Does Intergroup Contact Increase Children's Desire to Play with Diverse Peers and Reduce Experiences of Social Exclusion?

Melanie Killen, University of Maryland, College Park, USA
Amanda R. Burkholder, Furman University, USA
Riley N. Sims, University of Maryland, College Park, USA
Kathryn M. Yee, University of Maryland, College Park, USA
Jacquelyn Glidden, University of Maryland, College Park, USA
Katherine Luken Raz, University of Maryland, College Park, USA
Elise Kaufman, University of Maryland, College Park, USA
Tracy M. Sweet, University of Maryland, College Park, USA
Laura M. Stapleton, University of Maryland, College Park, USA

Corresponding Author Contact Information

Melanie Killen, Ph.D.
Email: mkillen@umd.edu
Address: 3942 Campus Drive, Suite 3304, University of Maryland, College Park, USA
Work Phone: 301-405-3176
Mobile: 301-915-7598
ORCID: https://orcid.org/0000-0002-6392-9373

To be published in *Peace and Conflict: A Journal of Peace Psychology. Accepted Oct 5 2023*
Editor in Chief: Laura K. Taylor
Special Issue on "Social Norms and Peace"

Citation:
Killen, M., Burkholder, A.R., Sims, R.N., Yee, K. M., Glidden, J. Luken Raz, K., Kaufman, E., Sweet, T.M., Stapleton, L.M. (2024). Does intergroup contact increase children's desire to play with diverse peers and reduce experiences of social exclusion? *Peace and Conflict: A Journal of Peace Psychology.* https://doi.org/10.1037/pac0000713

Acknowledgements

We thank the students, parents, teachers, and schools that participated in this study. We are grateful to the school district for providing permission for the study to be conducted. The first author was supported, in part, by a grant from the National Science Foundation, 1728918, and the National Institute of Child Health and Human Development, R01HD093698.

Abstract

Reducing prejudice in childhood requires changing group norms that often perpetuate prejudicial attitudes and in-group bias. Research has shown that intergroup contact is one of the most effective means to reduce prejudice. Yet little research has examined whether intergroup contact in the form of class discussions that challenge negative group norms might promote the desire to play with diverse peers. This study tested whether a classroom intervention program, *Developing Inclusive Youth*, which included experiences of direct and indirect contact, would increase children's desire for contact with diverse peers and reduce reported experiences of social exclusion. A multisite randomized control trial was implemented with 983 students (502 females; 58.5% White; M_{age} = 9.64 years) and 48 teachers in 48 third, fourth, and fifth grade classrooms across six schools. Overall, students in the program displayed more positive expectations about play with diverse peers and fewer experiences with social exclusion. Classroom discussions involved challenging group norms that perpetuate same-group preferences. Children's grade moderated their desire for contact with peers from some but not all social groups. This type of program may be an effective means for increasing positive, inclusive group norms in childhood, as this is a time in development when attitudes and preferences for peer friendships are forming. Increasing positive intergroup norms in the classroom creates academic learning environments that promote healthy child development.

Key words: social exclusion, group norms, prejudice, intergroup contact

Does Intergroup Contact Increase Children's Desire to Play with Diverse Peers and Reduce Experiences of Social Exclusion?

Social exclusion, harassment, prejudice, and bias persist and contribute to discriminatory behavior toward others in all realms of society, including the workplace and school settings (Dovidio & Gaertner, 2008). Psychologists and social scientists have demonstrated that understanding and changing attitudes, beliefs, and perspectives about others is necessary to reduce discriminatory and unfair treatment towards others as well as improve psychological wellbeing (Bonilla-Silva, 2015; Killen & Dahl, 2021; Paradies, 2016; Taylor et al., 2020; Verkuyten, 2014). It is especially important to understand the development of group norms in childhood, as norms that groups hold contribute to decision-making about social inclusion and exclusion (Nesdale & Lawson, 2011). Further, intervening to change norms in childhood has the greatest potential for change given that children's attitudes are much more pliable than are those held by adults (Stangor & Schaller, 1996).

An essential and fundamental question in both social psychological and developmental psychological research is how to change group norms (Cameron et al., 2011; Nesdale, 2008; Taylor, 2020). Intergroup contact has been proposed as one means by which individuals will reduce biases and negative attitudes about others (Pettigrew & Tropp, 2006). Positive contact with individuals perceived to be members of an outgroup (often by ethnicity, race, gender, nationality, and other group identity categories) can help reduce bias and promote fair and just treatment towards others (Rutland & Killen, 2015; Tropp & Barlow, 2018).

In many developmental psychology studies, the effectiveness of contact is measured by whether children reporting cross-group friendships display fewer prejudicial attitudes about others identified than do children who do not report such friendships (Turner & Cameron, 2016).

The goal of this study was distinct in that the effectiveness of contact was analyzed by whether children who participated in an 8-week program, where they were provided with opportunities to reflect on and discuss peer exclusion norms that reflect bias with their classmates, were more likely to report contact with diverse peers and report fewer experiences of social exclusion than children who did not participate in the program. A fundamental goal of the program was to change group norms in the classroom through classroom discussions that were motivated by interacting with an animated web-based online tool. The tool enabled children to first evaluate, reflect, and interpret an everyday peer inclusion/exclusion situation online, and then discuss the scenario with their peers in the classroom guided by a trained teacher that occurred over two months (see Killen et al., 2022).

Previous research using programs that involve classroom discussions about peer inclusion and exclusion has revealed that this experience can reduce negative trait attributions (e.g., being aggressive, lazy, or mean) about diverse peers and increase math and science competency beliefs for diverse peers (Killen et al., 2022). What has not yet been examined is whether participating in the program increases students' perceptions of classroom norms about play with diverse peers, their own desire to play with diverse peers, and reported contact with diverse peers. Nor has participating in this type of program been investigated to determine if these discussions reduce children's reported experiences of social exclusion.

Background

Social exclusion occurs at many levels, from dyadic to group, from interpersonal to intergroup, and reflects different types of intentions and goals (Abrams & Killen, 2014; Rutland, et al., 2010). Intergroup exclusion has been the focus of an extensive body of research designed to demonstrate that individuals are excluded from resources and opportunities to maintain current

hierarchies of power, privilege, and prestige (Burkholder et al., 2019; Verkuyten, 2014). Research has also demonstrated that children both exclude others and are excluded themselves because of group identity (Mulvey, 2016; Nesdale & Lawson, 2011).

Intergroup exclusion is a core facet of group dynamics that results from basic processes regarding the evolution and maintenance of social groups (Abrams & Killen, 2014). The consequences of intergroup exclusion are highly detrimental, often leading to negative health, social, and academic consequences for those who are excluded and for those who are the excluders (Rivas-Drake et al., 2014; Yip, 2015). This is because exclusion based on one's group identity reflects forms of prejudice and results in experiences of discrimination (Abrams & Rutland, 2011; Elenbaas et al., 2016). Individuals who are members of high status groups are more likely to hold negative expectations about those from groups they perceive to be low in status, which contributes to discriminatory and negative outcomes (Cameron et al., 2011; Taylor, 2020; Verkuyten, 2014).

