.g., as neighbors) were more likely than adolescents with less contact to say that immigrants and Italians were treated differently in society and, in turn, expressed stronger support for actions towards greater equality between immigrants and Italians (Di Bernardo et al., 2021). Together, these findings raise the question of when in development intergroup contact might start to shape societal as well as interpersonal attitudes.

Moreover, if intergroup contact can inform children's early interests in societal issues, then it is critical to understand how—or through what processes—this works. The paths from intergroup contact to *societal* attitudes and behavior (e.g., policy changes) are currently less well understood than the paths from intergroup contact to *interpersonal* attitudes and behavior (e.g., inclusion in peer group activities). It is possible that the same processes that lead to more positive interpersonal behavior can also lead children from more privileged groups to believe that people from more marginalized groups should be treated fairly on a broader scale. In the context of immigrant-national relations, for instance, feeling less prejudice (or more positive attitudes) towards immigrants may lead American children to believe that, not only should new immigrants be treated more inclusively on an interpersonal level (e.g., befriended not bullied), but also on a societal level (e.g., afforded access to the resources and opportunities that native-born Americans enjoy).

Or, as noted above, it is possible that different processes, such as being aware that social inequalities exist, are what lead children from more privileged groups to support fair treatment on a societal level. In the context of attitudes towards immigrants, for instance, perhaps harmony in intergroup peer interactions is not enough, and American children need specific awareness of challenges that immigrants face navigating social systems in the U.S. to begin to advocate for fair treatment in those systems (Elenbaas et al., 2020).

Finally, whether gleaned from direct or indirect intergroup contact, knowing what it means to be an immigrant may also demystify this "outgroup," shedding some light on relevant experiences and improving attitudes. For instance, having accurate knowledge of what it means to be from a MENA background (versus inaccurate information or no knowledge at all) was also associated with lower outgroup fear in the previously described study with American 6- to 11 year-olds (Brown et al., 2017). Likewise, in one recent study Irish 8- to 11-year-olds who learned about a Syrian refugee family coming to Northern Ireland were more interested in spending time helping these peers settle in at their school than children who did not learn about refugees' experiences (Taylor & Glen, 2020).

In short, although there is limited, emerging developmental evidence that more intergroup contact may be associated with stronger concerns for fair treatment on a societal level, it is not yet clear how common or generalizable this is, or how children might arrive at those views. In the context of immigration in the U.S., immigrant children and their families face and navigate myriad structural barriers in social systems including housing, education, labor, and health care (Marks et al., 2018). If intergroup contact—direct or indirect—can support American children's awareness, concerns, or motivation to help address those or other barriers, it may have beneficial long-term impacts for greater equality in this diverse society.

The current study

Bringing together research on intergroup contact and research on children's thinking about social inequalities, this study had three aims. First, we investigated the effects of three developmental and contextual variables—child age, direct intergroup contact, and indirect intergroup contact—on 8- to 12-year-old American children's societal attitudes about immigrants. To assess societal attitudes, we showed children a scenario reflecting a social inequality between immigrants and Americans and measured whether they detected that the situation was discriminatory, how negatively they evaluated it, and what they decided to do with resources that they could use to address an inequality between immigrants and Americans.

Second, as noted above, it is not yet clear whether the processes linking intergroup contact and societal attitudes and behavior are similar or different from those linking intergroup contact and interpersonal attitudes and behavior. We explored three potential mediators suggested in the literature to date: (a) whether children could accurately define what it means to be an immigrant, because limited evidence suggests this might be linked to both interpersonal (e.g., Brown et al., 2017) and societal (e.g., Taylor & Glen, 2020) attitudes about immigrants, (b) children's social preferences for immigrant peers, because extensive evidence has linked intergroup contact with immigrants to reduced prejudice and increased social preferences on an interpersonal level (Gönültaş & Mulvey, 2019; Jones & Rutland, 2018), making it a candidate mediator for societal attitudes as well, and (c) the extent to which children believed immigrants faced barriers in American society, because emerging evidence suggests this may be a critical mediator enabling children and adolescents to respond to social inequalities in particular (e.g., Di Bernardo et al., 2021; Elenbaas, 2019).

Third, we tested whether the strength of the relations described above differed across three between-subjects conditions involving immigrants from Mexico, China, or Egypt. Immigrants to the U.S. are diverse, arriving from almost 200 countries of origin (Ward & Batalova, 2023). Mexico sends the largest number of immigrants to the U.S., China sends a large number as well, and Egypt sends far fewer (Ward & Batalova, 2023). These between-subjects conditions allowed us to test whether associations might be stronger

or weaker based on the degree to which children had direct intergroup contact with the immigrant group in question.

We focused on late childhood (ages 8–12 years) for this study primarily because prior research indicates that the effects of intergroup contact on interpersonal attitudes may be most impactful during this period (Beelmann & Heinemann, 2014), suggesting that this might be a formative time for the influence of intergroup contact on societal attitudes as well. Additionally, other research points to late childhood as a time when U.S. children first become increasingly aware of some of the underlying causes and negative consequences of other social inequalities involving race, gender, and social class (Elenbaas et al., 2020), suggesting that perceptions of social inequalities involving immigrants may likewise emerge over this age range.

Hypotheses

We hypothesized that American children with more direct (e.g., friendships) or indirect (e.g., school lessons) intergroup contact with immigrants would show greater concerns that immigrants should be treated fairly in a social inequality scenario (research aim #1, above). We explored whether those relations were explained by processes similar to what has been shown for interpersonal attitudes and behavior (e.g., social preferences), different processes more often linked with children's emerging justice concerns (e.g., perceived barriers), or both (research aim #2). We explored whether the strength of observed relations were further moderated by the immigrant group in question or generalized across groups, with between-subjects conditions involving immigrants from Mexico, China, or Egypt (research aim #3).

Characterization

In sum, our hypotheses about relations between direct and indirect intergroup contact experiences and behavioral outcomes were confirmatory, and our hypotheses about mediators (e.g., perceived barriers) and moderators (i.e., by condition/immigrant group) were exploratory.

Method

Participants

Power analyses using a Monte Carlo simulation approach (Muthén & Muthén, 2002), expecting direct effects between $\beta = .25$ and $\beta = .30$ (Beelmann & Heinemann, 2014; Zhou et al., 2019) for the multi-groups path models described in the Analysis Plan below, indicated that a sample size of approximately 375 participants would yield power consistently above .80 to test our hypotheses. We recruited participants from 23 community sites (e.g., after-school programs, community centers, museums, libraries) in Indiana and North Carolina between the summer of 2023 and spring of 2024. We described the study topic as "how American kids think about kids from immigrant backgrounds." We initially enrolled 392 participants, and later excluded 13 due to excessive inattentiveness (e.g., no longer answering questions or looking at the screen after multiple prompts) or parental interference (e.g., parent interjecting to help child answer questions).

