

# A Social Network Intervention to Improve Adolescents' Intergroup Tolerance Via Norms of Equality-Based Respect: The “Together for Tolerance” Feasibility Study

Maor Shani

Institute for Psychology, Osnabrück University, Germany

Sophie de Lede

Association of Education Initiatives in Lower Saxony, Germany

Stefanie Richters, Malin Kleuker and Wilma Middendorf

Institute for Psychology, Osnabrück University, Germany

Juliane Liedtke and Sandrine Witolla

Association of Education Initiatives in Lower Saxony, Germany

Maarten van Zalk

Institute for Psychology, Osnabrück University, Germany

## Abstract


Advances in social norm research indicated the potential benefit of utilizing social referents, who are highly connected to others and have outstanding positions in social networks, and therefore may effectively provide normative cues for other group members. Addressing the need to increase intergroup tolerance among adolescents, we developed an intervention for secondary schools focusing on network-identified social referents, who were encouraged to spread *Equality-Based Respect* norms to increase peer-to-peer tolerant relationships. We examined the feasibility, acceptability, and effectiveness of “Together for Tolerance” in a waitlist-controlled trial ( $N=1,339$ ). Implementation was largely as planned, with high acceptability among randomly selected social referents. However, we observed no increase in perceived respect norms or tolerant behaviors, apart from a potential short-term benefit in tolerance among students exposed to peer-led actions. We address conceptual (e.g., the role of norms) and methodological (e.g., positive initial attitudes) limitations, and suggestions for future implementation and evaluation.

## Keywords

Intergroup tolerance, social network interventions, social norms, social referents, feasibility study

---

## Author Note

Maor Shani  <https://orcid.org/0000-0002-5301-5332>

The authors declare no conflict of interests with respect to the authorship or the publication of this article. This research was supported by Volkswagen Foundation, Project “Inclusivity Norms

to Counter Polarization in European Societies (INCLUSIVITY)” (9B060), and by a grant from the State Crime Prevention Council of Lower Saxony (*Länderpräventionsrat Niedersachsen*).

## Introduction

Across Europe, schools are becoming increasingly diverse in terms of ethnicity and immigration heritage (Titzmann & Jugert, 2019). On the one hand, diverse schools offer the opportunity for intergroup connections and developmental benefits, such as improved social skills, school cohesion, and academic achievements (Kornienko & Rivas-Drake, 2022). On the other hand, negative peer relationships, including bullying across ethnic lines, have been recently observed, with a surge in intolerant behaviors, racial slurs, bigotry, and harassment of minorities (Costello & Dillard, 2019; Douglass et al., 2016). Furthermore, untreated prejudice and bias can lead to severe behavioral deviations like ideological and religious radicalization, manifested in hate crimes and violent extremism (Beelmann, 2020).

In this social atmosphere, research on social norms and their spread via social networks may offer a promising direction for interventions fostering positive intergroup behaviors (Hoffman et al., 2013; Valente, 2012). Social network interventions engage individuals or groups with prominent network roles to alter perceptions of social norms (Cialdini & Goldstein, 2004; Sherif & Sherif, 1964). In such interventions, a pivotal role is often given to *social referents* as a major source of normative informa-

tion (Tankard & Paluck, 2016). Social referents are well-regarded and well-integrated individuals who hold psychological prominence in networks. Their beliefs and behaviors tend to garner more attention than those of others, and as a result, they are expected to have a disproportionate impact on others' perceptions of group norms (Paluck & Shepherd, 2012; Paluck et al., 2016; Tankard & Paluck, 2016; Zingora et al., 2020). Whether enjoying higher status, being more popular, or having a greater capacity for socialization than others – social referents share their role as those receiving the most attention from their peers (Paluck & Shepherd, 2012). According to Paluck and colleagues (2016), social referents can be detected as those with whom others choose to spend time with, which makes them and their behaviors highly observed by others and salient in peer networks.

In network interventions that utilize the prominence of social referents, peer-led actions using natural communication channels are often employed as a vehicle to instill desired norms and reinforce positive behaviors (Paluck & Shepherd, 2012; Paluck et al., 2016). These include activities such as peer mentoring, rewarding desired behaviors, campaigning in school or social media spreading desired messages, and various events promoting normative changes. Such interventions have demonstrated effectiveness in various fields, such as healthy sexual (e.g., Mitchell et al., 2021), anti-bullying (e.g., Paluck & Shepherd, 2012; Paluck et al., 2016), and pro-environmental behaviors (e.g., Farrow et al., 2017). Nevertheless, to our knowledge, network interventions have yet to be examined in the context of efforts to facilitate positive intergroup relations. Indirect intergroup contact interventions often use methods like extended or vicarious contact, which include observing peers in positive intergroup interactions (Mazziotta et al., 2011; Wright et al., 1997). Such interventions rely on group norms, where peers model positive intergroup behaviors, such as outgroup friendships, thereby reducing intergroup anxiety and promoting tolerance. However, the social referent approach can include a range of norm-inducing behaviors symbolizing intergroup tolerance and cooperation, beyond intergroup contact.

We suggest that network interventions may be particularly effective in the context of schools and in promoting positive intergroup relations compared to conventional approaches (Paluck et al., 2016; Pettigrew, 2011). Moreover, by focusing on social influence, network interventions are embed-

---

The authors wish to thank the teachers and pupils in the two anonymous schools that took part in our project, and the school management for their motivation, engagement, and cooperation throughout the project. We are grateful to our partners in the INCLUSIVITY project, Prof. Dr. Oliver Christ, Prof. Dr. Marcin Bukowski, Prof. Dr. Miranda Lubbers, Prof. Dr. Eva Jaspers and their teams for developing the project with us and for their valuable feedback along the way. Finally, we thank our team of student assistants and interns for their hard efforts and amazing work during data collection and beyond.

Author contributions according to the CRediT system: MS: Conceptualization, Formal Analysis, Investigation, Methodology, Project Administration, Visualization, Writing – original draft, Writing – review and editing; SdL: Conceptualization, Project administration, Writing – review and editing; SR: Conceptualization, Project administration; WM: Project administration, Writing – review and editing; MK: Project administration; JL: Conceptualization, Funding acquisition, Project administration; SW: Conceptualization, Project administration; MvZ: Conceptualization, Funding acquisition, Project administration, Supervision, Writing – review and editing.

All data and analysis codes are available on the Open Science Framework project page: <https://osf.io/rk2sd/>

Correspondence concerning this article should be addressed to Maor Shani, Osnabrück University, Institute for Psychology, Developmental Psychology, Lise-Meitner-Str. 3, 49076 Osnabrück, Germany. E-mail: maor.shani@uni-osnabrueck.de

ded in the school's natural environment, which may bypass motivational barriers facing many programs to improve intergroup relations (Landry & Halperin, 2023).

### The Current Study

This paper aims to fill in the gap on peer-led network interventions in intergroup relations. We, a team of researchers and practitioners in Germany, designed a novel intervention titled "Together for Tolerance". The intervention facilitated intergroup tolerance and cooperation among adolescents in school settings. *Intergroup tolerance* refers to accepting various outgroups' values, beliefs, and practices, as well as their right to live and practice their culture in the same sociocultural and political space, despite possible meaningful disagreement and divergent ways of life, due to value-based reasons (Verkuyten, 2022). We propose that value-based reasons to practice intergroup tolerance could result from adherence to a set of norms that value equality-based respect. *Equality-based respect* (in short, *respect norms*) involves recognizing and treating individuals as equals with the same rights and dignity (Renger & Reese, 2017). Research showed that equality-based respect can improve intergroup relations, reduce ingroup favoritism and foster identifications with outgroup members (e.g., Renger & Reese, 2017; Renger & Simon, 2011). Like other norms, respect norms are learned through socialization and internalized to guide intergroup attitudes and behaviors.

Interventions promoting norms such as fairness, equity, and justice (Beelmann, 2021) or universalistic norms (Neuner & Ramirez, 2023) have shown potential for combating extremist narratives and fostering political tolerance. Respect norms may therefore contribute to forming a sense of community where members feel accepted and can practice their values in an open society. Indeed, recognition as equals between ingroup and outgroup members was found to lead to mutual respect and tolerance toward previously disapproved others (Simon et al., 2019; Zitzmann et al., 2022). While tolerance can be context-specific and dependent on groups, their beliefs, and the social environment (Gibson & Gouws, 2001), we propose that norms of equality-based represent general, abstract orientation toward legitimate outgroups. When adopted and influencing behaviors, these norms should result in tolerance towards groups with diverse sociocultural or political backgrounds.