The unfairness that results from the use of group identity criteria for inclusion in social groups is often deeply felt by those who are excluded which can result in depression and social withdrawal (Rivas-Drake et al., 2014). When stereotypes and biases present in childhood are left unchecked, this often contributes to intergroup tension in adulthood when work and community engagement requires intergroup cooperation. Thus, addressing intergroup bias in childhood is important for healthy development for all children.

Solutions that counter exclusionary normative expectations towards diverse peers are necessary because intergroup exclusion reflects systemic biases and prejudicial attitudes. These normative expectations often stem from societal conventions and traditions that are designed to perpetuate social status hierarchies and are reflected in children's interactions with one another,

such as when gender biases deny girls access to science (Bian et al., 2017) or racial stereotypes contribute to academic achievement gaps (Brown, 2017; Levy et al., 2016). Treating intergroup exclusion involves not just addressing the problem at the individual level but changing group norms that perpetuate bias (Mulvey, 2016).

Intergroup contact theory. Extensive research in developmental science has focused on the role that intergroup contact plays regarding the emergence of prejudice and bias in childhood (Taylor, 2020; Tropp & Barlow, 2018; Turner & Cameron, 2016). Intergroup contact theory, modified from Allport's (1954) "contact hypothesis", posits that positive interactions and relationships between individuals of different social groups reduces prejudice under specific conditions: equal status, common goals, and authority support for mutual respect (Pettigrew & Tropp, 2006). Research has demonstrated that cross-group friendships are one of the most significant predictors for a reduction in prejudice when these conditions are met, particularly in childhood and adolescence (Bağcı, et al., 2021; Graham & Echols, 2018).

Two forms of intergroup contact have been shown to be effective for reducing biases: direct and indirect. Direct contact refers to actual relationships, exchanges, and discussions that meet the goals of friendship (Pettigrew & Tropp, 2006). Research with children and adolescents has demonstrated reductions in forms of bias as a function of reporting cross-group (e.g., cross-race, cross-SES) friendships, and particularly for individuals with historically majority status group memberships (Graham & Echols, 2018; Killen et al., 2021). The mechanisms of direct and indirect contact provide a basis for changing perceptions of group norms (see White et al., 2021). Very few intervention programs include *both* direct and indirect forms of contact when aiming to increase children's desire for direct contact with diverse peers, and by extension, their desire for cross-group friendship.

Cross-group friendships enable individuals to have direct first-hand experiences that disconfirm stereotypic messages disseminated in the media and elsewhere in society ("my friend is not like that"). Some examples of positive outcomes of intergroup contact include using moral reasoning as justification for rejecting race-based exclusion (Crystal et al., 2008), and a reduced rate of negative expectations about outgroup members' intentions (McGlothlin & Killen, 2006). Surprisingly, there is still very little understood about what types of attitudes change when intergroup interactions occur in childhood. Nor has there been much research on testing whether discussing such experiences in a guided discussion format in the classroom produces change in one's desire for direct contact.

Indirect contact refers to being exposed to materials (book, videos, movies) that display intergroup friendships, particularly with one's ingroup interacting with others who reflect the outgroup (Brown et al., 2018; Cameron et al., 2011; Levy et al., 2016). Indirect contact enables individuals to identify with someone like them who includes others who appear to be different. The empathy and perspective-taking that occurs when children experience indirect contact provides a mechanism for broadening the boundaries of group identity, a form of widening the circle of the ingroup membership (Hitti & Killen, 2015; White et al., 2021).

Research on the Role of Age and Group Membership. Studies assessing the outcomes of promoting intergroup contact in childhood are surprisingly rare as most studies focus on adolescence (Echols & Ivanich, 2021). Recently, studies have shown that implementing a program focusing on vicarious intergroup contact (reading story books about intergroup friendships) and social norms helped reduce stigma-based bullying with children enrolled in 4th and 5th grades (Cocco et al., 2021). Vicarious intergroup contact involved items related to treating foreign children fairly, and specifically that outgroup vicarious contact was associated

with greater intentions to react to name-calling. With only one intervention session and two age groups close in age, 4th and 5th graders, no age-related changes were demonstrated, suggesting that multiple intervention sessions as well as a wider age range may reveal grade-related findings.

In a longitudinal study examining changes in the predictions of preference for same-ethnic friendships among German and Turkish preadolescents (mean age = 10.4 years), enrolled in an ethnically heterogeneous school, over a year, there was a decrease in the preference for same-ethnic friendships (Jugert et al., 2011). There were also different trajectories for findings for German and Turkish students, with German children declining in same-ethnic preference overall, and Turkish children's declining in same-ethnic preference as a function of classroom identification. This indicates that social group membership plays a role in responses to intergroup contact experience.

To date, only one program that we know of has revealed age-related differences as a function of experiencing an intergroup contact program designed to reduce prejudice and increase intergroup friendships (Killen et al., 2022). In this study, 3rd graders (age 8-9 years) benefitted from a program designed to enable students to challenge and reject exclusionary group norms more than did 5th graders (10-11 years), even though intergroup attitudes improved for all students. With age, children become more aware of group norms and associate norms with group identification (Nesdale, 2008). As children become more aware of group dynamics around social inclusion and exclusion, gaining trust from their peers in situations involving discussions about social exclusion may afford a larger cost than for younger children (Palmer & Abbott, 2018). Thus, it would be expected that younger children might benefit more from an

intergroup contact program that only lasts one or two sessions than would older children when the goal is to change group norms about inclusion.

The Current Study

In the current study, direct and indirect contact were incorporated into an 8-week school-based intervention program. Indirect contact occurred during guided opportunities for children to observe, reflect, and respond to social inclusion and exclusion exchanges between peers from different backgrounds depicted in animated scenarios using a web-based curriculum tool (indirect contact). Direct contact occurred when children were engaging in classroom discussions about experiences of inclusion and exclusion. During the classroom discussions, children interact with their classmates. These interactions reflect experiences of both exclusion (e.g., the girls being excluded from sports at recess) and inclusion (e.g., friends that include each other in social activities).

The goal of the classroom discussion was for children to talk about their exclusion experiences guided by the teacher, who encourages children to work on solutions to the exclusionary experiences. Discussions about social inclusion and exclusion occurred in the context of a safe space as identified by the intervention program and as by the classroom teacher who led the group discussions. The “safe space” was communicated by the teacher at the beginning of each session during the eight weeks. The teacher communicated the importance of respecting each student in the class, listening to one another, and not calling out names of other peers when describing experiences of exclusion (see Figure 1 and Figure S2). We predict that discussions about intergroup exclusion and inclusion in a safe peer context have the potential to change norms about desires for contact with perceived outgroups members and to build a sense of teacher and peer support in the classroom, thereby creating a more inclusive environment.