The final analytic sample was $N = 379$ children ages 8–12 years. Table 1 provides complete sample demographics. Age, gender, race or ethnicity, generational status, and subjective social status (SSS) are by child report; education and income are by parent report. We used the MacArthur Scale of Subjective Social Status for family SSS, where 10 = "the people who are the best off, who have the most money, most education, and best jobs" and 1 = "the people who are the worst off, who have the least money, least education, and worst jobs or no job" (Adler et al., 2000; Mistry et al., 2015).

Procedure

The study was approved by the Institutional Review Board at Purdue University, study ID 2023-242, with a reliance agreement at North Carolina State University, and conducted in accordance with the ethical principles of the American Psychological Association and the Society for Research in Child Development. Parent consent and child assent were obtained for all participants. Participants took an average of 20 min to complete the measures below using iPads. All measures were presented in a random order except for the immigrant definition measure which always came first. Each participant received a small toy in compensation.

After the immigrant definition measure, participants were provided with a brief, factual definition: "Immigrants are people who were born in one country and then moved to another country and live there now. So immigrants to the US were born in another country but moved to the US and live here now. Sometimes people immigrate to the US when they are adults, and other times kids immigrate, usually with their family." Then they were randomly assigned to a between-subjects condition and told that they would be talking "about kids who were born in [Mexico or China or Egypt] but now live in the US. When they were little, these kids lived in [Mexico or China or Egypt], but then they immigrated with their families and they live in the US now." An illustration accompanied this introduction and all subsequent measures; illustrations are available on OSF: https://osf.io/975me/.

Measures

All measures are summarized below, and complete details are available on OSF: https://osf.io/975me/.

Intergroup contact experiences

Direct intergroup contact

Six items, $\alpha = .69$, $\omega = .71$, covered direct contact at school, in the neighborhood, and friendships, from 1 = none to 4 = a lot (Gönültaş & Mulvey, 2021). One example is: "How many students in your school are from [Country] but now live in the US?" We created an average score for analyses.

Indirect intergroup contact

Twelve items, $\alpha = .60$, $\omega = .56$, covered indirect contact online, in books, in school lessons, and overheard conversations (Vezzali et al., 2014). For example, children were asked: "When you're online, how often do you see things about kids who are from [Country] but now live in the US?" and they responded from 1 = never to 4 = often. They were also asked about the valence of that indirect contact, from 1 = mean to 4 = really nice, with items such as: "When you read books with characters who are from [Country] who now live in the US, what are those characters like?" Finally they were asked how much they believed what they were exposed to, for instance: "How much do you believe the things you

Table 1 Sample demographics.

	n	Proportion
Child Age in Years		
8	115	.30
9	109	.29
10	68	.18
11	58	.15
12	23	.06
Not specified	6	.01
Child Gender		
Girl	199	.53
Boy	164	.43
Nonbinary	4	.01
Another identity	6	.01
Not specified	6	.01
Child Race or Ethnicity		
Black	51	.14
White	180	.48
Asian	15	.04
Latino/Hispanic	22	.06
Indigenous	2	.00
Middle Eastern	6	.01
Multiracial/Multiethnic	42	.11
Another identity	32	.08
Not specified	29	.08
Child Generational Status		
First-generation	26	.07
Second-generation	52	.14
Third-generation +	260	.69
Not specified	40	.10
Child Subjective Social Status		
1	2	.00
3	1	.00
4	17	.05
5	66	.17
6	73	.19
7	82	.22
8	57	.15
9	33	.09
10	40	.11
Not specified	8	.02
Parent Educational Attainment		
Some high school	9	.02
High school degree or equivalent	46	.12
Some college	39	.10
Technical or vocational degree	12	.03
Two-year college or associates degree	41	.11
Four-year college or bachelor's degree	104	.27
Master's degree	68	.18
Doctorate degree	23	.06
Not specified	37	.10
Family Annual Income		
<$15K	14	.04
$15K–$25K	16	.04
$25K–$50K	57	.15
$50K–$75K	41	.11
$75K–$100K	48	.13
$100K–$150K	63	.17
$150–$200K	48	.13
$200K–$250K	17	.04
$250K–$500K	18	.04
>$500K	5	.01
Not specified	52	.14
Data Collection Location		
Indiana	274	.72
North Carolina	105	.28

hear people say about people from [Country] who now live in the US?" from 1 = not at all to 4 = completely. We created an average score for analyses to reflect children's frequent-positive-trusted indirect intergroup contact.

Mediators

Accurate definition

A single item asked: "What do you think it means to be an immigrant?" (Brown & Lee, 2015). Two undergraduate Research Assistant team members later coded children's open-ended responses into mutually exclusive categories. To be coded as accurate, a definition had to be factual, e.g., "You came from another country and started a life in the country you came to," "It means like you are from another country but then you move to another country for a specific reason," "It's someone who used to live in another country but then they moved to America;" $\kappa = .95$. Overall, 30% of participants ($n = 113$) gave an accurate definition.

We also coded for conceptually related but not entirely correct definitions, e.g., "Somebody that traveled from one place to another," "Probably it means like somebody with a different background than other people," "Someone who was born in another state [within the U.S.];" $\kappa = .84$; 12%, $n = 44$. Finally, we coded for inaccurate definitions, e.g., "To be smart," "To be a kind person to all;" $\kappa = .91$; 16%, $n = 58$. Some participants (43%, $n = 160$) considered the question but could not generate a definition, e.g., "It's like … actually I'm not sure;" $\kappa = .98$. Inter-rater reliability was calculated on a randomly selected 21% of participant responses after which the two coders split the dataset and coded independently.

As a reminder, this was the first study question that participants answered, and all were provided with the brief, factual definition above (see Participants) before proceeding.

Social preferences

Three items were asked, $\alpha = .72$, $\omega = .73$, from 1 = really don't like to 5 = really like, such as, "How much do you like kids who are from [Country] and now live in the US?" (Brown, 2011). We created an average score for analyses.

Perceived barriers

Four items, $\alpha = .80$, $\omega = .80$, from 1 = really do not agree to 5 = really agree, included "People who come here from [Country] are not always treated fairly in the US" (Rapa et al., 2020). We created an average score for analyses.

Outcomes

To set up a social inequality for children to consider, we introduced three towns and described how they had distributed school supplies in the past, with illustrations (Elenbaas et al., 2016). In each case, the town had one school that primarily served students who were recent immigrants from Mexico, China, or Egypt; that school consistently received fewer school supplies. And each town had another school that primarily served students who were US-born Americans; that school consistently received more supplies.

Detect discrimination

A single item asked: "Why do you think these towns gave out the school supplies the way that they did?" Two undergraduate Research Assistant team members later coded children's open-ended responses; $\kappa = .89$ on a randomly selected 21% of participant responses after which the two coders split the dataset and coded independently. To be coded as detecting discrimination, participants had to reference differential treatment based on group membership, e.g., "They didn't like the Mexican people," "They just care about the kids who were born here and not the kids from Egypt," "They thought that the people from China didn't deserve things because they weren't Americans."