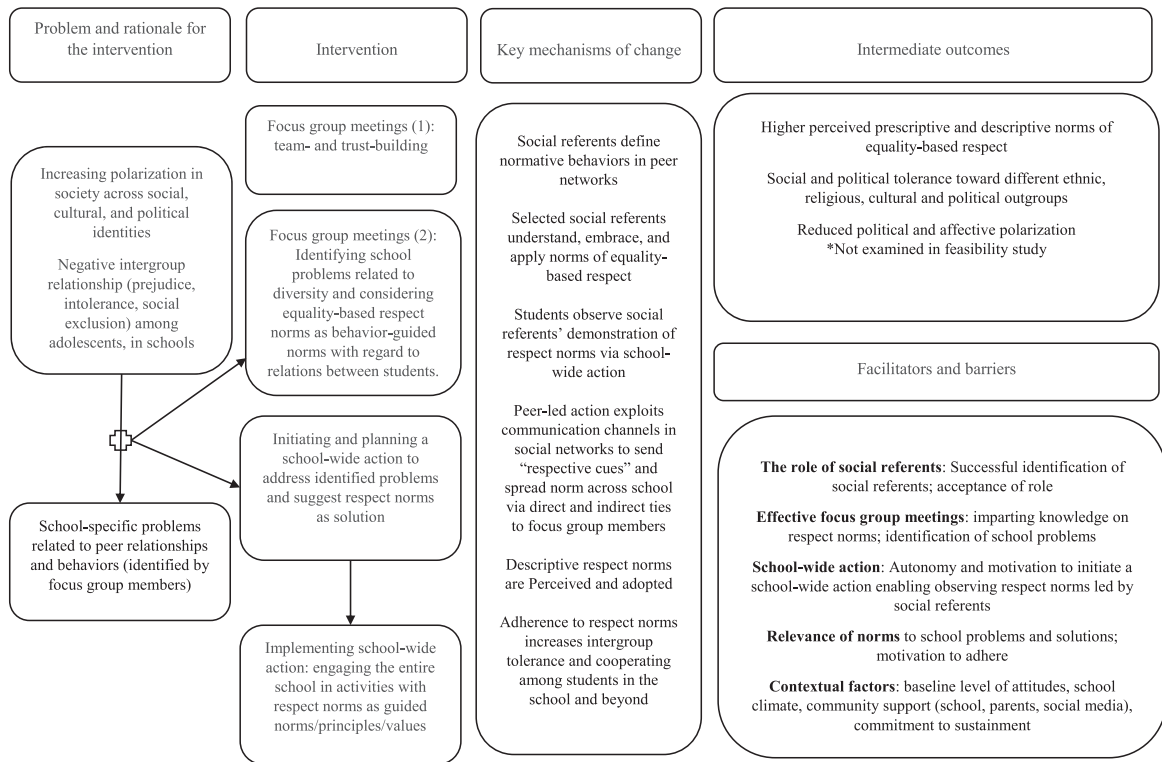
### Intervention Development: Logic Model and Guided Principles

Together for Tolerance was developed in three main phases. In the first phase, we established the theoretical foundations of the intervention and developed its theory of change in a logic model. We developed a strategy that attracts support from a diverse array of stakeholders, is practical to implement and cost-effective, and is designed with scalability in mind. The logic model and the theory of change are presented in Figure 1. The program's facilitators worked with a focus group of social referents (we use the term 'focus group' to denote the group of selected social referents, not in reference to the research method), encouraging them to initiate and implement a school-wide action to spread norms of equality-based respect, which should lead to increased tolerance and cooperation among peers.

In the second phase, we transformed the logic model into a detailed, evidence-based curriculum and activity guide. The team from Osnabrück University collaborated with the Association of Education Initiatives in Lower Saxony (Verein Niedersächsischer Bildungsinitiativen e.V., VNB) to develop a scalable intervention aimed at addressing adolescent social norms. The intervention's development followed MRC's guidelines (Craig et al., 2008). We also followed guidelines for scientifically-based interventions offered by Beelmann and Lutterbach (2022), with the particular aim to fortify elements addressing developmental processes and theories. We selected the ROOTs open-access and flexible intervention (Paluck et al., 2016; Bowes, 2019) as the basis for our program, adapting it to our logic model and the German school context. Additionally, we identified relevant materials from several existing interventions such as the KiVa antibullying program (Salmivalli & Poskiparta, 2012), the Constructive Dialogue Institute's platform against polarization (formerly "OpenMind", [constructivedialogue.org](http://constructivedialogue.org)), and the EU Stronger Together program against radicalization (<https://strongertogetherproject.eu/>). We targeted middle adolescence (grades 7 to 9), which is considered an ideal period for intervention focusing on peer influence (Dahl et al., 2018). Emphasis was placed on making focus group members feel respected and nurturing their efficacy in making positive changes (Yeager et al., 2018). Accordingly, we gave students a rather generous autonomy in developing and implementing the school-wide action. We additionally followed a participatory approach

**Figure 1**

*Together for Tolerance logic model*



(Freire et al., 2022), involving adolescents in the design of the intervention and conducting online group interviews, which provided valuable insights that informed the intervention’s activities and refined our measures.

*Implementation of Together for Tolerance*

The third stage included the implementation of the program in the intervention school. We adapted Paluck et al.’s (2016) procedure to identify and select social referents (see details on the selection procedure under Measures and receptibility under Results). The 10-session intervention comprised five primary phases, each including two weekly 75-minute sessions, guided by trained facilitators familiar with the intervention’s logic model, curriculum, and activity guide (see OSM, Appendix H). The first phase emphasized team-building and trust, while the second introduced respect norms and cooperative tolerance through group discussions and interactive methods. The third phase involved students in norm-crafting activities for their school, generating

concrete examples of respectful and tolerant behavior. In the fourth phase, students collaboratively implemented focus group-led, school-wide actions promoting respect norms. Finally, facilitators guided reflection and follow-up activity planning in the last session.

The facilitators followed a semi-structured activity guide, allowing flexibility based on the school’s and students’ needs. Minimal adjustments to the structure and content were made, such as delaying the final session to provide more time for school-wide action implementation. Continuous communication with the school’s social worker, didactic manager, and teachers through online feedback sessions proved essential for the project’s successful implementation and acceptability.

*Evaluation of Together for Tolerance’s Feasibility, Acceptability, and Effectiveness*

In addition to program implementation, we conducted a feasibility study to test the implementation and evaluation procedures and to assess the inter-

vention's effectiveness. Feasibility studies are critical for evaluating the practicality, suitability, and potential effectiveness of proposed initiatives, identifying potential barriers to success, and refining interventions to increase the likelihood of achieving sustainable outcomes (Craig et al., 2008).

We addressed three main hypotheses corresponding to the program's theory of change. First, we expected whole-school effects on perceived norms and tolerant and cooperative intergroup behaviors (Paluck et al., 2016). In line with social norm theory (Sherif & Sherif, 1964; Hogg & Reid, 2006), we hypothesized improvements in the intervention school compared to a non-intervention comparison school in perceived prescriptive and descriptive respect norms. We also expected positive norm and behavioral changes to occur particularly among participants with initial low respect attitudes. Examining initial attitudes as a moderator can help refuting the suspicion that many diversity and anti-racism interventions end up preaching to the converted (e.g., Dobbin & Kalev, 2016), often due to lack of motivation to engage with the intervention among those who often need it the most (Landry & Halperin, 2023). In line with our theoretical assumptions, we suggested that perceived norms of equality-based respect are particularly beneficial for facilitating tolerant attitudes and behaviors toward different groups, which can coexist with negative outgroup attitudes or disagreement with outgroup's values or beliefs. For this reason, we focus on tolerance and cooperation (avoidance) as dependent variables, rather than on prejudice or intergroup policies.

Second, we examined the relationships between students and selected social referents in the focus group leading the intervention. Paluck and Shepherd (2012) found a long-term positive relationship between the number of students' direct ties to focus group members and perceptions of prescriptive norms regarding harassment and anti-harassment behavior following the implementation of a social referent-led intervention, despite growing harassment in the intervention school. Similarly, Paluck et al. (2016) found that students exposed to selected social referents were more likely to perceive the school norms as more disapproving of conflict, relative to students with no exposure to social referents. Consistent with these findings, we hypothesized that the largest improvements would be observed in focus group members themselves, followed by students with outgoing ties to focus group members, and less substantial improvements will characterize

participants with no ties to focus group members.

Finally, focusing on the focus group-led school-wide action as a mechanism for spreading inclusivity norms in the school, we expected students who were exposed to the school-wide action to benefit more in terms of perceived respect norms and tolerance compared to those who were not exposed, as participation increases the opportunity for associating social referents with desired norms and behaviors.

## Method

We utilized a waitlist-controlled trial in two secondary comprehensive schools (German: *Gesamtschule*, for grades 5 to 13) in Lower Saxony, Germany. In both schools, the management and educational staff were in agreement that it is important to address intergroup relationships among students in the schools. We randomly assigned the schools to intervention and waitlist comparison conditions. The use of a waitlist design guaranteed that both schools cooperate with the data collection and receive the intervention that is appropriate for its social context. However, it did not guarantee similarity or equivalence between the schools (see selection threat analysis below). The study and its protocol were approved by the Ethics Committee of Osnabrück University and by the Regional Office for Schools and Education of Hanover (German: *Regionales Landesamt für Schule und Bildung Hannover*).