Positive contact with others is the first step towards effective and sustained intergroup relationships that reduce prejudice (Tropp & Barlow, 2018). Additionally, if children and their classmates learn why intergroup exclusion is wrong both by witnessing the consequences in third party accounts, and by hearing and sharing the consequences with their peers, they may exclude less and experience less exclusion in the future (Mulvey, 2016). Thus, to test the effectiveness of this program we measured children's contact with peers of different gender and racial backgrounds, and their reported experiences of social exclusion both before and after the program was implemented. Previously, very little intergroup contact research during childhood has aimed to change attitudes in the context of everyday interactions, such as in school settings. Yet, exclusionary behavior has extensive negative outcomes, such as the denial of opportunities (both social and material) and denial of friendships.

Aims of the Study

This empirical project was designed to change children's behavior and attitudes regarding everyday peer interactions, which in turn fosters healthy child development. The goal was to evaluate the impact of a multi-site randomized control trial (RCT) intervention program, *Developing Inclusive Youth*, on American children in third, fourth and fifth grade (age 8 – 11 years), located in a large public school system in the suburbs outside of a large metropolitan city in the mid-Atlantic East Coast of the U.S. These grades were selected because these students spend most of the day in their home room, creating an optimal peer group community, and a continuity of experience for the development of teacher-child relationships. The program sought to increase children's reported play with diverse peers (direct contact), perceived peer group norms about play, and own desires for play. In addition, the program aimed to reduce experiences of social exclusion. We also examined how grade and group membership moderated

these variables based on prior research demonstrating that younger children may change their group norms easier than older children given that norms are less established (Killen et al., 2022) and that the desire to play with diverse peers may vary by ethnicity (Jugert et all,. 2011).

The RCT was employed under routine conditions in authentic education settings. In a prior study analyzing the results of this program, the results demonstrated an increase in positive trait attributions and evaluations of interracial social exclusion (Killen et al., 2022). Here the unique hypotheses focused on whether the program changed children's desire for contact and reported experiences of social exclusion. The intervention program incorporated two components: 1) *Developing Inclusive Youth*, a web-based curriculum tool about peer inclusion and exclusion; and 2) a teacher-led classroom discussion session that immediately followed students' use of the tool. Together, these components were designed to elicit positive behavioral and attitudinal change through indirect and direct contact, respectively.

The *Developing Inclusive Youth* component is an interactive web-based curriculum tool that presents scenarios in which children must decide to include or exclude members from multiple target groups: race and ethnicity (African-American, Latiné, Arab-American, Asian-American, European-American), wealth status (high/low), and immigrant-status (non-native student) (see Killen et al., 2022, for details of the program). These categories were selected for three primary reasons. First, a diverse range of target groups was identified so that participants had the opportunity to view characters who shared similar group memberships to themselves act as the excluder in some vignettes and as the excluded in other scenarios. Relating to the characters from multiple angles may increase children's ability to relate to the consequences of exclusion and the wrongfulness of the act (Cooley et al., 2019). Second, selecting multiple target groups reduces the potential harm that focusing on solely one group (e.g., race) would cause for

participants of that group who may feel singled out. Finally, individuals from many backgrounds experience victimization and social exclusion in peer contexts during the elementary school years. Showing multiple target groups may help children connect with the vignettes that they witness and or experience in their own lives (Brown, 2017; Rutland & Killen, 2015).

The content of the DIY web-based interactive tool and teacher training manual draws on well-established theoretical and empirical lines of research on prejudice and social exclusion in childhood as well as theories of intergroup contact (Graham & Echols, 2018; Turner & Cameron, 2016). Overall, the intervention program provided children with two types of experiences for promoting change, indirect and direct contact.

Hypotheses. There were four central hypotheses for this paper. First, based on research demonstrating that indirect contact increases the desire to have friends from different backgrounds (Turner & Cameron, 2016; White et al., 2021), it was expected that children who participated in the DIY program would report increases in their contact with peers from a variety of different racial and gender groups (defined as a composite of three measures: reported contact, desire for contact, and perceived classroom contact norms) (H1). Second, based on previous research showing that interventions are often more effective for younger than older children and that this can vary by the group membership of the target (Losinski et al., 2019), it was hypothesized that grade and group membership would moderate the effectiveness of the DIY program to increase reported contact and to reduce experiences of social exclusion (H2).

Third, research has demonstrated that creating a safe space in the classroom to discuss inclusion and exclusion will help to change group norms towards inclusion rather than exclusion (Nesdale & Lawson, 2011). Thus, it was expected that participation in the DIY program would decrease children's experiences of social exclusion (e.g., exclusion at recess, during free time, at

the lunch table) (H3). Finally, our fourth hypothesis was that the effect of participation in the program on children's experiences of social exclusion would be moderated by grade and social group membership, based on previous findings regarding age-related changes in the salience of group social exclusion (Mulvey, 2016) (H4).

Method

Participants

The present study consisted of $N = 983$ student participants who attended one of six suburban public elementary schools in the Mid-Atlantic region of the United States. Participants were in third ($n = 323$, 53% female, $M_{age} = 8.64$ years, $SD_{age} = 0.36$), fourth ($n = 337$, 52% female, $M_{age} = 9.65$ years, $SD_{age} = 0.38$), and fifth ($n = 323$, 48% female, $M_{age} = 10.63$ years, $SD_{age} = 0.36$) grades. A slight majority of the participants were identified as monoracial White by parent report (58.5%), while the rest of the participants were reported as members of two or more racial/ethnic groups (17.5%), monoracial Asian (8.3%), monoracial Black (5.8%), monoethnic Latinx (4.2%), a member of another racial/ethnic group not listed (0.6%) or did not report their race/ethnicity (5.3%). While school district policy prevented direct reporting of participant familial income, participating schools had a mean of 8.1% students on Free and Reduced Priced Meals (FARMS) with a range from 5% to 11.4%. FARMS is a U.S. government program that provides free meals to public school students who qualify as based on their low-socioeconomic (SES) family backgrounds; thus, FARMS is one index of SES. For more information about participant demographics, see Table S1 (students) and Table S2 (teachers).

Study Design

The present study is part of a larger project testing the effectiveness of the Developing Inclusive Youth (DIY) intervention program and received approval from the University of

Maryland Institutional Review Board (#1093717). Data were collected during fall of 2018 and fall of 2019, and all the analyses presented in this paper are novel to the present study.

The intervention took place in the third, fourth, and fifth grade classes of the six participating elementary schools. Within each school, classrooms were randomly assigned to participate as an intervention or a control classroom and each school had at least two classes of each grade to ensure both intervention and control classrooms were represented across sites. Thus, there was a total of 24 DIY program classrooms and 24 control classrooms. Randomization was blocked within school at the classroom level in order to control for school-level characteristics.

To determine the effectiveness of the DIY program, participants received questionnaires assessing their contact with peers from multiple racial and gender backgrounds and experiences of social exclusion (see Table S3 for the timeline) one week prior to the implementation of the program (pretest) and one week after the completion of the program (posttest). Between pretest and posttest, participants in the intervention classrooms were administered the DIY program while participants in the control classrooms did not participate in the DIY program but were instructed to go about business as usual (BAU) which included doing homework, reading books, and quiet independent time.

Intervention and control groups were equivalent on racial and gender demographic groups (see Table S1). There were also no significant differences between intervention and control groups on outcome variables at pretest.