Inequality evaluation

A single item assessed: "What do you think about how these towns gave out school supplies; how okay or not okay is it?" from 1 = really okay to 5 = really not okay.

Resources to immigrants

Finally, participants were introduced to a new town with one school that primarily served students who were recent immigrants from Mexico, China, or Egypt and another school that primarily served students who were US-born Americans. The town had six boxes of school supplies that they needed to give out. Participants were asked how many boxes the town should give to each school, making for a total of 0 to 6 to the school serving recent immigrants.

Additional information

American identification

Four items, $\alpha = .80$, $\omega = .80$, from 1 = not at all to 4 = very, included "How important is it to you that you're American?" (Barrett & Oppenheimer, 2011).

Immigrants as an outgroup

A single item asked: "In your opinion, how American are people who were born in [Country] but now live in the US?" Responses ranged from 1 = not at all to 4 = very (Brown, 2011).

Inequality prediction

In the inequality scenario, after they were introduced to the new town and before they decided how many boxes of supplies each school *should* get, participants were asked to predict how the town had *probably* given out supplies last year, making for a range of 0 to 6 predicted boxes for the school serving recent immigrants.

Analysis plan

We conducted a multi-groups path analysis in M*plus* 8 (Muthén & Muthén, 2017), testing the indirect effects of age and direct and indirect intergroup contact on children's responses to the social inequality scenario (detecting discrimination, evaluating it negatively, and using resources to address it) via three mediators (knowing what it means to be an immigrant, having positive social preferences, and perceiving that immigrants face barriers), while also testing whether the strength of relations between these variables differed across the three between-subjects conditions (groups from Mexico, China, or Egypt). First, we estimated an unconstrained model in which all structural paths were allowed to vary across the three between-subjects conditions. Then, we sequentially constrained paths to be equal across groups, moving from exogenous to endogenous variables, using a χ^2 test of parameter constraints at each step to determine whether the more constrained model produced a significant decrease in fit. All demographics were initially included as covariates (child gender, race or ethnicity, generational status, SSS, and location).

Missing data were rare; <1% for mediators and outcomes; we used FIML estimation (Enders, 2025). Overall model fit was considered acceptable if RMSEA < .06, SRMR < .08, and CFI > .90 (Hu & Bentler, 1999). Standard errors (SEs) are indices of point estimate precision and standardized path coefficients (β) are indices of effect size.

Scientific integrity and openness

We report how we determined our sample size (power analyses, above), all data exclusions (participants section, above), and we follow APA JARS. We do not have permission to share the data from this study, but we have provided extensive descriptives for all measures (Table 2) and all study stimuli and measures are available on OSF: https://osf.io/975me/. This study design and analyses were not preregistered.

Results

Descriptives

As outlined in Table 2, on average, participants reported low direct intergroup contact and moderate indirect intergroup contact. Participants in the Mexico condition reported more direct contact ($M = 1.91$, SE = .05) than participants in the China condition ($M = 1.72$, SE = .05) who, in turn, reported more direct contact than participants in the Egypt condition ($M = 1.48$, SE = .05), $F(2, 371) = 18.46$, $p < .001$, $\eta_p^2 = .09$. Similarly, participants in the Mexico condition reported higher indirect contact ($M = 2.50$, SE = .05) than participants in the Egypt condition ($M = 2.27$, SE = .05), with participants in the China condition falling in between ($M = 2.33$, SE = .05), $F(2, 372) = 6.01$, $p < .003$, $\eta_p^2 = .03$. Although direct and indirect contact were positively associated, neither was associated with child age; that is, children who had more direct interactions with immigrants (e.g., at school) also had more indirect experiences (e.g., saw more about immigrants online), but neither

Table 2 Descriptives and correlations for all study variables.

	M	SD	Min	Max	Age	Gender	Race ethnicity	Gen status	SSS	Location	Cond = Mexico	Cond = China	Cond = Egypt	Direct contact	Indirect contact	Accurate definition	Social preference	Perceived barriers	Detect discrimination	Inequality evaluation
Age	9.37	1.24	8	12																
Gender	.44	.50	0	1	.06															
Race Ethnicity	.51	.50	0	1	.00	.04														
Gen Status	.77	.42	0	1	−.07	.00	.36**													
SSS	6.92	1.74	1	10	−.12*	−.11*	−.04	−.02												
Location	.72	.45	0	1	−.06	−.04	−.10	.00	.05											
Cond = Mexico	.31	.47	0	1	−.02	.03	.11	−.05	.10	.00										
Cond = China	.32	.47	0	1	−.01	−.03	−.15**	−.11*	.11*	−.03	−.47*									
Cond = Egypt	.36	.48	0	1	.03	.00	.04	.16**	−.20**	.03	−.51**	−.52**								
Direct Contact	1.69	.60	1	3.67	.04	−.02	−.08	−.04	.17**	.06	.25**	.03	−.27**							
Indirect Contact	2.37	.54	1	3.83	.09	−.02	.01	.00	.08	.04	.17**	−.04	−.13*	.43**						
Accurate Definition	.30	.46	0	1	.39**	.01	.12*	−.06	−.03	−.11*	.01	.03	−.04	.00	.06					
Social Preference	4.10	.69	1	5	.10*	−.04	.05	.07	−.11*	−.08	.03	−.02	−.01	.12*	.23**	.12*				
Perceived Barriers	3.00	.94	1	5	.10	.00	.11*	.09	.12*	−.01	.05	−.04	.00	.06	.10	.16**	.02			
Detect Discrimination	.57	.50	0	1	.22**	−.08	.07	.02	−.10*	.00	−.04	.00	.04	.00	.05	.24**	.19**	.01		
Inequality Evaluation	4.38	.90	1	5	.13*	.02	.04	−.02	−.24**	−.12*	−.01	−.05	.06	−.14**	−.03	.30**	.26**	−.08	.32**	
Resources to Immigrants	3.09	.41	1	6	.01	−.02	−.01	−.01	.08	−.04	−.03	−.05	.08	.01	.06	.04	.08	.12*	.04	−.06

Note. Gender 1 = boy; Race Ethnicity 1 = white; Gen Status 1 = third-gen+; Location 1 = IN. * = $p < .05$, ** = $p < .01$.