All data and codes for analysis are available under <https://osf.io/rk2sd/>. Due to the limited length of this paper, we report main statistical findings in the text below, while detailed statistical results are available in Appendices in the Online Supplementary Materials (OSM). The present investigation analyzes data collected as part of a larger project (van Zalk et al., 2023).

## Participants and Procedure

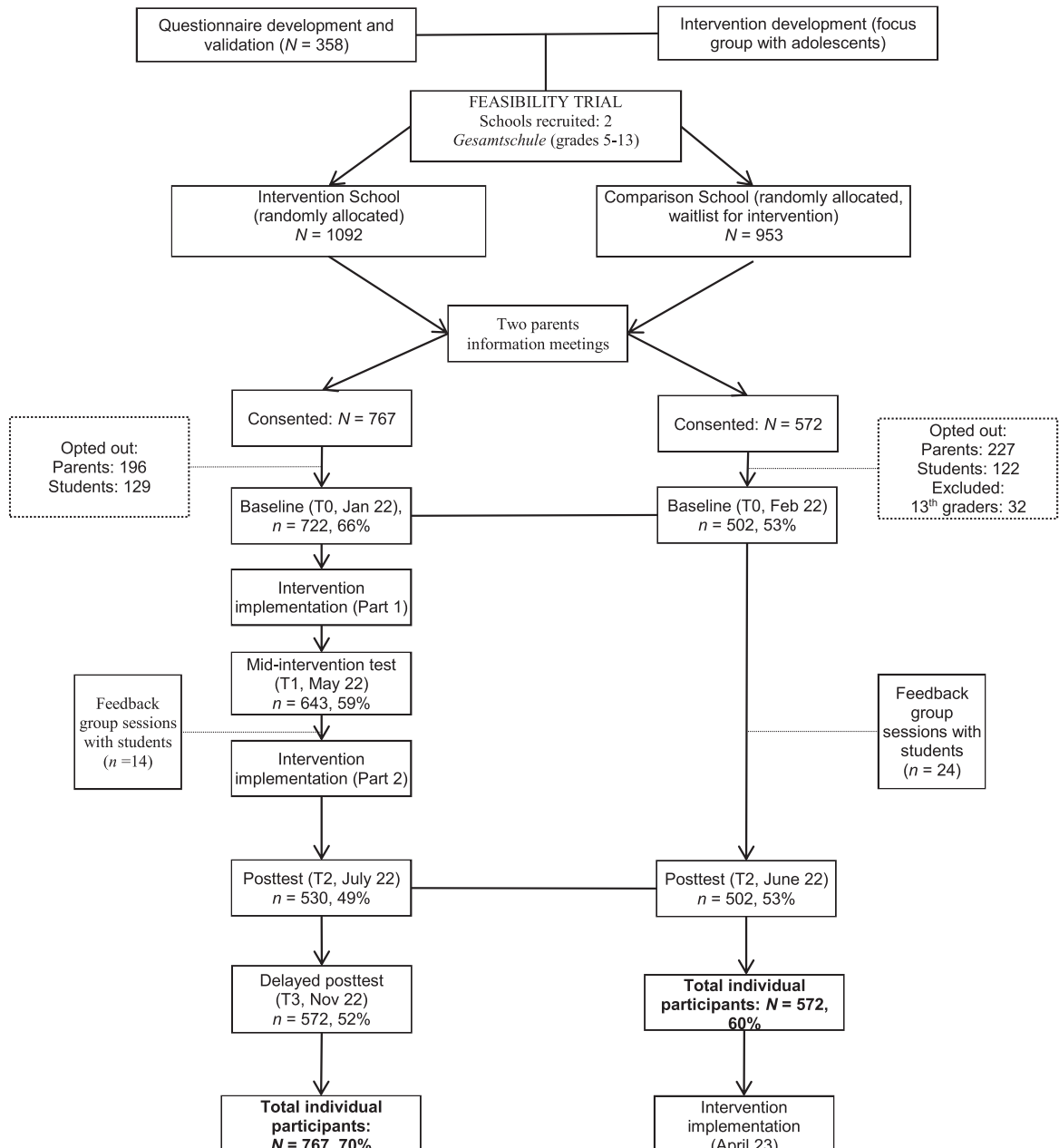
The study's flow chart is presented in Figure 2. The sample included the entire student population in the intervention school. In the comparison school, we excluded students from the 13<sup>th</sup> grade from data collection after the school's administration raised concerns that data collection interferes with final exams. No intervention with similar objectives or structure was implemented in the comparison school during that period. The project was presented to stu-

dents, school staff and parents in advance during internal conferences and online sessions, to address possible questions and concerns at an early stage. A total of 767 students in the intervention school (70%

of the 1092 students in the school;  $M_{age} = 13.589$ ,  $SD = 2.411$ ; 49.3% males, 39.5% with migration background, defined as children and/or at least one parent born outside Germany) participated at least

**Figure 2**

*Feasibility Study Flowchart*



*Note.* Percentages represent the number of participants in each wave divided by the total student population. Numbers/percentages vary across waves due to unavailability of students across waves.

in one waves, of whom 409 students (37%) participated in all four waves: T0=Two months before the intervention (which were needed to allow sufficient time to select and invite social referents), T1=in the middle of the intervention, before the planned school-wide action, T2=at the end of the intervention, and T3=four months after the intervention. In the comparison school, 572 students participated (60% of the 953 students in the school;  $M_{\text{age}} = 13.589$ ,  $SD = 2.073$ ; 52.7% males, 23.1% with migration background), of whom 432 (45%) participated in two waves (parallel to T0 and T2). Informed written consent was obtained from all adolescents who took part in the study. We utilized an opt-out procedure for parents pertaining to the surveys, but an opt-in written consent for selected adolescents to participate in the focus group meetings. Students required an average of 45 minutes for each questionnaire. Additional sample characteristics for both schools and participation across waves are presented in the OSM, Appendices A and B, respectively.

## Measures

All measures were administered in German. When needed, translation to German was done by the research team following common translation and back-translation procedures. The questionnaires included additional time variant and time-invariant measures not reported in this paper (for the complete measures see OSF repository). All main outcome measures were pretested for validity and psychometric properties in an online opportunistic sample ( $N = 358$ ) prior to the project. Detailed item analyses are available in the OSM, Appendix C.

### *Social Network Nomination and Selection of Social Referents*

Students in the intervention school nominated peers they spent time with, in person or online. Nominations at T0 were used in the algorithm developed by Paluck et al. (2016) to designate the relevant students as social referents. Similar to Paluck et al. (2016), we wanted to target adolescents whose behavior is most observed by peers (i.e., those who receive the highest number of nominations as those others wish to spend time with), but also to avoid selecting those who are part of the same friendship clique. Accordingly, for each participant, we computed local centrality mea-

asures of indegree and transitivity<sup>1</sup>. We then selected within each block of grade (7 to 9) and gender (male versus female and other) the upper quartile of students with the highest indegree scores. Students with the highest indegree scores but below-medium transitivity score were assigned the status of social referents.

### *Feedback and Attitudes toward the Intervention*

Acceptability was assessed through feedback and attitude questions at T1 and T2 for the intervention school. Different sets of questions were presented to focus group members and other students. We present descriptive statistics for feedback questions and compare across subgroups.

### *Perceived Effectiveness*

At T3, students in the intervention school reflected on their experience and assessed the project's potential contribution in terms of respectful behaviors in school, social relationships and feeling of belonging to the school. We used seven items (see OSM, Appendix D, Figure D.1) for descriptive statistics and calculated a composite score ( $\alpha = .970$ ) to compare across subgroups.

### *Outcome Variables*

**Prescriptive and Descriptive Norms, and Attitudes of Equality-Based Respect.** Following Paluck et al. (2016) we measured both prescriptive and descriptive norms, in order to explore changes in perceptions of prevalent attitudes and well as behaviors related to respect norms. To measure *prescriptive respect norms*, we adapted existing measures of equality-based respect (Renger & Reese, 2017; Renger & Simon, 2011). Participants were asked to think about their entire school (all grades and classes) and to assess the extent to which their schoolmates agree with three statements on a scale from 1 (*do not agree at all*) to 5 (*fully agree*). Example item:

<sup>1</sup>*Indegree* refers to the number of incoming connections (or edges) to a particular node (or actor) within a directed network. Local indegree measures the node's popularity or influence within the network. A higher local indegree indicates that the node is connected to more actors in the network, suggesting greater prominence or popularity. *Transitivity* is a measure of the tendency for nodes within a network to form closed triads, or the likelihood that two nodes connected to a common node are also directly connected to each other. Local transitivity gauges the proportion of ties between the nodes in i's neighborhood (i's ego-net) to the number of ties that could possibly exist between them.