Intervention program: Developing Inclusive Youth (DIY)

Web-based Curriculum Tool. Once a week across eight weeks, students in the intervention group individually interacted with a fifteen-minute vignette from the DIY web-

based curriculum tool. This included scenarios designed to give students indirect contact experiences during an intergroup exclusion encounter, with each week highlighting a unique intergroup context in everyday familiar contexts such as at recess, in the park, in the classroom, and at home (Table 1). Each scenario targeted a distinct social group in the following order: *Recess* (exclusion based on new student at school: Neutral target), *Science* (exclusion based on gender: Female target), *Park* (exclusion based on ethnicity; Latino target), *Bowling* (exclusion based on immigrant status: Polish target), *Arcade* (exclusion based on wealth status: Low wealth target), *Dance* (exclusion based on race: Black target), *Party* (exclusion based on race: White target) and *Movie* (exclusion based on ethnicity: Arab-American target).

Because children from many backgrounds have experiences that involve intergroup exclusion and inclusion (deciding whether to accept or reject someone in their group), each scenario featured characters encountering a peer who had a different group membership. One or two characters (i.e., excluder) discussed excluding the peer (i.e., excluded) from a group activity while another character (i.e., bystander) voiced an inclusive desire. Characters who wanted to exclude referenced stereotypic expectations or preferences for adhering to exclusive ingroup norms. These attitudes were refuted by characters who wanted to include and also highlighted commonalities or the possibilities for new friendships.

To encourage children to think deeply about the content, multiple questions were included throughout the vignettes to prompt children to predict the excluder, excluded, and bystander characters' feelings, provide reasoning for why exclusion might be acceptable or unacceptable, and decide what the characters should do (see Figures S2 for the guided questions for one of the sessions, and the guide for the overall program). A unique aspect of the tool was that participants were prompted to make a decision about whether or not to include the peer and

subsequently watched the scenario play out based on their decision. This setup allowed children to witness the direct and immediate consequences of their choice. This design element of the tool also created an interactive aspect that fostered engagement and autonomy. Children were not passive viewers, but rather actively responded to prompts about how each character felt ("emotion" ratings) and what the characters should do next. In most cases, exclusion decisions resulted in a loss of friendship opportunities and sadness displayed by the excluded children while inclusion decisions resulted in friendship and new lessons learned. Importantly, all students watched the opposite outcome after first viewing the one that they chose (after receiving a prompt: "Let's say that the group decided to do X instead…"), such that all participants were able to witness both the benefits of inclusion and the harmfulness of exclusion.

Teacher-led Class Discussions. Once all students had individually completed the scenario of the week using the DIY tool, participants engaged in the teacher-led discussion. Drawing on moral education research (Nucci & Ilten-Gee, 2021), teachers received training regarding how to facilitate the classroom discussion. Teachers were provided with documents and materials that provided reminders and prompts about the content and themes present in the week's vignette. As shown in Figure 1 and Figure 2, teachers were asked to establish a safe space in the classroom, which included listening to their students without interruptions, and refraining from identifying students by names (Figure 1 and Figure S2). During the discussion, children were prompted to 1) Make connections between the scenarios and their own experiences; 2) Reflect on how their experiences related to broader themes of inclusivity; 3) Reflect on how the story they heard is similar to other weeks' scenarios; 4) Get both sides of the story and discuss why each character made the decisions they did; and 5) Share personal experiences that relate to the week's topic and themes. Teachers thus engaged students in a

substantive face-to-face classroom discussion about the vignette, their own experiences of exclusion, and thoughtful reflection about the experiences of their classmates.

One to two research assistants were present to observe each classroom discussion but did not participate or intervene during the session. The research assistant transcribed the classroom discussions and provided feedback to the teacher after the session was over when requested (for more information, see Killen et al., 2022).

Measures for the Pretest/Posttest Assessment

In addition to their race, gender, and grade, participants were assessed on two groups of outcome measures: 1) contact with peers from multiple racial and gender backgrounds, and 2) experiences of social exclusion.

Contact with peers. We measured contact through reported play, own desire to play, and perceived norms about play with a group of diverse peers in order to measure a meaningful peer contact experience in childhood (modified from Brenick & Romano, 2016; Bierman & McCauley, 1987). Participants' peer contact was assessed for female, male, White, Black, and Asian peers. For each social group, participants responded to three prompts: 1) Reported Play (e.g., "Here are some kids who look like this. How often do you play with kids who look like this?"); 2) Own Desire to Play (e.g., "Here are some kids who look like this. How much would you want to play with kids who look like this?"); and 3) Perceived Norms of Play (e.g., "Here are some kids who look like this. How much do you think the other kids in your class would want to play with kids who look like they do?"), for a total of 15 items (see Table S5 and Figure S1). Reported Play was measured on a rating scale from 1 (*Never*) to 5 (*All of the Time*) while both Desire to Play and Perceived Norms of Play were measured on Likert-type scales ranging from 1 (*Really Don't Want to*) to 6 (*Really Want to*). For each racial (White, Black, Asian) and

gender (Male, Female) group, the three prompts loaded onto one factor for both the pretest and posttest (see Table S4). Posttest factor regression scores were used as the composite outcome variable separately for each racial and gender group.

Experiences of Social Exclusion. Participants were assessed on their experiences of exclusion from peers in school contexts. The six items covered common experiences of exclusion (e.g., "Kids at my school leave me out of activities at recess," "Kids at my school don't talk to me during free time," "Kids at my school don't pick me to be their partner for school projects") (see Table S6 for all items). Responses were recorded on frequency rating scales ranging from 1 (*Never*) to 5 (*Always*), with lower scores indicating fewer experiences of exclusion. The items loaded onto one factor for both the pretest and posttest (see Tables S5 and S6), and posttest factor regression scores were used as the composite outcome variable.

Data Analytic Plan

All data analyses were conducted using SPSS Version 27. We first determined whether the nested nature of the data (students within classrooms) required a multilevel analytic framework. Intraclass Correlation Coefficients (ICCs) were calculated and model comparisons were conducted between models with a random intercept of classroom and without a random intercept for each hypothesized model. All models without the random intercept were selected as the better or equal fitting models according to both AIC and BIC. Further, the ICCs were low, less than 0.056, and any adjustments to standard errors using the design effect would have been negligible. Therefore, we report results from only regression models with fixed intercepts throughout the manuscript.

While the attrition rate was low (n = 54 were missing; 16 repeated absence, 10 behavioral issues, 2 developmental delays, 5 non-English speakers, 6 moved out of the school district, 5

technical issues, 10 missing for other reasons), we conducted multiple imputations using linear regression to address missing values (Graham & Hofer, 2000). Specifically, 30 imputed datasets were created using linear regression in SPSS; demographic variables (grade, classroom, condition, gender, and race) were predictors while pretest and posttest scores were both predictors and imputed values. All analyses used the 30 imputed datasets, and their estimated sampling variances were obtained given the process outlined by Graham and Hofer (2000).