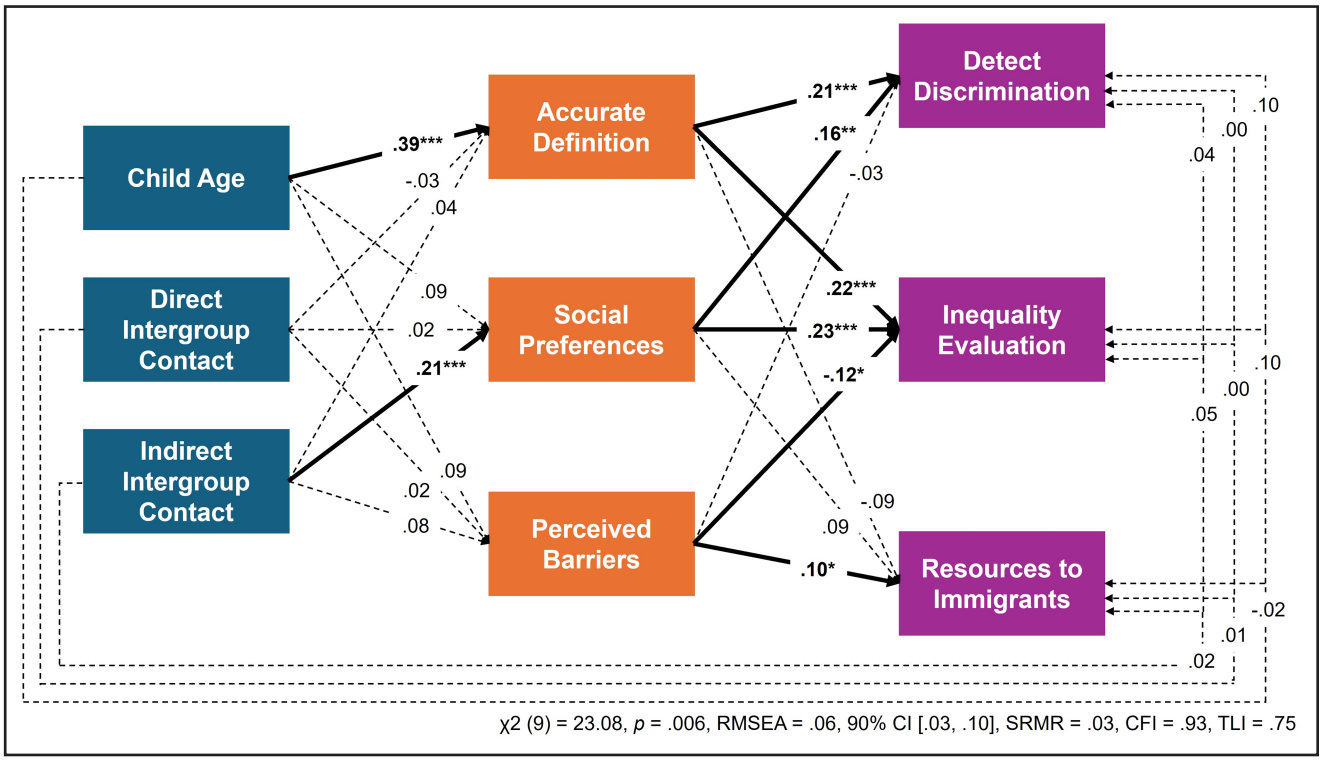

Figure 1 Effects of age and intergroup contact experiences on societal attitudes. Standardized path coefficients; *$p < .05$, **$p < .01$, ***$p < .001$; solid lines are significant.

experience was more or less common for older or younger children in this sample.

Overall, about a third of participants gave an accurate definition of what it means to be an immigrant, social preferences for immigrant peers were relatively positive, and participants were in the middle as to whether immigrants faced barriers in American society; see Table 2. None of these mediators differed significantly by condition, $\chi^2(2) = .57$, $p = .752$, $F(2, 374) = .19$, $p = .830$, $\eta_p^2 = .00$, and $F(2, 372) = .47$, $p = .627$, $\eta_p^2 = .03$, respectively. Importantly, age was positively associated with giving an accurate definition and with social preferences, and both direct and indirect intergroup contact were positively associated with social preferences. Please also see Table S1 in the online Supplementary Materials for bivariate associations using an alternative coding of indirect contact.

In the inequality scenario, just over half of children detected discrimination, overall evaluations were negative, and children distributed resources approximately evenly between immigrant and American peers; see Table 2. None of these outcomes differed significantly by condition, $\chi^2(2) = .90$, $p = .639$, $F(2, 374) = .69$, $p = .501$, $\eta_p^2 = .00$, and $F(2, 373) = .76$, $p = .466$, $\eta_p^2 = .01$, respectively. Importantly, giving an accurate definition and having more positive social preferences were both positively associated with detecting discrimination and with inequality evaluations, and stronger perceptions that immigrants faced barriers in society was associated with distributing more resources to immigrants.

As anticipated, participants identified as "pretty American" on average, $M = 3.25$, SD = .70, and saw immigrants as "a little American," $M = 2.70$, SD = .76. In the inequality scenario, the majority (81%) predicted that, last year, the new town probably gave more school supplies to the school serving Americans than the school serving immigrants, with 57% predicting the exact same six/one split that they had seen in the previous three towns.

Multi-groups analyses: moderation by condition (Mexico, China, Egypt)

First, none of the demographics (child gender, race or ethnicity, generational status, SSS, location) were significant covariates; these were dropped from subsequent analyses. An initial unconstrained model fit the data well, χ^2 (27) = 34.62, $p = .148$, RMSEA = .05, 90% CI [.00, .09], SRMR = .04, CFI = .96, TLI = .74. Constraining the paths from age and direct and indirect intergroup contact to the mediators (accurate definition, social preferences, perceived barriers) to be equal across conditions did not result in a significant reduction in model fit, $\Delta\chi^2$ (18) = 19.65, $p = .352$. Likewise, constraining the paths from the mediators to the behavioral outcomes (detect discrimination, inequality evaluation, resources to immigrants) to be equal across conditions did not result in a significant reduction in model fit, $\Delta\chi^2$ (18) = 19.80, $p = .344$.

In sum, our multi-groups path analyses did not find significant moderation by between-subjects condition. The paths from age and direct and indirect intergroup contact to mediators to behavioral outcomes were comparable in strength and direction regardless of whether the immigrant group in question was from Mexico, China, or Egypt.

Full sample analyses

Final analyses used the full sample, and the final model fit the data well, χ^2 (9) = 23.08, $p = .006$, RMSEA = .06, 90% CI [.03, .10], SRMR = .03, CFI = .93, TLI = .75. Standardized direct and indirect effects are illustrated in Figure 1. Within-level covariances were estimated but are not shown.

Model direct effects

As illustrated in Figure 1, older participants were more likely to accurately define what it means to be an immigrant, $b = .14$ (.02), $\beta = .39$, $p < .001$, and participants who experienced more indirect intergroup contact reported stronger social preferences for immigrant peers, $b = .27$ (.07), $\beta = .21$, $p < .001$. Direct intergroup contact was not significantly related to any of the mediators, all $ps > .05$.