“All people should be treated with respect no matter what their culture, religion or country of origin is”. For obtaining scores of *respect attitudes* we adapted the same items and asked students to rate their own agreement on a scale of 1 (*I do not agree at all*) to 5 (*I fully agree*). Finally, for *descriptive respect norms*, we adapted the attitudinal items to behavioral context, and asked students to estimate how many of their schoolmates would behave in the described manner (e.g., “treat people from different cultures, religions or countries of origin as equal”) on a 5-level scale with the anchors *nobody* (1), *few* (2), *about half* (3), *most* (4), and *all* (5). Confirmatory factor analyses confirmed the distinction between prescriptive norms, descriptive norms, and personal attitudes regarding equality-based respect (see OSM, Appendix E), and reliabilities were sufficiently high ( $\alpha > .750$ , see OSM, Appendix F). Accordingly, we calculated average scores for each of the three scales, for each participant and wave.

#### **Intergroup Tolerance and Contact Avoidance.**

Finally, we measured tolerance and preference for contact avoidance toward three socially-relevant groups in the German society, namely Jews, Muslims, and Russians (see rationale in Appendix L in OSM, pp. 106-107). For *outgroup tolerance*, three items for each social group were employed. Two of these items had already been used in previous studies to assess tolerance (Jones & Bejan, 2021), and an additional item was taken from Velthuis and colleagues (2021), originally measuring respectful tolerance (e.g., “Russians/Muslims/Jews should be allowed to live as they wish.”). For *outgroup contact avoidance*, we adapted three items per group from Tam et al.’s (2009) measure of avoidant tendencies toward outgroups (e.g., “If I had the choice, I would rather have nothing to do with Russians/Muslims/Jews living in Germany”). In both measures, participants rated their level of agreement on a Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). We then averaged responses across the three groups to obtain two single scores on outgroup tolerance and contact avoidance for each individual at each measurement time, with higher scores representing more tolerance or more contact avoidance tendencies, respectively.

#### *Demographics*

Finally, demographic measures included age, gender, socioeconomic status (SES, the MacArthur Scale of Subjective Social Status, Amir et al., 2019), religion,

and migration background (assessed via asking for participants’ and their parents’ places of birth).

#### **Data Analysis Overview**

Missing data accounted for up to 3.7% for outcome measures across time, and Little’s MCAR test was insignificant ( $ps > .057$ ). Accordingly, missing data were not imputed and were handled by listwise exclusion. Acceptability was examined using descriptive statistics and subgroup analysis using linear regression models. Tests for selection bias, attrition, and pretesting effects utilized logistic regression analyses.

In order to examine our three main hypotheses for preliminary effects of the intervention, we conducted a set of linear mixed models that allowed to account for clustering of repeated observations (level-1) within each individual student (level-2), and clustering of students within each classroom (level-3). Additional details on the models and parametrization are available in Appendix G in OSM, p. 38. In all analyses, significance was determined at the  $p < .05$  level.

## **Results**

### **Selection of Social Referents and Receptibility of the Focus Group**

Figure 3 presents a graphic depiction of the intervention school’s social network for each measurement point (T0-T3) with indication of selected (i.e., focus group members) and non-selected social referents. Table I.1 in the OSM (p. 93) shows additional social network information. Of the 31 social referents obtained at T0 (for characteristics see Table A.2 in the OSM, pp. 3-4), 16 were randomly selected to form the focus group for the prevention. Twelve (75%) social referents accepted their assigned role in the focus group. Following the decline of four students who could not participate due to their parents not granting approval for participation, additional four were randomly selected from the social referents pool, and all agreed to take the role of leading the school-wide action with their fellow members in the focus group. The 16 final focus group members were nominated by 122 students. In grades 7 to 9, focus group members received nominations from 112 students, who were 37.6% of all students in these grades. Although changes in the social networks throughout the study



were expected (both due to missingness across waves and changes in nominations), there was a relative stability in nominations between waves (all Jaccard indices were higher than .30, see OSM, Table I.1, p. 93).

### Focus Group Acceptability and Engagement

Due to school trips and project days, attendance rates in facilitated meetings varied. Ultimately, around 40% of the selected social referents took part in all ten meetings of the focus group, and all attended at least eight sessions. Absent students were informed about materials and developments via the school's online platform.

Focus group members were encouraged to employ respect norms as potential solutions to peer relationship problems they identified in their school. During the school-wide action planning sessions, the focus group expressed their wish to create events that will enable their schoolmates to better understand the experiences of racism and discrimination in everyday life and their impact on affected individuals. The focus group felt that activities around this topic can raise awareness of disrespectful behaviors in the school and convince others to behave in a more tolerant manner.

Accordingly, the students conducted two activities in which all school students and staff were invited to participate: an exhibition in the school's assembly hall and an online event, both focusing on the topics of racism, discrimination, and bullying. The two-week exhibition under the title "Living together in diversity" was brought to the school and aims to increase awareness of everyday racism through narrative and photographic portraits by individuals who experienced racism who narrated what those experiences meant for the lives of those affected. In addition, an online event of 90 minutes was held and included a panel discussion with two people from local organization fighting racism and transphobia, who shared their own experiences and work in the field. Since the online event took place during school hours, the focus group arranged that teachers watch the event together with their students in the classroom and engage in discussion through the chat. The focus group also held a waffle sale event after the final session of the intervention and raised money for charitable purposes.

Focus group feedback showed high engagement, satisfaction, and efficacy. Descriptive statistics can be found in Appendix J in the OSM (pp. 94-95). The vast majority expressed high satisfaction with the inter-

vention, felt respected and that they could express their opinions freely. Around 75% believed the focus group could make a significant change in the school. Most thought the school-wide action was important, felt that they personally contributed to the activities, and were satisfied with its implementation.

### Student Population's Exposure and Feedback

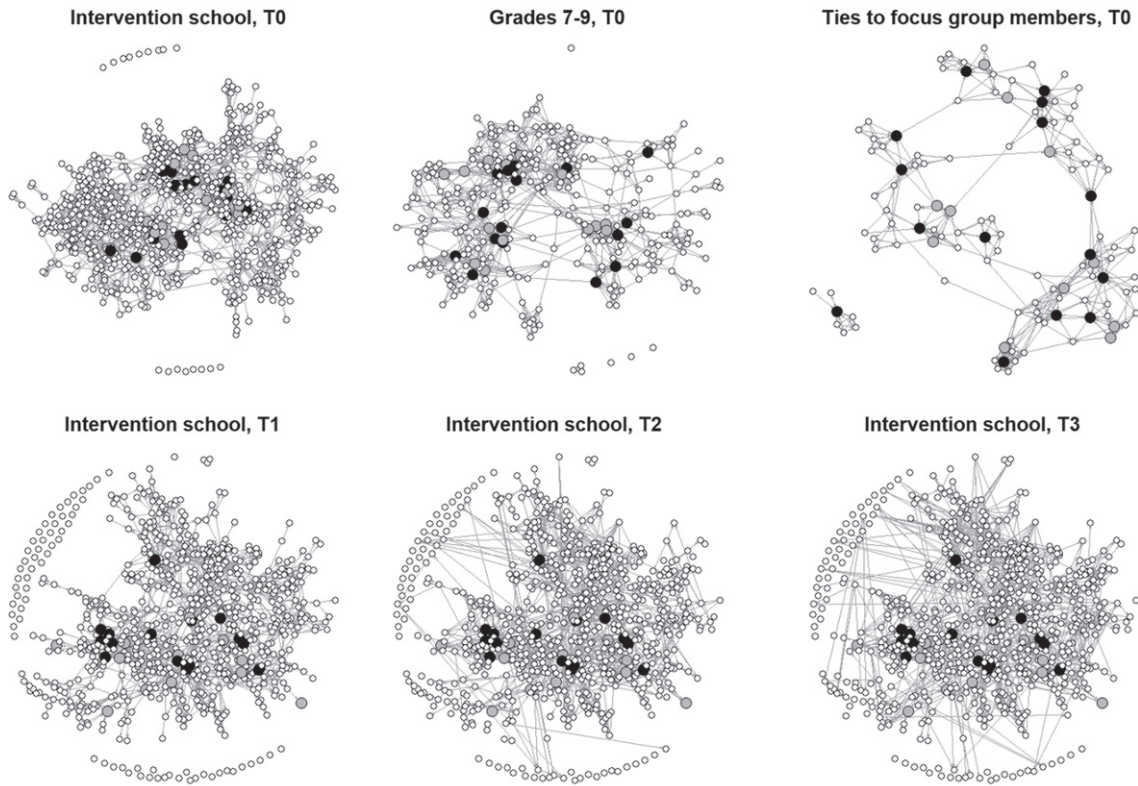
Tables K.1-3 in the OSM (pp. 98-100) provides detailed participation frequencies in the focus group-led school-wide action and detailed statistical results for school feedback. Critically, student participation in the exhibition was voluntary, while the decision to present the online events in the classes was at each teacher's discretion. Several factors unrelated to the intervention, such as crucial pre-exam sessions, influenced this choice. Around 49% of school students did not attend any event, 29% attending one (exhibition or online event), and 22% attending both. Exposure to the action was found to be independent from whether individuals had or did not have ties with focus-group members,  $\chi^2(2) = 0.453$ ,  $p = .797$ . Students' average overall attitude toward the intervention was at T2  $M = 6.899$  ( $SD = 1.904$ ), and slightly higher among students exposed to the school-wide action. Subgroup analysis revealed lower satisfaction among 7-9<sup>th</sup> graders compared to 5-6<sup>th</sup> and 10<sup>th</sup> graders (see Appendix K, OSM).