To test our contact hypotheses, we conducted linear regression models with treatment as a predictor of posttest factor regression scores for Reported Play, Own Desire to Play, and Perceived Norms of Play. These regressions were conducted separately for each of our outcome measures (i.e., female, male, White, Black, and Asian peers contact measures). To test our exclusion hypotheses, we conducted linear regression models with treatment as a predictor of posttest factor regression scores for the Experiences of Social Exclusion composite. In addition, each child's grade, gender, race, and pretest factor score were included as covariates. We also tested moderation models with the addition of interactions by treatment and social group membership (race or gender) and treatment by grade to determine more nuanced effects of treatment by participants' demographics. See Tables S7 and S8 for correlations between pretest and posttest outcome variables.

Grade was transformed into dummy variables for the model where Grade 4 was coded as 1 if the child was in a fourth-grade classroom and 0 if not, and Grade 5 was coded as 1 if the child was in a fifth-grade classroom and 0 if not. Social group memberships included gender and race. Gender was coded as 1 if the child was female and 0 if the child was male (the standards of the school district did not allow children to report non-binary, though no specific instances of non-binary participants were brought to the researchers' attention). Due to the high prevalence of

multiracial participants in the sample, racial groups were coded separately with 1.0 for participants who reported monoracial identity in that category, 0.5 for participants who reported multiple identities in addition to that category, and 0 for participants that reported not having that racial identity (Liebler & Halpern-Manners, 2008). Finally, treatment was coded as 1 if the child was in the DIY intervention group and 0 if the child was in the BAU control group.

In addition to these primary analyses, to investigate specific individual change from pre- to posttest among the outcome measures, we conducted exploratory t-tests between individual outcome measures' pre- and posttest scores for both the intervention and control groups which are available in the supplementary materials.

To minimize the false discovery rate for multiple comparisons, we performed the Benjamini Hochberg correction with a false discovery rate of 25%, given that there is no agreed-upon values of the false discovery rate (Benjamini & Hochberg, 1995). Results did not change when using a false discovery rate of 5% or 10%, apart from the effect of treatment on experiences of social exclusion, which was significant with false discovery rates of 10% and 25% but not 5%. All significant *p* values reported are significant with the Benjamini Hochberg correction.

Results

Presentation of the results regarding main effects of treatment and interactions by grade and social group membership are organized by outcome variables so that first we report the results related to contact with peers, then we report the results related to experiences of social exclusion.

The Effect of Treatment on Contact with Peers

Regarding our first hypothesis concerning the overall effectiveness of the DIY program on increasing contact with peers (as measured through the posttest factor score of reported contact, desire for contact, and perceived classroom contact norms for female, male, White, Black, and Asian peers; see Table S5 and Table S6), there were significant positive main effects of treatment for the models testing children's contact with Black peers, $\beta = 0.13$ (0.06), $p = .017$, and male peers, $\beta = 0.13$ (0.04), $p = .003$, and (Table 2). Thus, contact with Black peers and male peers was significantly higher at posttest for those in the DIY program than for those in the BAU group, controlling for all other variables in the model.

Regarding our second hypothesis that the effect of treatment would be moderated by participants' social group membership (race or gender) and grade, there was an interaction between treatment and fifth grade, compared to the referent third grade, for contact with male peers, $\beta = -0.31$ (0.11), $p = .005$. Bonferroni pairwise comparisons indicated that third graders in the DIY program reported significantly higher contact with male peers than third graders in the control group (Table S9). Therefore, third grade students, but not fifth grade students, in the DIY program reported significantly more contact with male peers than the BAU group.

The main effect of treatment for female, White, and Asian peers, and the other tested interactions were not significant, ps $< .05$, suggesting that the intervention program had no effect on reported contact with female, White, or Asian peers (Table 2).

Thus, in partial support of our first hypothesis, children in the DIY program reported significantly more contact with Black and male peers at posttest than did the control group, while controlling for contact at pretest and children's demographics. Yet, we did not see significant differences between intervention and control groups for contact with White, Asian, or female peers. In partial support of our second hypothesis, third grade children in the DIY program

reported more contact at posttest with male peers than did third graders in the control condition, however there were no interactions with grade among the other target groups. These findings reveal mixed evidence that that the DIY program may be more effective for the younger ages and for improving contact among certain target groups, such as with Black and male peers. For descriptive statistics of outcome measures and exploratory comparisons between pre- and posttest scores, see Table S10.

The Effect of Treatment on Experiences of Social Exclusion

Regarding our third hypothesis that the DIY program would decrease children's Experiences of Social Exclusion as measured through posttest factor scores on the Experiences of Social Exclusion scale (Table S4), there was a significant main effect of treatment, $\beta = 0.13$ (0.05), $p = .018$. Children in the DIY program reported fewer experiences of exclusion than did children in the BAU, taking pre-test levels into account. Yet, there was no significant fourth grade by treatment interaction, $\beta = -0.06$ (0.13), $p = .639$, or fifth grade by treatment interaction, $\beta = 0.002$ (0.13), $p = .988$. Additionally, there were no significant interactions with treatment for children's gender and racial/ethnic group memberships (Table S11). Our fourth hypothesis that children's own experiences of social exclusion would be moderated by grade and social group membership was therefore not supported—the DIY program reduced experiences of social exclusion for all children, regardless of age, gender, or race. Thus, children in the DIY program reported fewer experiences of exclusion at posttest than did children in the control group, regardless of their own racial group membership or grade. For exploratory comparisons between pre- and posttest scores, see Table S10.

Discussion

In this study, a classroom intervention program designed to foster reflection and discussion about classroom group norms pertaining to social exclusion and inclusion increased children's desires for contact with peers from different backgrounds (i.e., a composite of reported contact, perceived norms about contact, and own desires for contact). Further, participation in the program reduced self-reported experiences of peer exclusion at school (e.g., at free time, recess, the lunch table). Hypotheses about whether the program would improve participants' reported experience about contact and exclusion experiences were partially confirmed.

While the study found that the desire for contact with peers increased, it was only for children's desire for contact with male and Black peers. That the intervention program increased desire for contact (perceived norms, own desire, and reported contact) for Black peers confirmed our expectations that the program would generate change regarding racial minority peers. Below is an example of a class discussion after viewing a scenario in which two White girls were debating whether a Black girl who wanted to try out for the ballet club would be qualified. The teacher started with a prompt about biases.

T: "Has anyone made any assumptions about your because of your race?"
S1: "Yes, sometimes people will assume you're too good or something and won't want you to join."
S2: "It feels bad because you are getting bulled because of your skin color."
T: "S2 used the word "bullied", is it close to that?
S2: "Yeah, kinda, because why would people judge you on your skin color? It's like one thing and there's only one of them (skin colors")
S3: "No!"
T: "How many skin colors do you think there are?
S3: "Everything from 1000 to 3."
T: "Why do you think this happens today?
S2: "Are we in segregation again?"
S3: "Maybe a little for Tanya" [Tanya is the Black girl in the Dance scenario].

In this scenario the students were talking about what it feels like when other kids make wrong assumptions about you based on skin color. The teacher prompted them to think about why this happens, and the students then discussed what makes racial biases hurtful.