Next, participants who could accurately define what it means to be an immigrant were more likely to detect discrimination in the inequality scenario, $b = .23$ (.06), $\beta = .21$, $p < .001$, and evaluated that inequality more negatively, $b = .43$ (.10), $\beta = .22$, $p < .001$. Similarly, participants who reported stronger social preferences for immigrant peers were more likely to detect discrimination, $b = .12$ (.04), $\beta = .16$, $p = .001$, and evaluated the inequality more negatively, $b = .30$ (.06), $\beta = .23$, $p < .001$. In an unexpected contradiction, participants who perceived that immigrants faced more barriers in American society simultaneously evaluated the inequality scenario less negatively, $b = -.11$ (.05), $\beta = -.12$, $p = .017$, *but* distributed more resources to immigrants to address that inequality, $b = .05$ (.03), $\beta = .10$, $p = .049$.

Model indirect effects

For participants' detection of discrimination, child age had a significant total indirect effect, $b = .04$ (.01), $\beta = .10$, $p < .001$, which operated via a specific indirect effect through accurate definition, $b = .03$ (.01), $\beta = .08$, $p < .001$, and indirect intergroup contact had a significant total indirect effect, $b = .04$ (.02), $\beta = .04$, $p = .032$, which operated via a specific indirect effect through social preferences, $b = .03$ (.01), $\beta = .04$, $p = .013$. For participants' inequality evaluations, child age had a significant total indirect effect, $b = .07$ (.02), $\beta = .10$, $p < .001$, which operated via a specific indirect effect through accurate definition, $b = .06$ (.02), $\beta = .09$, $p < .001$, and indirect intergroup contact had a significant total indirect effect, $b = .08$ (.04), $\beta = .05$, $p = .027$, which operated via a specific indirect effect through social preferences, $b = .08$ (.03), $\beta = .05$, $p = .003$. For participants' resource distributions, no predictors had significant total indirect effects, all $ps > .05$.

Discussion

This study integrated intergroup contact theory and research on children's thinking about social inequalities to examine whether and how intergroup contact experiences informed 8- to 12- year-old American children's views on social inequalities involving immigrants. We found that older children and children who reported more indirect intergroup contact (e.g., via books) showed stronger support for immigrants in a situation reflecting social inequality, because they were more accurate in defining what it meant to be an immigrant and liked immigrants more, respectively. These patterns were consistent for immigrants from Mexico, China, and Egypt, even though participating children had, on average, more direct intergroup contact with some of those groups than with others. Some findings about the role of direct intergroup contact and the effects of perceiving that immigrant families face barriers in society were contrary to expectations. Overall, the most important conclusion from this study is that intergroup contact can positively affect children's views on *societal* as well as interpersonal relations between social groups, which is encouraging for current and future research investigating how and for whom intergroup contact experiences in childhood may foster support for positive social change.

First, we found that children who experienced more indirect intergroup contact (e.g., saw more good things about immigrants online) expressed stronger social preferences for immigrants (e.g., liked them more) and, in turn, were more likely to detect and negatively evaluate discrimination in a context reflecting social inequality in which immigrants received fewer educational resources than Americans. These findings are important for three main reasons. First, they demonstrate that intergroup contact experiences in childhood may be shaping even more than previously predicted; as hypothesized, these experiences can positively inform children's views on *societal* as well as interpersonal relations between social groups. Second, they illustrate that some of the *processes* connecting intergroup contact to interpersonal attitudes (Tropp et al., 2022), in this case social preferences, also link intergroup contact and societal attitudes. Third, they highlight *late childhood* (or the period of about 8 to 12 years) as a time when intergroup contact is shaping not only interpersonal (Beelmann & Heinemann, 2014) but also societal attitudes, in this case about social inequality, pointing to opportunities for early intervention. In short, this study provides evidence that intergroup contact experiences may enable children from more privileged social groups to more readily detect, evaluate, and respond to issues facing their peers from more marginalized groups on a broader societal level, including access to educational resources.

Further, we also found that basic knowledge about what it means to be an immigrant, in this case associated with age rather than intergroup contact experiences, mattered. Specifically, children who were able to factually describe what it means to be an immigrant were, in turn, more likely to detect and negatively evaluate discrimination when immigrants received fewer educational resources than Americans. At a time in U.S. history when a quarter of children are immigrants or immigrant-origin (Ward & Batalova, 2023), these findings are useful because they suggest another path to greater equity that does not rely on local opportunities for direct intergroup contact. Teaching children in the U.S. about different immigrant groups may be particularly impactful in educational settings (e.g., schools, community education) that are nationally homogenous. Being familiar with a marginalized group and some of the things that they have experienced, even if not learned directly from the group themselves, can help children from more privileged groups recognize and reject systemic discrimination.

Interestingly, only one mediator—perceiving that immigrants currently face barriers in American society (e.g., do not have equal opportunities at school or at work)—was associated with distributing more resources to immigrants in a context reflecting social inequality. This indicates that, beyond knowing what it means to be an immigrant or liking immigrants, it is necessary for American children to be aware of broader social inequalities that affect immigrants in order to *behave* equitably when they have the chance to do so. These findings are consistent with prior studies showing that older children who are more aware of racial, gender, and social class inequalities are also more likely to behave equitably when they have the chance to address an unfair inequality of resources or opportunities (Elenbaas et al., 2020).

Unexpectedly, however, children who perceived that immigrants face more barriers in society also evaluated the inequality scenario slightly less negatively than children who were more mixed in their perceptions. Importantly, they still evaluated the

inequality negatively (mere tenths of a point from the sample average). One possible explanation is that children who strongly perceived that immigrants were treated unfairly in multiple areas of American society were simply less surprised by the educational inequality scenario that we used in this study, evaluating it in light of the even more egregious issues that they perceived outside of the study context. Critically, these were the same children who subsequently took action by allocating resources more equitably between immigrants and Americans when they had the chance, suggesting that they also possessed a more constructive repertoire of responses to inequality than children with less awareness of how society often operates.

Finally, *direct* intergroup contact (e.g., with classmates) was not significantly related to any of the outcomes in this study. Although developmental research in this area is very new, the absence of a significant association here is contrary to expectations from prior studies on cross-class contact in childhood (Elenbaas, 2019) and immigrant-national contact in adolescence (Di Bernardo et al., 2021). Importantly, although we did find that, on average, children had the most direct contact with peers from Mexico, then China, then Egypt (as expected, Ward & Batalova, 2023), overall rates for all groups were low. One interpretation is that, in the absence of direct personal experiences, children drew more heavily on their indirect intergroup contact to form their impressions of immigrants and decide how to behave in the inequality scenario (as discussed above). This underscores the importance of indirect intergroup contact in two ways. On the one hand, many American children currently live in social environments with few opportunities for direct intergroup contact with immigrants, and in these cases, the messages that they receive third-hand will likely "fill in the blanks" in ways that might not be constructive. On the other hand, in these contexts, *positive* indirect intergroup contact has the potential to set the stage not only for cooperative peer relationships as highlighted in prior research (Turner & Cameron, 2016), but also a willingness to try to help address societal issues including social inequalities, as shown in this study.