### Perceived Effectiveness of the Intervention

Appendix D in the OSM presents detailed statistical results for perceived effectiveness in the intervention school and the distributions of self-assessed impact items in T3, including subgroup analysis. Of those who answered, 44% agreed that Together for Tolerance positively influenced their behavior towards peers from other groups, while 23% disagreed. Around 35% agreed the program enhanced their interest in diverse opinions, and 40% felt it increased awareness of discrimination and sense of belonging. About a third believed it positively impacted students' conversations and tolerance. Perceived positive impact of the intervention averaged  $M = 2.92$  ( $SD = 1.16$ ). Subgroup analysis showed that focus group members scored higher in perceived importance than those with or without network ties to them. The perceived impact was slightly higher among younger cohorts, but higher among students with initially high respect attitudes.

**Figure 3**

*Social Networks of Intervention School Across Time with Distribution of Focus Group-Selected (Black) and Non-Selected (Grey) Social Referents*



*Note.*  $N=767$ . Unconnected nodes due to non-participation across wave or lack of nominations. Social referents and focus group members were obtained at T0 and their position in the network for T1-T3 is highlighted based on that initial selection. The network for grades 7-9 at T0 includes only participants from these grades and all social referents in these grades. The network titled “Ties to focus group members at T0” includes only individuals with direct outgoing ties to social referents.

### Evaluation of Intervention Outcomes

Preliminary analysis is available in the OSM, Appendix L, largely confirming selection bias (Table L.1, pp. 120-121), but ruling out attrition (Tables L.3-6) and pretesting effects (Appendix M). As expected, higher perceived prescriptive and descriptive respect norms were associated with more tolerant attitudes and less outgroup avoidance tendencies (see bivariate correlations in the OSM, Appendix O).

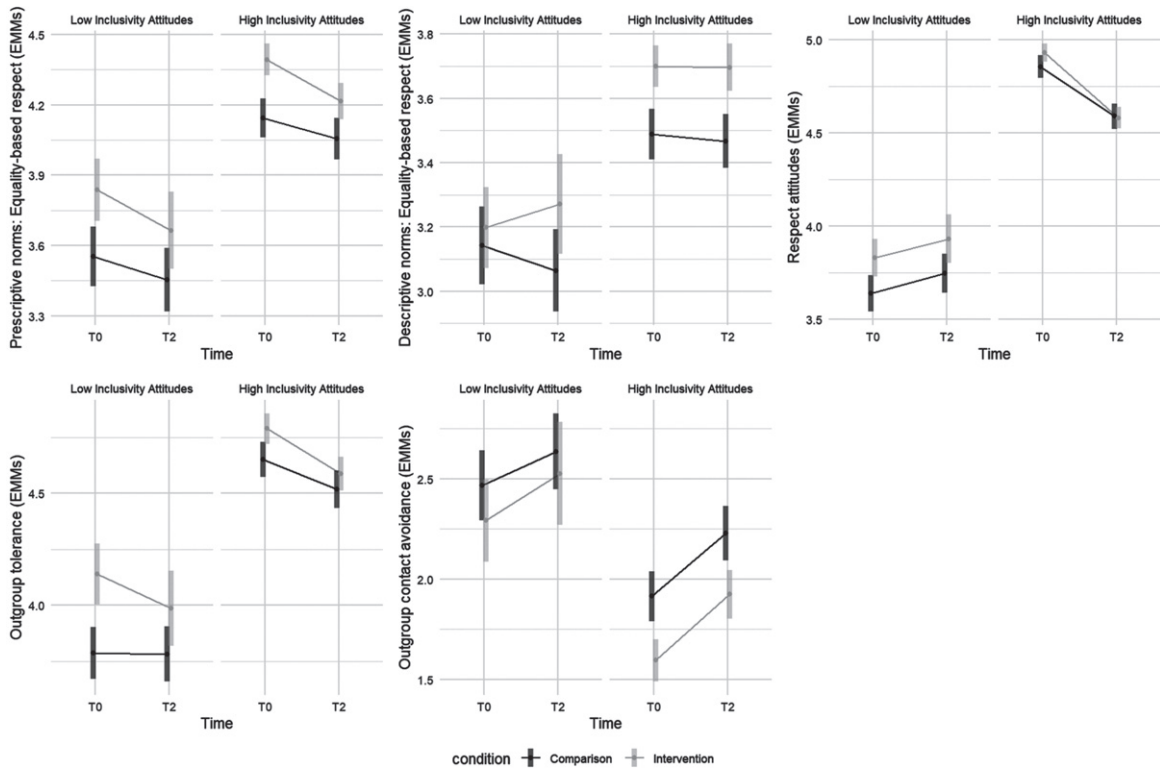
#### *Hypothesis 1: Whole-School Improvement Moderated by Initial Respect Attitudes*

Statistical summary tables and detailed results for all outcome assessments are available in the OSM, Appendix G. Figures 4–6 present Estimated

Marginal Means (EMMs) for perceived norms and tolerance outcomes for hypotheses 1-3, respectively. In linear mixed-models for the first hypothesis there were no significant interaction effects between condition and time, indicating that in the overall sample, there were no differential T0-to-T2 changes between the schools. In addition, no three-way interactions involving initial respect attitudes, condition, and time were detected, which provided evidence against hypothesis 1 regarding the intervention being more effective for students with initial lower respect attitudes. Exploratory inspection of planned comparisons showed that average scores of norm perceptions and tolerance decreased in both schools, mostly for students with initial positive respect attitudes.

**Figure 4**

*Estimated Marginal Means of Outcome Variables as a Function of Initial Respect Attitudes, Condition, and Time (Hypothesis 1)*



*Note.* EMMs = Estimated Marginal Means. Models are three-level linear mixed with random intercepts for participants nested in classes. All models controlled for age, gender, migration background and socioeconomic status. Error bars depict 95% confidence intervals. Detailed results for all models are available in Appendix G in the OSM, Tables G.1-2 (pp. 39-41) and Tables G.5-9 (pp. 45-56).

*Hypothesis 2: Increase in Tolerance by Relations to Focus Group Members (Intervention School Only, Grades 7-9)*

Hypothesis 2 referred to the central peer influence mechanism. Overall, the findings were inconsistent with the hypothesis. One significant interaction between relations to the focus group and measurement time was found for outgroup contact avoidance. Planned comparisons showed a rather sharp increase in contact avoidance in the focus group at T3 compared to T0 and T1, versus a more slow-paced increase among students with or without ties to focus group members. Exploratory analysis showed that the focus group exhibited less decrease in perceived respect norms and tolerance in the first three waves compared to students with or without ties to its mem-

bers, demonstrating possible benefits of receiving an extensive intervention.<sup>2</sup>

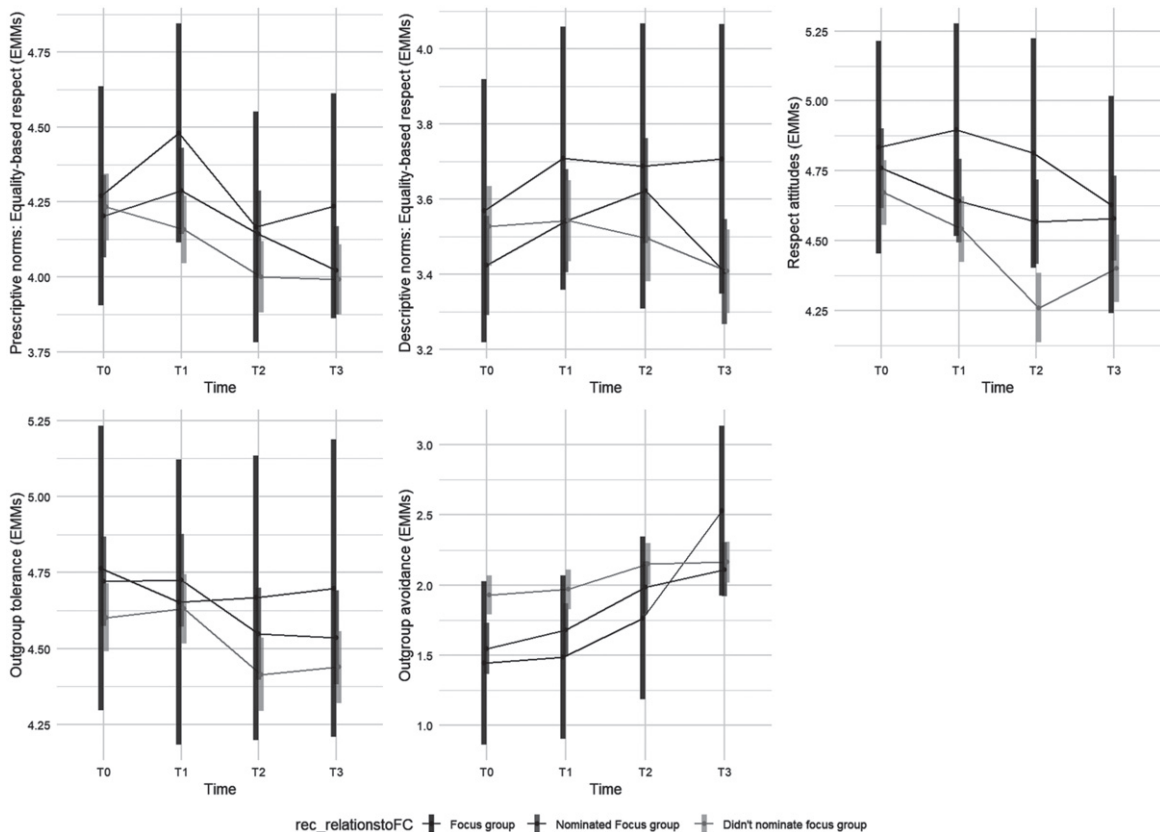
*Hypothesis 3: Increase in Tolerance by Exposure to School-Wide Action*