The finding for an increase in reported contact, own desire, and perceived norms for contact with male peers was unexpected. Additionally, grade moderated these findings for contact with male peers but not for experiences of social exclusion. Third grade students, but not fifth grade students, in the intervention program reported significantly more contact with male peers than the BAU group. We speculate that the increase in contact with male peers occurred because male students were often supportive of statements of intergroup inclusion by other children during the classroom discussions. A common example discussed in class had to do with gender exclusion at recess. Here is one example with 4th grade students in response to the teacher's request for a personal experience of exclusion after watching the scenario about three boys' decision to include or exclude a girl from a science project. This scenario generated a discussion led by the girls about being excluded from soccer at recess:

> Girl 1: "The boys never let us play soccer at recess because they say we're not good at it."
> Girl 2: "Yeah, that happens to me, too."
> Boy: "But we didn't know you wanted to play. We'll let you play."
> Boy 2: "Yeah, you didn't tell us you wanted to play but now we know."

Voicing support for inclusion by the boys in the class may have had a positive effect on the norms in the classroom. Even if the boys were previously oblivious to the girls' interests, the fact that they announced to their peers that they want to be inclusive may be the beginning of a change in peer norms. Supporting this view, teachers during the focus groups (which were held after the conclusion of the data collection) discussed how some classes adopted new ways to choose students to join activities at recess to promote access for everyone, such as choosing team

members for soccer by alternating the choice by gender. This type of discussion may have helped improve a desire to play with boys given that they were voicing an inclusionary position.

We also found that children in the DIY program reported fewer experiences of exclusion than did children in the control group, taking pre-test levels into account. Contrary to our hypotheses, there were no significant grade by treatment interactions or social group membership (gender and racial/ethnic) by treatment interactions. Since this program included vignettes depicting inclusion across several social group memberships, it may be that changes to group norms were broader and increased inclusion for students of many backgrounds instead of a more focused intervention that targeted increasing inclusion of only one group. Still, given that previous research has reported age-related changes regarding experiences of social exclusion, more research needs to be conducted to better understand the role of age and intergroup contact on experiences of social exclusion.

Improving expectations about reported play with diverse peers and experiences of exclusion are central aspects of creating fair and just classrooms (Losinski et al., 2019; Tropp et al., 2014). Classrooms that are welcoming are characterized by students who express positive attitudes about their classmates, desire to interact with them, and include others in peer group activities. However, reports of children's negative experiences regarding discrimination, exclusion, and bias in school have increased over the past ten years (Costello & Dillard, 2019) and are negatively related to academic success and motivation to achieve (Rivas-Drake et al., 2014). The current study demonstrates that a school-based curriculum program focusing on peer interactions changed children's attitudes about contact with other peers. Changing attitudes about group norms, traditions, and group dynamics has been shown to be quite difficult (Stangor &

Schaller, 1996). Thus, many researchers have argued that intervening early is important, prior to adulthood as attitudes in childhood are emerging and still in flux.

Social information-processing approaches have demonstrated significant links between attitudes and behaviors (Crick & Dodge, 1996;). Children who hold a "hostile attribution bias" for example, where they view acts that have ambiguous intentions as negatively motivated, are more likely to be rejected and neglected by their peers than are children who do not hold these biases (Dodge et al., 2003). In the context of intergroup attitudes, we assert that children who have opportunities to discuss decision-making about exclusionary actions with one another in the classroom will have more positive expectations and attitudes about intergroup contact and less likely to report experiencing social exclusion at school.

Further, intergroup contact is related to increased awareness of fair and equal treatment of others (Crystal et al. 2008). When children hear their peers voicing inclusive intentions and solutions during classroom discussions about social exclusion, and specifically social exclusion experiences articulated by their classmates, then it is likely that the group norms become less exclusionary, and more inclusive. The findings in the current study provide initial evidence that discussions about social exclusion in the classroom result in positive attitudes towards inclusive orientations.

The core components of the intervention program that facilitated the significant changes included responding to peer scenarios in everyday contexts, a form of indirect contact (Turner & Cameron, 2016). Participants heard about scenarios involving peers like them become friends with peers from different backgrounds. In addition, another core component was the teacher-led peer discussions, a form of direct contact (Graham & Echols, 2018). The discussions were characterized as direct contact because children shared and debated their perspectives about what

makes social exclusion unfair, and together, devised solutions for becoming more inclusive towards others from different backgrounds (gender, race, ethnicity, immigrant status, and wealth status). We were not able to document whether new friendships were formed as a result of these weekly exchanges, a point we elaborate on below, for future research.

There are several factors that made these experiences in the program meaningful. First, the web-based curriculum tool required students to make decisions about whether to include or exclude, to watch different outcomes (all students watched both outcomes), and to make choices about how each character felt during the exchange. The exchanges that they watched involved characters expressing a range of group identities and group norms about inclusion and exclusion. Second, the group norms expressed by characters in the program included those that have been shown by children to justify exclusion such as conventions, traditions, and group identity in previous research as well as norms that children have used to reject exclusionary behavior, such as the unfairness or harm that results from negative intentions towards others (Rutland & Killen, 2015; Mulvey, 2016). Participants in the program had a chance to reflect on these norms, pervasive in children's everyday experiences, and to discuss whether and how these norms were helpful or harmful for peer relationships as highlighted in Figure S3. Third, the lessons at the end of each scenario viewed on the web-based curriculum tool provided a peer-focused solution, emphasizing peer interactions and solutions for addressing exclusionary behavior rather than a solution based solely on directing the problem to a teacher to solve. Finally, teachers discussed how to treat others with respect and equality in their wrap-up during the classroom discussions which were identified in their guided tool (see Figure 1 and Figure S1).

Limitations and Future Directions

For the current study, classroom discussions were hand-transcribed during each session resulting in 500 lines of utterances. This procedure limited the ability to conduct systematic analyses with the data, given that it was not exhaustive of all exchanges that transpired. For future research we recommend that researchers audiotape the classroom discussions to provide a complete dataset for analyses. School districts are more willing to allow audiotaping which blinds the identity of the participants unlike videotaping which does not. Audiotaping would allow for researchers to have full transcripts of all exchanges and provide for direct and comprehensive analyses regarding how peer norms expressed in the classroom relate to changes that occur in the outcome measures. This would provide an opportunity to conduct both qualitative and quantitative analyses regarding the power of classroom discussions focusing on challenging negative group norms can be a catalyst for desiring contact with diverse peers.

Our measure of social exclusion was very general and did not ask specifically about intergroup exclusion. Part of this methodological decision had to do with the fact that participant identity was very diverse across group categories. In fact, the largest ethnic/minority group in this sample was multi-racial/multi-ethnic (almost 20%). We recommend that future research examine changes in intergroup friendships by using peer network analyses as has been measured with adolescent data (Rivas-Drake et al. 2019). Rivas-Drake and colleagues (2019) studied peer networks among racially diverse American middle school students (mean age 12 years) and found that students with more positive contact attitudes were more likely to be friends with peers who were also positive about intergroup contact. This type of analysis would be very fruitful as a follow-up assessment for a program like the DIY program to determine whether and how the peer networks change after participation in a program focusing on classroom discussions about

social inclusion and exclusion. Our findings are limited and provide the basis for future research with more in-depth assessments.