Generalizability

There are two main constraints on generalizability (Simons et al., 2017) for this study. First, this study used the specific context of American children's thinking about social inequalities involving immigrants to test broad questions about intergroup contact and thinking about social inequalities among children from more privileged groups. Certainly, more research is needed to see how these theoretical questions are supported across additional intergroup contexts. On a related note, it is important to acknowledge that not all immigrants to the U.S. face the same barriers we measured here (access to jobs, education, neighborhoods, or general fair treatment), or face them to the same degree (Ward & Batalova, 2023), and immigrants' experiences are shaped by policies and practices that also change over time and influence how different immigrant groups are perceived (e.g., Lei et al., 2023).

Second, these findings with 8- to 12-year-old self-identified American children in Indiana and North Carolina offer some strength and some caveats for generalizability to 8- to 12-year-old self-identified American children nation-wide, particularly regarding direct intergroup contact with immigrants. Although there are still far fewer immigrants in these areas of the U.S. than in some of the more traditional destinations (e.g., California, Texas, Florida, New York) (Budiman, 2020), these areas have witnessed relatively rapid increases in community diversity via immigration in the past decade or so. This makes the social environmental context for children in this study increasingly like—but still different from—other regions of the U.S.

Limitations and future directions

One important future direction for research in this area concerns the *content* of children's intergroup contact. The links between indirect contact, social preferences, and societal attitudes revealed in this study highlight one route through which early contact experiences can raise children's concerns about societal issues. Yet, research with adults increasingly indicates that intergroup interactions are most impactful in catalyzing actions for social change among people from more privileged *and* more marginalized social groups when those involved in the interactions directly discuss injustices (Cocco et al., 2023) in ways that highlight their illegitimacy (Tropp & Barlow, 2018) and express willingness to work in solidarity to enact necessary changes (Hässler et al., 2020). Paradoxically, contact that is interpersonally harmonious but does not explicitly acknowledge injustices can have a sedative effect on motivations for social change among adults from more marginalized groups, for instance by reducing perceptions of discrimination, emphasizing commonalities over differences, and increasing perceptions that systems do operate fairly (Reimer & Sengupta, 2023). Now that we know intergroup contact matters for American children's thinking about social inequalities involving immigrant groups, we can further investigate the specific content within those interactions that is most impactful, and for which groups of children.

On a related note, higher *quality* intergroup interactions may be more likely to include discussions of social issues. For instance, one recent study with 8- to 14 year-old American children found that, when offered the chance to talk with someone about racial inequalities, children chose people in their lives (e.g., friends, family members, teachers) who they thought had expertise in the subject matter and with whom they felt a close relationship (Kneeskern & Elenbaas, 2022). Although well-established self-report measures of direct intergroup contact, including the one used in the current study (Gönültaş & Mulvey, 2021), usually ask about both closer (e.g., friends) and more distant (e.g., classmates) relationships, they tend to be more focused on contact frequency (e.g., how often) than contact quality or the specific nature of those relationships (e.g., shared goals).

Likewise, measures of indirect intergroup contact are quite diverse, as indirect contact itself has numerous forms and mediums (White et al., 2021). The current study focused on frequency, valence, and trust in contact online, in books, in school lessons, and in overheard conversations, aiming for a breadth of potential exposure opportunities and a measure comparable in nature to the direct intergroup contact measure. Yet, as a result, it too merged features of intergroup contact that may uniquely shape thinking about social inequalities if assessed separately. For instance, valence may interact with frequency, in the sense that some positive messages may buffer the detrimental effects of many negative exposures or in the sense that a single negative message may outweigh multiple positive exposures. Or, different sources of indirect contact may garner varying levels of children's trust; e.g., over time, children may trust messages about

immigrants that they hear at school but be hesitant to accept what they see online. Overall, future studies may benefit from assessing the joint and separate effects of contact content (e.g., conversations about social issues) and contact quality (e.g., interpersonal trust) on children's developing abilities to detect, evaluate, and respond to social inequalities.

Additionally, one of the most important contributors to children's equitable behavior in this study perceived that immigrants face barriers in American society, yet these perceptions of barriers were not significantly related to age or to either form of intergroup contact assessed here. This raises the question of where children acquire their perceptions of how fairly immigrants are treated in American society. Attitudes about immigrants are multiply determined, and future studies may benefit from further investigating the roles of parents and teachers in addition to peer contact (Gönültaş & Mulvey, 2019). Likewise, it is an open question as to whether children perceive that second- or third-generation families also face barriers. Prior research from the U.S. (Brown et al., 2017) and the Netherlands (Thijs & Verkuyten, 2023; Verkuyten et al., 2014) indicates that children increasingly categorize immigrants as co-nationals the more they appear to look, sound, and behave like their national ingroup (e.g., clothing, accent, activities) and the longer they have been in the country, suggesting that U.S. children's social preferences for immigrant may increase over time as immigrants seem "more American" while perceptions of barriers in society may decrease for the same reason.

Additionally, attitudes about immigrants encompass more than perceptions of social inequalities. For instance, integrated threat theory proposes that immigrants are perceived to pose both realistic threats to the political and economic power of the national ingroup (e.g., material resources, work, education) and symbolic threats to the worldview of the national ingroup (e.g., cultural values, norms, beliefs), and both perceived threats generate prejudice (Stephan et al., 2016). Although this framework is less common in developmental research, it could generate fruitful hypotheses about how perceptions of barriers or other forms of discrimination may interact with perceived threat to inform children's attitudes.

Finally, from a developmental perspective, we focused on late childhood (ages 8 to 12 years) for this study because the effects of intergroup contact on attitudes and behavior are often most impactful during this period (Beelmann & Heinemann, 2014). However, additional longitudinal research that examines how these processes unfold over time is critical. For instance, it may be that positive indirect intergroup contact motivates children to seek out more opportunities to learn about immigrant groups and even befriend immigrant peers, fostering direct intergroup contact (Turner & Cameron, 2016).

Conclusions

This study is a first step in applying intergroup contact theory to learn how experiences with peers from more marginalized social groups may enable children from more privileged social groups to consider current social inequalities and how they could contribute to addressing them. With a sample of 8- to 12-year-old American children, we found that older participants and participants who experienced more indirect intergroup contact with immigrants showed stronger support for immigrants in a situation reflecting social inequality, and that these relations were explained by different processes (knowing what it means to be an immigrant and liking immigrants more). Overall, the most important conclusion is that intergroup contact *can* positively affect children's views on societal (as well as interpersonal) relations between groups, and that these experiences may have potential to foster the kind of critical thinking about social inequalities that is a crucial prerequisite for addressing justice concerns across the lifespan.