The final set of results examined the role of exposure to the school-wide action facilitated by the focus group in amplifying potentially positive intervention effects. The analysis included only those who participated at T2 and indicated their participation

<sup>2</sup>We conducted an additional exploratory analysis and examined the moderating role of average distance from focus group members based on social network distance. The results contradict the hypothesis that more opportunities for meaningful contact with focus group members would result in more positive effects (see OSM, Appendix N).

**Figure 5**

*Estimated Marginal Means of Outcome Variables as a Function of Ties to Focus Group Members and Time in Grades 7-9, Intervention School (Hypothesis 2)*



Note. EMMs = Estimated Marginal Means. Models are three-level linear mixed with random intercepts for participants. Error bars depict 95% confidence intervals. Detailed results for all models are available in Appendix G in the OSM, Table G.3 (pp. 41-42) and Tables G.10-14 (pp. 56-67).

in the peer-led initiatives. The interaction of exposure and time predicting outgroup tolerance was significant,  $F(6, 1074.58) = 2.376, p = .028$ , indicating differential trajectory of tolerance for the three exposure groups. Planned contrasts showed that average tolerance levels significantly decreased at T2 for unexposed individuals but only at T3 for highly exposed individuals, with medium sized effects in comparison to baseline, while remaining somewhat constant among partially exposed students from T1 onward (see Table G.4 in OSM, pp. 43-44). However, all three exposure groups experienced decreased tolerance at T3 compared to T0, indicating no long-term effects.<sup>3</sup>

<sup>3</sup>We further integrated hypotheses 2 and 3 and conducted an exploratory analysis examining the three-way interactions between Time, Exposure to school-wide action, and Relations to focus

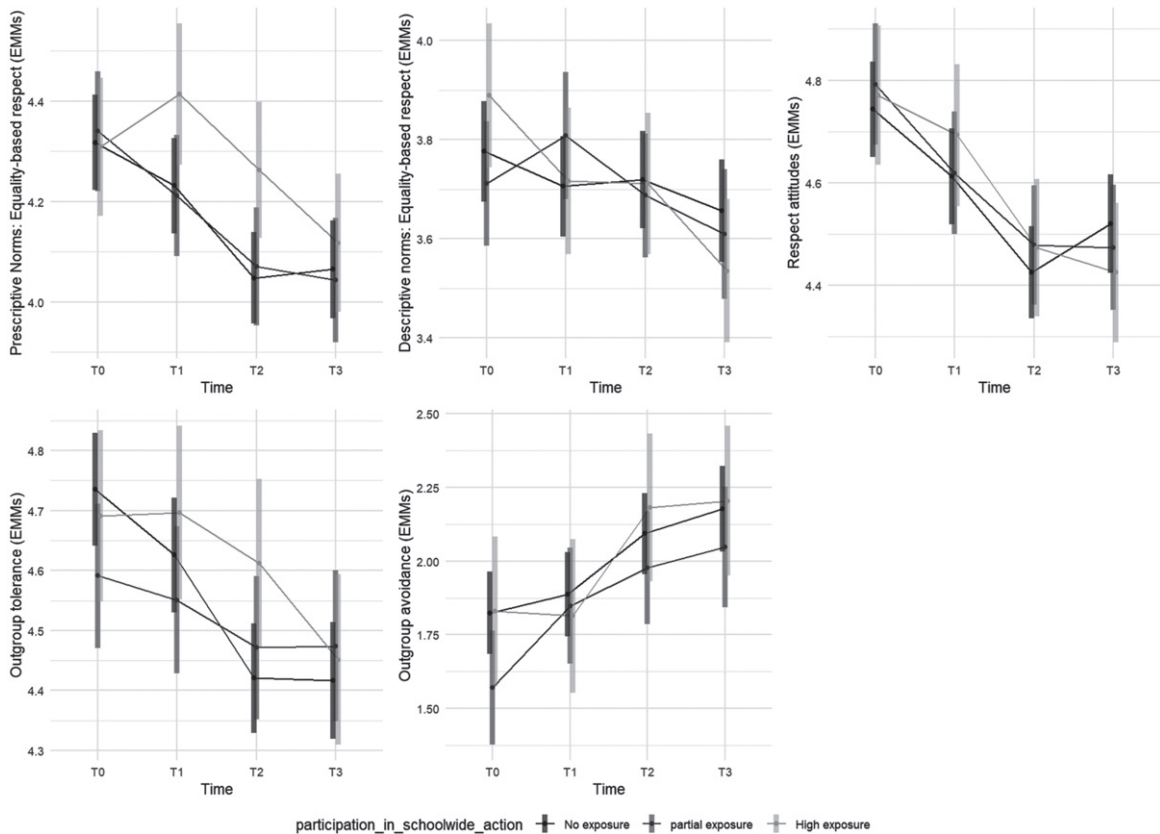
### Intervention Sustainability

Almost all focus group members reported to have maintained friendships with other members, and nine mentioned participating in additional discussions or activities related to Together for Tolerance. Across the school, 78 students (15%) took part in other related activities during the same school year, and 61 (11%) in the following year. Activities included student exchange programs, climate-related events, information sessions, and initiatives like “school without racism - school with courage”. Given the high satisfaction among staff and students, the intervention team discussed further engagement with the

group members in the intervention school, grades 7-9. No significant three-way interactions were found. The results for our five dependent variables are available in Tables N.6-N10 in OSM).

**Figure 6**

*Estimated Marginal Means of Outcome Variables as a Function of Exposure to School-Wide Action and Time, Intervention School (Hypothesis 3)*



Note. EMMs = Estimated Marginal Means. Models are three-level linear mixed with random intercepts for participants. Error bars depict 95% confidence intervals. Detailed results for all models are available in Appendix G in the OSM, Table G.4 (pp. 43-44) and Tables G.15-19 (pp. 67-79).

school administration and were invited to present the project to the school community. The school created three working groups (German: *Arbeitsgemeinschaften*) for voluntary activities outside the classroom to increase cross-group friendships, promote mutual understanding and conflict resolution, and organize annual action days on discrimination, diversity, and democracy.

### Discussion

This paper presented the development, implementation, and pilot evaluation of a novel school intervention aimed at promoting norms of equality-based respect to fortify intergroup tolerance and cooperation. The intervention was deemed successful

in terms of implementation and acceptability, garnering high institutional support and engagement from selected social referents. Focus group engagement was high, similar to previous programs working with social referents (e.g., Mitchell et al., 2021; Paluck et al., 2016). Strong rapport with school staff, like Bowes et al. (2019), was essential for successful feasibility and acceptability.