A future direction for the program could also include older samples. This program was geared for third to fifth grade students (8 – 11 years old). Thus, the program could be scaled up for older students to examine whether programs promoting classroom discussions amongst diverse peers increases the desire for contact regarding friendships as well as decreases intergroup social exclusion in older age group. In addition, scaling down the program for younger children, ages 6 -8 years, could be advantageous given that the younger students benefitted from this program regarding perceptions of contact and experiences of exclusion.

Conclusions

Children's attitudes about peer inclusion and exclusion are critically important to their social experiences and academic motivation to succeed in school. Children who experience social exclusion are at risk for depression and anxiety given that school is a social context (Rivas-Drake et al., 2014). Decisions about peer inclusion and exclusion happen most often outside of the direct view of teachers, given that much of it occurs during recess, lunchtime, and on the playground in elementary and primary school. Teachers have little access to what students experience regarding peer exclusion, as there is little time devoted to discussions about these experiences. This study provided novel findings demonstrating that a guided context in the classroom where students can discuss these topics and learn from one another has positive outcomes for reported contact and play with peers and for experiences of social exclusion as well. Much more research needs to be conducted to fully understand what types of techniques work best to promote positive outcomes, and how best to determine the long-term consequences of these experiences. Providing a safe space for students to discuss these issues at school is

informative for teachers, who learn more about their students as well as for the students who have an opportunity to learn from one another and share their values about positive treatment of others (Killen & Rutland, 2022). This study contributes to a new body of research on promoting positive social norms and improving intergroup attitudes in childhood (Taylor, 2020).

References

Abrams, D., & Killen, M. (2014). Social exclusion of children: Developmental origins of prejudice. *Journal of Social Issues, 70*, 1–11. https://doi.org/10.1111/josi.12043

Abrams, D., & Rutland, A. (2011). Children's understanding of deviance and group dynamics. In J. Jetten & J. Hornsey (Eds.). *Rebels in groups: Dissent, deviance, difference, and deviance* (135- 157). Blackwell Publishing.

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

Bağcı, Ç., Turner, R. N., & Cameron, L. (2021) Cross-group friendships: predictors and implications for intergroup relations and beyond. In Tobias Altman (Ed.) *Friendship in cultural and personality psychology: International perspectives* (pp.57-91). Nova Science Publishers pp. 57-91.

Bian, L., Leslie, S. J., & Cimpian, A. (2017). Gender stereotypes about intellectual ability emerge early and influence children's interests. *Science, 355*, 389–391.

Bierman, K. L., & McCauley, E. (1987). Children's descriptions of their peer interactions: Useful information for clinical child assessment. *Journal of Clinical Child Psychology*, *16*, 9–18. https://doi.org/10.1207/s15374424j ccp16 01_2

Bonilla-Silva, E. (2015). The structure of racism in color-blind, "post-racial" America. *American Behavioral Scientist*, *59*(11), 1358–1376. https://doi.org/10.1177/0002764215586826

Brenick, A., & Romano, K. (2016). Perceived peer and parent out-group norms, cultural identity, and adolescents' reasoning about peer intergroup exclusion. *Child Development, 87* (5), 1392-1408. https://doi.org/10.1111/cdev.12594.

Brown, C. S. (2017). *Discrimination in childhood and adolescence: A developmental intergroup approach*. Taylor & Francis.

Brown, C. S., Tam, M., & Aboud, F. (2018). Ethnic prejudice in young children in Indonesia: Intervention attempts using multicultural friendship stories. *International Journal of Early Childhood, 50,* 67-84. https://doi.org/10.1007/s13158-018-0214-z

Burkholder, A. R., D'Esterre, A. P., & Killen, M. (2019). Intergroup relationships, context, and prejudice in childhood. In H. Fitzgerald, D. Johnson, D. Qin, & F. Villarruel, & J. Norton (Eds.) *Handbook of children and prejudice: Integrating research, practice and policy* (pp.115-130). Springer Press. doi.org/10.1007/978-3-030-12228-7_6

Burkholder, A. R., Elenbaas, L., & Killen, M. (2021). Giving priority to race or wealth in peer group contexts involving social inclusion. *Developmental Psychology*, *57*(5), 651-661. https://doi.org/10.1037/dev0001178

Cameron, L., Rutland, A., Hossain, R., & Petley, R. (2011). When and why does extended contact work? The role of high-quality direct contact and group norms in the development of positive ethnic intergroup attitudes amongst children. *Group Processes & Intergroup Relations, 14(*2), 193–206. https://doi.org/10. 1177/1368430210390535.

Cocco, V.M., Bisagno, E., Visintin, E.P., Cadamuro, A., Di Bernardo, G.A., Trifiletti, E., Molinari, L., & Vezzali, L. (2021). *Social Development, 31*, 782-796. https://doi.org/10.1111/sode.12574

Cooley, S., Burkholder, A. R., & Killen, M. (2019). Social inclusion and exclusion in same-race and interracial peer encounters. *Developmental Psychology, 55*(11), 2440–2450. https://doi.org/10.1037/dev0000810

Costello, M. & C. Dillard, C. (2019). *Hate at School*. Southern Poverty Law Center.

Crick, N. R., & Dodge, K.A. (1996). Social information-processing mechanisms on reactive and

proactive aggression. *Child Development, 67*(3), 993-1002. https://doi.org/10.2307/1131875

Crystal, D., Killen, M., & Ruck, M. D. (2008). It is who you know that counts: Intergroup contact and judgments about race-based exclusion. *British Journal of Developmental Psychology*, *26*(1), 51–70. http://doi.org/10.1348/026151007X198910

Dodge, K.A., Lansford, J.E., Burks, V.A., Bates, J.E., Petit, G., Fontaine, R., & Price, J.M. (2003). Peer rejection and social information-processing factors in the development of aggressive behavior problems in children. *Child Development, 74*(2), 374-393. https://doi.org/10.1111/1467-8624.7402004

Dovidio, J. F., & Gaertner, S. L. (2008). New directions in aversive racism research: Persistence and pervasiveness. In C. Willis-Esqueda (Ed.), *Motivational aspects of prejudice and racism.* (Vol. 53, pp. 43–67). Springer Science. https://doi.org/10.1007/978-0-387-73233-6_3

Echols, L., & Ivanich, J. (2021). From "fast friends" to "true friends": Can a contact intervention promotes friendships in middle school? *Journal of Research on Adolescence, 31*(4), 1152-1171. https://doi.org/10.1111/jora.12622.

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

Feddes, A. R., Noack, P., & Rutland, A. (2009). Direct and extended friendship effects on minority and majority children's interethnic attitudes: A longitudinal study. *Child Development, 80*(2)*,* 337–390. https://doi.org/10.1111/j.1467-8624.2009.01266.x

Graham, S., & Echols, L. (2018). Race and ethnicity in peer relations research. In W. M. Bukowski, B. Laursen, & K. H. Rubin (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 590–614). The Guilford Press.

Graham, J. W., & Hofer, S. M. (2000). Multiple imputation in multivariate research. In T.D. Little, K. U. Schnabel, & J. Baumert (Eds.), *Modeling longitudinal and multilevel data: Practical issues, applied approaches, and specific examples* (pp. 201–218, 269–281). Lawrence Erlbaum Associates Publishers.