Supplementary material

Supplementary material is available at *Child Development* online.

Data availability

The data and necessary to reproduce the analyses presented here are not publicly accessible. The materials necessary to replicate the findings presented here are publicly accessible: https://osf.io/975me/. The analyses presented here were not preregistered.

Author contributions

Laura Elenbaas, Kelly Lynn Mulvey, and Christia Spears Brown were responsible for conceptualization, formal analyses, methodology, supervision, and writing- original draft. Laura Elenbaas was responsible for data curation, software, and visualization. Laura Elenbaas and Kelly Lynn Mulvery were responsible for funding acquisition and resources. Jane Singman and Megan N. Norris were responsible for investigation, validation, and writing-reviewing and editing. Jane Singman and Kelly Lynn Mulvey were responsible for project administration.

Funding

None declared.

Conflicts of interest

None declared.

References

Aboud, F. E., & Brown, C. S. (2013). Positive and negative intergroup contact among children and its effect on attitudes. In G. Hodson, & M. Hewstone (Eds.), *Advances in intergroup contact* (pp. 176–199). Psychology Press.

Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy white women. *Health Psychology*, *19*, 586–592. https://doi.org/10.1037/0278-6133.19.6.586

Allport, G. W. (1954). *The nature of prejudice*. Addison-Wesley.

Barrett, M., & Oppenheimer, L. (2011). Findings, theories, and methods in the study of children's national identifications and national attitudes. *European Journal of Developmental Psychology*, *8*, 5–24. https://doi.org/10.1080/17405629.2010.533955

Beelmann, A., & Heinemann, K. S. (2014). Preventing prejudice and improving intergroup attitudes: A meta-analysis of child and adolescent training programs. *Journal of Applied*

Developmental Psychology, *35*, 10–24. https://doi.org/10.1016/j.appdev.2013.11.002

Brown, C. S. (2011). American elementary school children's attitudes about immigrants, immigration, and being an American. *Journal of Applied Developmental Psychology*, *32*, 109–117. https://doi.org/10.1016/j.appdev.2011.01.001

Brown, C. S., Ali, H., Stone, E. A., & Jewell, J. A. (2017). U.S. children's stereotypes and prejudicial attitudes toward Arab Muslims. *Analyses of Social Issues and Public Policy*, *17*, 60–83. https://doi.org/10.1111/asap.12129

Brown, C. S., & Lee, C. A. (2015). Impressions of immigration: Comparisons between immigrant and nonimmigrant children's immigration beliefs. *Analyses of Social Issues and Public Policy*, *15*, 160–176. https://doi.org/10.1111/asap.12067

Budiman, A. (2020). *Key findings about U.S. immigrants*. Pew Research Center. https://www.pewresearch.org/fact-tank/2020/08/20/key-findings-about-u-s-immigrants/

Cameron, L., Rutland, A., Brown, R., & Douch, R. (2006). Changing children's intergroup attitudes toward refugees: Testing different models of extended contact. *Child Development*, *77*, 1208–1219. https://doi.org/10.1111/j.1467-8624.2006.00929.x

Cocco, V. M., Vezzali, L., Stathi, S., Di Bernardo, G. A., & Dovidio, J. F. (2023). Mobilizing or sedative effects? A narrative review of the association between intergroup contact and collective action among advantaged and disadvantaged groups. *Personality and Social Psychology Review*, *28*, 119–180. https://doi.org/10.1177/10888683231203141

Crocetti, E., Albarello, F., Prati, F., & Rubini, M. (2021). Development of prejudice against immigrants and ethnic minorities in adolescence: A systematic review with meta-analysis of longitudinal studies. *Developmental Review*, *60*, 100959. https://doi.org/10.1016/j.dr.2021.100959

DeJesus, J. M., Hwang, H. G., Dautel, J. B., & Kinzler, K. D. (2018). American = English speaker" before "American = white": The development of children's reasoning about nationality. *Child Development*, *89*, 1752–1767. https://doi.org/10.1111/cdev.12845

Di Bernardo, G. A., Vezzali, L., Stathi, S., McKeown, S., Cocco, V. M., Saguy, T., & Dixon, J. (2021). Fostering social change among advantaged and disadvantaged group members: Integrating intergroup contact and social identity perspectives on collective action. *Group Processes & Intergroup Relations*, *24*, 26–47. https://doi.org/10.1177/1368430219889134

Dovidio, J. F., Love, A., Schellhaas, F. M. H., & Hewstone, M. (2017). Reducing intergroup bias through intergroup contact: Twenty years of progress and future directions. *Group Processes and Intergroup Relations*, *20*, 606–620. https://doi.org/10.1177/1368430217712052

Elenbaas, L. (2019). Inter-wealth contact and young children's concern for equity. *Child Development*, *90*, 108–116. https://doi.org/10.1111/cdev.13157

Elenbaas, L., Rizzo, M. T., Cooley, S., & Killen, M. (2016). Rectifying social inequalities in a resource allocation task. *Cognition*, *155*, 176–187. https://doi.org/10.1016/j.cognition.2016.07.002

Elenbaas, L., Rizzo, M. T., & Killen, M. (2020). A developmental science perspective on social inequality. *Current Directions in Psychological Science*, *29*, 610–616. https://doi.org/10.1177/0963721420964147

Enders, C. K. (2025). Missing data: An update on the state of the art. *Psychological Methods*, *30*, 322–339. https://doi.org/10.1037/met0000563

Gönültaş, S., & Mulvey, K. L. (2019). Social-developmental perspective on intergroup attitudes towards immigrants and refugees in childhood and adolescence: A roadmap from theory to practice for an inclusive society. *Human Development*, *63*, 90–111. https://doi.org/10.1159/000503173

Gönültaş, S., & Mulvey, K. L. (2021). The role of immigration background, intergroup processes, and social-cognitive skills in bystanders' responses to bias-based bullying toward immigrants during adolescence. *Child Development*, *92*, e296–e316. https://doi.org/10.1111/cdev.13476

Hässler, T., Ullrich, J., Bernardino, M., Shnabel, N., Laar, C. V., Valdenegro, D., Sebben, S., Tropp, L. R., Visintin, E. P., González, R., Ditlmann, R. K., Abrams, D., Selvanathan, H. P., Branković, M., Wright, S., von Zimmermann, J., Pasek, M., Aydin, A. L., Žeželj, I., … Ugarte, L. M. (2020). A large-scale test of the link between intergroup contact and support for social change. *Nature Human Behaviour*, *4*, 380–386. https://doi.org/10.1038/s41562-019-0815-z

Hazelbaker, T., & Mistry, R. S. (2022). Negotiating whiteness: Exploring white elementary school-age children's racial identity development. *Social Development*, *31*, 1280–1295. https://doi.org/10.1111/sode.12602