However, we found little evidence for the intervention's effectiveness or its theory of change, and both intervention and comparison schools displayed decreased respect norms and tolerance over time. Two results are worth noting: First, focus group members did not exhibit the same downstream trend as other students. Aligning with Wade et al. (2022), this suggests that social referents may be the primary beneficiaries of such interventions. Second, we found that

Table 1  
 Post-Feasibility Assessment of the Theory of Change: Summary of Evidence and Recommendations for Further Implementation and Evaluation

Domains and Mechanisms	Summary of Evidence	Recommendation for further implementation
Baseline norms and behaviors	High initial perceived respect norms and attitudes and tolerance (OSM, Appendix L, pp. 108-119)	Focus on schools with high diversity that experience challenges in students' relationships and more frequent intolerant behaviors (perhaps from lower ranked tier)
Focus group sessions: high autonomy, safe and respected environment	High acceptability, engagement, efficacy, and satisfaction (OSM, Appendix J)	Retain as mechanisms
Selected social referents understand, embrace, and apply norms of equality-based respect	Respect norms may be less prominent in school-wide action (see Discussion)	Encourage school-wide action that exposes students to respect norms and demonstrate tolerant behaviors; Emphasize concrete behaviors that are respectful and tolerant; emphasize creating a cognitive association between social referents and such behaviors
Students observe social referents' demonstration of respect norms via school-wide school-wide action	Not sufficient exposure to school-wide action across school; Action focused on discrimination rather than solutions (see Results)	Involve non-focus group students in raising problems in their school through an extended "make a change" box activity; Create a toolkit with specific ideas and suggestions for meaningful, high-impact activities, while balancing independent action by students
Social influence mechanism for spreading respect norms	No evidence of impact (see Results)	At this stage, retain the theory of change while focus on enhancing opportunities for impact
Adherence to respect norms increases intergroup tolerance and cooperating among students in the school and beyond	Correlational evidence only (OSM, Appendix O)	Encourage more research on the role of equality-based respect norms in promoting tolerant behaviors to strengthen the theory and create an evidence base
Measurement of outcomes	No positive outcomes revealed (see Results)	Focus more on perceived norms of concrete respectful and tolerant behaviors; increase participatory approach in scale building; add measures of affective polarization
School involvement and support	High support, involvement, and encouragement by the school; commitment for a prolonged process (see Results)	Retain as mechanisms Address student-teacher relationship and institutional discrimination in the school
Parental and community involvement	Low participation in parents' online information sessions, considerable opting out rates	Increase accessibility of parents to (translated) materials (a dedicated website, <a href="https://togetherfortolerance.de">togetherfortolerance.de</a> ) Increase channels of support and involvement for parents (emails, handouts), while maintaining a 'light touch' approach
Sustainability of the program	No sufficient build-in mechanisms for continuous involvement of schools and students (see Discussion)	Create mechanisms for sustainment, such as leadership programs, independent implementation of the social referent approach by the staff

individual students with high or partial exposure to the school-wide action led by social referents retained high average scores on outgroup tolerance compared to individuals who did not participate in the action, suggesting potential short-term (but not long-term) positive effects on tolerance resulting from peer-led actions demonstrating equality-based respect and tolerance, which was suggested as one mechanism through which social referents can influence perceived norms and behaviors. Aside from this specific outcome, our overall findings appear to contrast with recent empirical results on social referent-based interventions (e.g., Paluck & Shepherd, 2012; Paluck et al., 2016). However, they align with studies that have found no positive effects of network interventions in some or all schools (e.g., Bowes et al., 2019). Overall,

our results may not be an anomaly, as peer influence techniques to reduce intergroup bias have been found to have a weak-to-moderate reduction effect, somewhat smaller than other approaches (Paluck et al., 2021).

Understanding the main reasons for the lack of positive outcomes may bear important recommendations for future interventions. First, a true worsening of intergroup attitudes could have resulted from developmental or social experiences, or a combination of both. Research indicates that prejudice in mid- to late-adolescence is shaped by personal and social experiences (van Zalk & Kerr, 2014; Raabe & Beelmann, 2011). Rising intolerance in German society, highlighted by increasing right-wing politics, hate speech, and racially-motivated violence

(Soltau et al., 2022), alongside global events like the Ukrainian conflict, may foster intolerance. Such exposure could have influenced participants' intolerance levels directly and indirectly through peers. This possibility may necessitate future research to focus on preventive intervention roles.

Second, intensive engagement in diversity and discrimination topics may have increased awareness of intolerance and disrespectful behaviors, leading to detrimental effects on norm perceptions. Interventions highlighting implicit bias can unintentionally backlash by emphasizing the nature and prevalence of discriminatory behavior (Murrar et al., 2020). Certain research suggests that norms have subtle influence, with positive framing often being more effective than negative (Neuner & Ramirez, 2023). Our intervention school's peer-led action highlighted discrimination, but may have lacked a clear path towards tolerance, potentially emphasizing negative aspects rather than focusing on the transformational potential of respect norms.

Third, ceiling effects (see histograms in the OSM, Appendix L, pp. 108-119) may have limited intervention impact due to initially positive perceptions and attitudes across measures, possibly influenced by social desirability. Further research may evaluate interventions with more nuanced measures and in settings with adolescents who exhibit rather low diversity orientation.

Fourth, the school-wide action might have lacked visibility, duration, or meaning, or misidentified social referents, affecting respect norm adoption. The social network approach assumes that individuals learn desired behaviors through prolonged and intense interaction with social referents (Paluck et al., 2016). While students grasped the benefits of adopting respect norms, they may have lacked clear examples of respectful conduct. Providing tangible behavioral examples via social referents could therefore boost the intervention's ability to foster the desired changes (Bowes et al., 2019; Brauer et al., 2021).

Fifth, our interventions offered a synergy between social norm theory, social network influence theories, and participatory approach, in anticipation that concurrent theoretical interventions might produce superior outcomes (Paluck et al., 2021). We, however, cannot distinguish the aggregate effect from each theory's individual influence. Future research could compare different techniques, clarify their interaction, and incorporate additional evidence-based methods to enhance the intervention's effectiveness.

For example, vicarious contact mechanisms, proven to reduce prejudice, could be employed through positive intergroup interactions demonstrated by social referents (Mazziotta et al., 2011).

Finally, the role of respect norms in our intervention warrants reevaluation. Despite evidence that equality-based respect enhances intergroup relations (Renger & Reese, 2017; Simon et al., 2019; Zitzmann et al., 2022), its application in our intervention needs scrutiny. The social referent-led school-wide action may have emphasized the harm of discrimination more than the benefits of respect norms. A more tangible implementation of respect norms, considering participants' age and time constraints, may promote the desired normative shift. Hence, future research should focus on making respect norms more tangible and prominent.

Some additional limitations in our design should be noted. The quasi-experimental nature, with no random assignment of individuals or exposure to school-wide action, weakened causal inference. Although true randomization would be implausible, randomized elements could be enhanced, such as scaling up implementation to multiple schools or varying focus group composition (Paluck et al., 2016; Zingora et al., 2020). External and ecological validity may be limited due to the single school setting. The simple contagion model we used might require more complex dynamics to spread norms of equality-based respect effectively (Valente, 2012). Additionally, focusing on segmentation networks or smaller units could prove more beneficial. Finally, our intervention focused on peer-to-peer relationships, neglecting other domains such as teacher-student relationships (Civitillo et al., 2021; Moffitt et al., 2019) and institutional structures (Moffitt et al., 2020). Future interventions should address these areas, including the intersectional nature of exclusionary behaviors and institutionalized racialized othering in education.

Despite such limitations, our study contributes to the prejudice reduction literature and highlights the importance of adolescent social norms (Murrar et al., 2020; Pettigrew, 2011). We demonstrate the malleability of social norms through peer-to-peer interactions, as shown in prior research (Paluck & Shepherd, 2012; Mitchell et al., 2021). Our approach aligns with participatory education and active learning techniques (Freire et al., 2022), empowering students to initiate meaningful activities. We believe that our research also has practical implications for social network interventions in general, and specifi-

cally for interventions aiming to facilitate intergroup tolerance and reduce prejudice. Table 1 summarizes the evidence for the program's mechanism and derived recommendations for future implementation.

One last point should be made pertaining to the sustainability of Together for Tolerance. Pettigrew (2011) argued that interventions aiming at maintaining a normative change fulfill a pivotal prerequisite for sustaining interventions, since they hold the critical feature of persistence. While we managed to create some follow-up engagement, not enough build-in mechanisms were placed to enable the continuation of the program. Ultimately, sustainability should be a major priority for all stakeholders, but remains a great challenge for evidence-based intervention (Hailemariam et al., 2019).

### Supplementary Material

The supplementary material is available in the electronic version of this article: <https://dx.doi.org/10.3233/DEV-230342>.