Hitti, A., & Killen, M. (2015). Expectations about ethnic peer group inclusivity: The role of shared interests, group norms, and stereotypes. *Child Development*, *86*(5), 1522-1537. https://doi.org/10.1111/cdev.12393

Jugert, P., Noack, P., & Rutland, A. (2011). Friendship preferences among German and Turkish preadolescents. *Child Development, 82*(3), 812-829. https://doi.org/10.1111/j.1467-8624.2010.01528.x

Killen, M., Luken Raz, K., & Graham, S. (2021). Reducing prejudice through promoting cross-group friendships. *Review of General Psychology*. https://doi.org/10.1177/10892680211061262

Killen, M., & Dahl, A. (2021). Moral reasoning enables developmental and societal changes. *Perspectives in Psychological Science, 16*(6), 1209-1225 https://doi.org/10.1177/1745691620964076

Killen, M., & Rutland, A. (2022). Promoting fair and just school environments: Developing inclusive youth. *Policy Insights from the Brain and Behavioral Sciences*, *9*(1), 81-89. https://doi.org/10.1177/23727322211073795

Levy, S. R., Lytle, A., Shin, J. R., & Hughes, J. (2016). Understanding and reducing racial and

ethnic prejudice among children and adolescents. In T. Nelson (Ed.), *Handbook of prejudice, stereotyping, and discrimination, 2nd edition* (p. 455-483). Psychology Press.

Liebler, C.A., & Halpern-Manners, A. (2008). A practical approach to using multiple-race response data: A bridging method for public-use microdata. *Demography, 45*(1), 143-155. https://doi.org/10.1353/dem.2008.0004

Losinski, M., Ennis, R., Katslyannis, A., & Rapa, L. J. (2019). Schools as change agents in reducing bias and discrimination: Shaping behaviors and attitudes. *Journal of Child and Family Studies*, *28*, 2718–2726. https://doi.org/10.1007/s1082 6-019-01452-2

McGlothlin, H., & Killen, M. (2006). Intergroup attitudes of European American children attending ethnically homogeneous schools. *Child Development, 77*(5), 1375-1386. https://doi.org/10.1111/j.1467-8624.2006.00941.x

Mulvey, K. L. (2016). Children's reasoning about social exclusion: Balancing many factors. *Child Development Perspectives, 10(1),* 22-27. https://doi.org/10.1111/cdep.12157

Nesdale, D. (2008). Peer group rejection and children's intergroup prejudice. *Intergroup attitudes and relations in childhood through adulthood* (pp. 32-46). Oxford University Press.

Nesdale, D., & Lawson, M.J. (2011). Social groups and children's intergroup attitudes: Can school norms moderate the effects of social group norms? *Child Development, 82*(5), 1594-1606. https://doi.org/10.1111/j.1467-8624.2011.01637.x

Nucci, L.P., & Ilten-Gee, R. (2021). *Moral education for social justice*. Teachers College Press.

Palmer, S.B., & Abbott, N. ((2018). Bystander responses to bias-based bullying in schools: A developmental intergroup approach. *Child Development Perspectives, 12*(1), 39-44. https://doi.org/10.1111/cdep.12253

Paradies, Y. (2016). Whither anti-racism? *Ethnic and Racial Studies, 39*(1), 1-15. http://dx.doi.org/10.1080/01419870.2016.1096410

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*(5), 751–783. https://doi.org/10.1037/0022-3514.90.5.751

Rivas-Drake, D., Saleem, M., Schaefer, D. R., Medina, M., & Jagers, R. (2019). Intergroup contact attitudes across peer networks in school: Selection, influence, and implications for cross-group friendships. *Child Development*, *90*(6), 1898-1916. https://doi.org/10.1111/cdev.13061

Rivas-Drake, D., Seaton, E., Markstrom, C., Quintana, S., Syed, M., Lee, R. M., Schwartz, S. J., Umaña, T. A. J., French, S., & Yip, T. (2014). Ethnic and racial identity in adolescence: Implications for psychological, academic, and health outcomes. *Child Development, 85*(1)*,* 40-57. https://doi.org/10.1111/cdev.12200

Ruck, M. D., Park, H., Killen, M., & Crystal, D. S. (2011). Intergroup contact and evaluations of race-based exclusion in urban minority children and adolescents. *Journal of Youth and Adolescence*, *40*(6), 633-643. https://doi.org/10.1007/s10964-010-9600-z

Rutland, A., Killen, M., & Abrams, D. (2010). A new social-cognitive developmental perspective on prejudice: The interplay between morality and group identity. *Perspectives on Psychological Science, 5,* 279–271. https://doi.org/10.1177/1745691610369468

Rutland, A., & Killen, M. (2015). A developmental science approach to reducing prejudice and

social exclusion: Intergroup processes, social-cognitive development, and moral reasoning. *Social Issues and Policy Review*, *9*(1), 121–154. https://doi.org/10.1111/sipr.12012

Smetana, J. G., Jambon, M., & Ball, C. (2014). The social domain approach to children's moral and social judgments. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (2nd ed., pp. 23-45). Psychology Press.

Stangor, C., & Schaller, M. (1996). Stereotypes as individual and collective representations. In C. Neil Macrae, C. Stangor, & M. Hewstone (Eds)*, Stereotypes and stereotyping* (p. 1 – 14). Guilford Press.

Taylor, L. K. (2020). The development of peacebuilding model (DPM) of children's prosocial behaviors in settings of intergroup conflict. *Child Development Perspectives, 14(*3), 127-134. http://doi.org/10.1111/cdep.12377

Taylor, L. K., O'Driscoll, D., Dautel, J. B., & McKeown, S. (2020). Empathy to action: Child and adolescent out-group attitudes and prosocial behaviors in a setting of intergroup conflict. *Social Development, 29*, 461–477. https://doi.org/10.1111/sode.12421

Tropp, L.R., & Barlow, F.K. (2018). Making advantaged racial groups care about inequality: Intergroup contact as a route to psychologial investment. *Current Directions in Psychological Science, 27(3),* 194-199. https://doi.org/10.1177/0963721417743282

Tropp, L. R., O'Brien, T. C., & Migacheva, K. (2014). How peer norms of inclusion and exclusion predict children's interest in cross-ethnic friendships. *Journal of Social Issues*, *70*(1), 151–166. https://dx.doi.org/10.1111/josi.12052

Turiel, E. (2002). *The culture of morality*. Cambridge University Press.

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*(1), 212-246. https://doi.org/10.1111/sipr.12023

Verkuyten, M. (2014). *Identity and cultural diversity: What social psychology can teach us.* Routledge/Taylor & Francis Group.

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*(1), 132-153. https://doi.org/10.1111/josi.12400

Yip, T. (2015). The effects of ethnic/racial discrimination and sleep quality on depressive symptoms and self-esteem trajectories among diverse adolescents. *Journal of Youth and Adolescence, 44,* 419-430. https://doi.org/10.1007/s10964-014-0123-x