Hitti, A., Gönültaş, S., & Mulvey, K. L. (2023). What motivates adolescent bystanders to intervene when immigrant youth are bullied? *Journal of Research on Adolescence*, *33*, 603–617. https://doi.org/10.1111/jora.12829

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*, 1–55. https://doi.org/10.1080/10705519909540118

Jones, S., & Rutland, A. (2018). Attitudes toward immigrants among the youth. *European Psychologist*, *23*, 83–92. https://doi.org/10.1027/1016-9040/a000310

Kamberi, E., Martinovic, B., & Verkuyten, M. (2017). Intergroup contact and minority group empowerment: The perspective of Roma and non-Roma adolescents in Macedonia. *Journal of Community & Applied Social Psychology*, *27*, 424–434. https://doi.org/10.1002/casp.2320

Kneeskern, E., & Elenbaas, L. (2022). Someone who knows and someone I trust: Investigating how and with whom U.S. 8- to 14 year-old youth seek to learn about racial inequality. *Developmental Psychology*, *59*, 1892–1905. https://doi.org/10.1037/dev0001631

Lei, R. F., Foster-Hanson, E., & Goh, J. X. (2023). A sociohistorical model of intersectional social category prototypes. *Nature Reviews Psychology*, *2*, 297–308. https://doi.org/10.1038/s44159-023-00165-0

Marks, A. K., McKenna, J. L., & Garcia Coll, C. (2018). National immigration receiving contexts. *European Psychologist*, *23*, 6–20. https://doi.org/10.1027/1016-9040/a000311

Mistry, R. S., Brown, C. S., White, E. S., Chow, K. A., & Gillen-O'Neel, C. (2015). Elementary school children's reasoning about social class: A mixed-methods study. *Child Development*, *86*, 1653–1671. https://doi.org/10.1111/cdev.12407

Muthén, L. K., & Muthén, B. O. (2002). How to use a Monte Carlo study to decide on sample size and determine power. *Structural Equation Modeling*, *9*, 599–620. https://doi.org/10.1207/S15328007SEM0904_8

Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's Guide*. Muthén & Muthén.

Rapa, L. J., Bolding, C. W., & Jamil, F. M. (2020). Development and initial validation of the short critical consciousness scale (CCS-S). *Journal of Applied Developmental Psychology*, *70*, 101164. https://doi.org/10.1016/j.appdev.2020.101164

Reimer, N. K., & Sengupta, N. K. (2023). Meta-analysis of the "ironic" effects of intergroup contact. *Journal of Personality and Social Psychology*, *124*, 362–380. https://doi.org/10.1037/pspi0000404

Rodriguez, V. C., Gillen-O'Neel, C., Mistry, R. S., Brown, C. S., Chow, K. A., & White, E. S. (2016). National and racial-ethnic identification: What it means to be American among early adolescents. *The Journal of Early Adolescence*, *36*, 807–839. https://doi.org/10.1177/0272431615589348

Sierksma, J., Brey, E., & Shutts, K. (2022). Racial stereotype application in 4-to-8-year-old White American children: Emergence and specificity. *Journal of Cognition and Development*, *23*, 660–685. https://doi.org/10.1080/15248372.2022.2090945

Simons, D. J., Shoda, Y., & Lindsay, D. S. (2017). Constraints on generality (COG): A proposed addition to all empirical papers. *Perspectives on Psychological Science*, *12*, 1123–1128. https://doi.org/10.1177/1745691617708630

Stephan, W. G., Ybarra, O., & Rios, K. (2016). Intergroup threat theory. In *Handbook of prejudice, stereotyping, and discrimination* (2nd ed, pp. 255–278). Psychology Press.

Suárez-Orozco, C., Motti-Stefanidi, F., Marks, A., & Katsiaficas, D. (2018). An integrative risk and resilience model for understanding the adaptation of immigrant-origin children and youth. *American Psychologist*, *73*, 781–796. https://doi.org/10.1037/amp0000265

Taylor, L. K., & Glen, C. (2020). From empathy to action: Can enhancing host-society children's empathy promote positive attitudes and prosocial behaviour toward refugees? *Journal of Community & Applied Social Psychology*, *30*, 214–226. https://doi.org/10.1002/casp.2438

Thijs, J., & Verkuyten, M. (2023). Being considered a co-national: Social categorization and perceived acculturation of immigrant peers. *Journal of Experimental Child Psychology*, *225*, 105520. https://doi.org/10.1016/j.jecp.2022.105520

Tropp, L. R., & Barlow, F. K. (2018). Making advantaged racial groups care about inequality: Intergroup contact as a route to psychological investment. *Current Directions in Psychological Science*, *27*, 194–199. https://doi.org/10.1177/0963721417743282

Tropp, L. R., White, F., Rucinski, C. L., & Tredoux, C. (2022). Intergroup contact and prejudice reduction: Prospects and challenges in changing youth attitudes. *Review of General Psychology*, *26*, 342–360. https://doi.org/10.1177/10892680211046517

Turner, R. N., & Cameron, L. (2016). Confidence in contact: A new perspective on promoting cross-group friendship among children and adolescents. *Social Issues and Policy Review*, *10*, 212–246. https://doi.org/10.1111/sipr.12023

Verkuyten, M., Thijs, J., & Sierksma, J. (2014). Majority children's evaluation of acculturation preferences of immigrant and emigrant peers. *Child Development*, *85*, 176–191. https://doi.org/10.1111/cdev.12111

Vezzali, L., Hewstone, M., Capozza, D., Giovannini, D., & Wölfer, R. (2014). Improving intergroup relations with extended and vicarious forms of indirect contact. *European Review of Social Psychology*, *25*, 314–389. https://doi.org/10.1080/10463283.2014.982948

Vezzali, L., Hewstone, M., Capozza, D., Trifiletti, E., & Bernardo, G. A. D. (2017). Improving intergroup relations with extended contact among young children: Mediation by intergroup empathy and moderation by direct intergroup contact. *Journal of Community & Applied Social Psychology*, *27*, 35–49. https://doi.org/10.1002/casp.2292

Ward, N., & Batalova, J. (2023). *Frequently requested statistics on immigrants and immigration in the United States*. Migration Policy Institute. https://www.migrationpolicy.org/article/frequently-requested-statistics-immigrants-and-immigration-united-states

White, F. A., Borinca, I., Vezzali, L., Reynolds, K. J., Blomster Lyshol, J. K., Verrelli, S., & Falomir-Pichastor, J. M. (2021). Beyond direct contact: The theoretical and societal relevance of indirect contact for improving intergroup relations. *Journal of Social Issues*, *77*, 132–153. https://doi.org/10.1111/josi.12400

Zhou, S., Page-Gould, E., Aron, A., Moyer, A., & Hewstone, M. (2019). The extended contact hypothesis: A meta-analysis on 20 years of research. *Personality and Social Psychology Review*, *23*, 132–160. https://doi.org/10.1177/1088868318762647