### References

- Amir, D., Vallenggia, C., Srinivasan, M., Sugiyama, L. S., & Dunham, Y. (2019). Measuring subjective social status in children of diverse societies. *PLoS One*, *14*(12), e0226550. <https://doi.org/10.1371/journal.pone.0226550>
- Beelmann, A. (2020). A social-developmental model of radicalization. An integration of existing theories and empirical research. *International Journal of Conflict and Violence*, *14*, 1–14. <https://dx.doi.org/10.4119/ijcv-3778>
- Beelmann, A. (2021). Concept of and approaches toward a developmental prevention of radicalization: Promising strategies to keep young people away from political, religious, and other forms of extremism. *Monatsschrift für Kriminologie und Strafrechtsreform*, *104*(3), 298-309. <https://doi.org/10.1515/mks-2021-0130>
- Beelmann, A., & Lutterbach, S. (2022). Developmental prevention of prejudice: Conceptual issues, evidence-based designing, and outcome results. *Review of General Psychology*, *26*(3), 298-316. <https://doi.org/10.1177/10892680211056314>
- Bowes, L., Aryani, F., Ohan, F., Haryanti, R. H., Winarna, S., Arsianto, Y., ... & Minnick, E. (2019). The development and pilot testing of an adolescent bullying intervention in Indonesia—the ROOTS Indonesia program. *Global Health Action*, *12*(1), 1656905. <https://doi.org/10.1080/16549716.2019.1656905>
- Brauer, M., Dumesnil, A., & Campbell, M.R. (2021). Using a social marketing approach to develop a pro-diversity intervention. *Journal of Social Marketing*, *11*(4), 469-488. <https://doi.org/10.1108/JSOCM-09-2020-0174>
- Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annual Review of Psychology*, *55*, 591-621. <https://doi.org/10.1146/annurev.psych.55.090902.142015>
- Civitillo, S., Göbel, K., Preusche, Z., & Jugert, P. (2021). Disentangling the effects of perceived personal and group ethnic discrimination among secondary school students: The protective role of teacher–student relationship quality and school climate. *New Directions for Child and Adolescent Development*, *2021*(177), 77-99. <https://doi.org/10.1002/cad.20415>
- Costello, M., & Dillard, C. (2019). Assessing– and interrupting—intolerance at school. *American Educator*, *43*(3), 4-7.
- Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: The new Medical Research Council guidance. *British Medical Journal*, *337*. <https://doi.org/10.1136/bmj.a1655>
- Dahl, R. E., Allen, N. B., Wilbrecht, L., & Suleiman, A. B. (2018). Importance of investing in adolescence from a developmental science perspective. *Nature*, *554*(7693), 441-450. <https://doi.org/10.1038/nature25770>
- Dobbin, F., & Kalev, A. (2016). Why diversity programs fail. *Harvard Business Review*, *94*(7), 52-60.
- Douglass, S., Mirpuri, S., English, D., & Yip, T. (2016). They were just making jokes: Ethnic/racial teasing and discrimination among adolescents. *Cultural Diversity and Ethnic Minority Psychology*, *22*, 69–82. <https://doi.org/10.1037/cdp0000041>
- Farrow, K., Grolleau, G., & Ibanez, L. (2017). Social norms and pro-environmental behavior: A review of the evidence. *Ecological Economics*, *140*, 1-13. <https://doi.org/10.1016/j.ecolecon.2017.04.017>
- Freire, K., Pope, R., Jeffrey, K., Andrews, K., Nott, M., & Bowman, T. (2022). Engaging with children and adolescents: A systematic review of participatory methods and approaches in research informing the development of health resources and interventions. *Adolescent Research Review*, *7*(3), 335-354. <https://doi.org/10.1007/s40894-022-00181-w>
- Gibson, J. L., & Gouws, A. (2001). Making tolerance judgments: The effects of context, local and national. *The Journal of Politics*, *63*(4), 1067-1090. <https://doi.org/10.1111/0022-3816.00101>
- Hailemariam, M., Bustos, T., Montgomery, B., Barajas, R., Evans, L. B., & Drahota, A. (2019). Evidence-based intervention sustainability strategies: A systematic review. *Implementation Science*, *14*(1), 1-12. <https://doi.org/10.1186/s13012-019-0910-6>
- Hoffman, I. F., Latkin, C. A., Kukhareva, P. V., Malov, S. V., Batluk, J. V., Shaboltas, A. V., ... & Kozlov, A. P. (2013). A peer-educator network HIV prevention intervention among injection drug users: results of a randomized controlled trial in St. Petersburg, Russia. *AIDS and Behavior*, *17*, 2510-2520. <https://doi.org/10.1007/s10461-013-0563-4>
- Hogg, M. A., & Reid, S. A. (2006). Social identity, self-categorization, and the communication of group norms. *Communication Theory*, *16*(1), 7-30. <https://doi.org/10.1111/j.1468-2885.2006.00003.x>
- Jones, C. W., & Bejan, T. M. (2021). Reconsidering Tolerance: Insights from political theory and three experiments. *British Journal of Political Science*, *51*(2), 604-623. <https://doi.org/10.1017/S0007123419000279>



- Kornienko, O., & Rivas-Drake, D. (2022). Adolescent intergroup connections and their developmental benefits: Exploring contributions from social network analysis. *Social Development*, 31(1), 9-26. <https://doi.org/10.1111/sode.12572>
- Landry, A. P., & Halperin, E. (2023). Intergroup psychological interventions: The motivational challenge. <https://doi.org/10.31234/osf.io/e5bcu>
- Mazziotta, A., Mummendey, A., & Wright, S. C. (2011). Vicarious intergroup contact effects: Applying social-cognitive theory to intergroup contact research. *Group Processes & Intergroup Relations*, 14(2), 255-274.
- Mitchell, K. R., Purcell, C., Simpson, S. A., Broccatelli, C., Bailey, J. V., Barry, S. J., ... & Moore, L. (2021). Feasibility study of peer-led and school-based social network Intervention (STASH) to promote adolescent sexual health. *Pilot and Feasibility Studies*, 7(1), 1-15. <https://doi.org/10.1186/s40814-021-00835-x>
- Moffitt, U., Juang, L. P., & Syed, M. (2019). "We don't do that in Germany!" A critical race theory examination of Turkish heritage young adults' school experiences. *Ethnicities*, 19(5), 830-857. <http://dx.doi.org/10.1177/1468796818788596>
- Moffitt, U., Juang, L. P., & Syed, M. (2020). Intersectionality and youth identity development research in Europe. *Frontiers in Psychology*, 11, 78. <https://doi.org/10.3389/fpsyg.2020.00078>
- Murrar, S., Campbell, M. R., & Brauer, M. (2020). Exposure to peers' pro-diversity attitudes increases inclusion and reduces the achievement gap. *Nature Human Behaviour*, 4(9), 889-897. <https://doi.org/10.1038/s41562-020-0899-5>
- Neuner, F. G., & Ramirez, M. D. (2023). Evaluating the effect of descriptive norms on political tolerance. *American Politics Research*, 1532673X231168347. <https://doi.org/10.1177/1532673X231168347>
- Paluck, E.L., Porat, R., Clark, C.S., & Green, D.P. (2021). Prejudice reduction: Progress and challenges. *Annual Review of Psychology*, 72(1), 533-560. <https://psycnet.apa.org/doi/10.1146/annurev-psych-071620-030619>
- Paluck, E. L., & Shepherd, H. (2012). The salience of social referents: A field experiment on collective norms and harassment behavior in a school social network. *Journal of Personality and Social Psychology*, 103(6), 899-915. <https://doi.org/10.1037/a0030015>
- Paluck, E. L., Shepherd, H., & Aronow, P. M. (2016). Changing climates of conflict: A social network experiment in 56 schools. *Proceedings of the National Academy of Sciences*, 113(3), 566-571. <https://doi.org/10.1073/pnas.1514483113>
- Pettigrew, T. F. (2011). Toward sustainable psychological interventions for change. *Peace and Conflict*, 17(2), 179-192. <https://doi.org/10.1080/10781919.2010.536758>
- Raabe, T., & Beelmann, A. (2011). Development of ethnic, racial, and national prejudice in childhood and adolescence: A multinational meta-analysis of age differences. *Child Development*, 82(6), 1715-1737. <https://doi.org/10.1111/j.1467-8624.2011.01668.x>
- Renger, D., & Reese, G. (2017). From equality-based respect to environmental activism: Antecedents and consequences of global identity. *Political Psychology*, 38(5), 867-879. <https://doi.org/10.1111/pops.12382>
- Renger, D., & Simon, B. (2011). Social recognition as an equal: The role of equality-based respect in group life. *European Journal of Social Psychology*, 41(4), 501-507. <https://doi.org/10.1002/ejsp.814>
- Salmivalli, C., & Poskiparta, E. (2012). KiVa antibullying program: Overview of evaluation studies based on a randomized controlled trial and national rollout in Finland. *International Journal of Conflict and Violence*, 6(2), 293-301. <https://doi.org/10.4119/ijcv-2920>
- Sherif, M., & Sherif, C. W. (1964). *Reference groups; exploration into conformity and deviation of adolescents*. Harper and Row.
- Simon, B., Eschert, S., Schaefer, C. D., Reiningger, K. M., Zitzmann, S., & Smith, H. J. (2019). Disapproved, but tolerated: The role of respect in outgroup tolerance. *Personality and Social Psychology Bulletin*, 45, 406-415. <https://doi.org/10.1177/0146167218787810>
- Soltau, H., Barthels, I., & Leber, S. (2022, Jul. 8). Sexismus, Rassismus, Antisemitismus. Wie diskriminierend ist Deutschland? [Sexism, racism, anti-semitism. How discriminatory is Germany?] Tagesspiegel, <https://www.tagesspiegel.de/gesellschaft/nach-der-wahl-von-ferda-ataman-wie-diskriminierend-ist-deutschland-531534.html>
- Tam, T., Hewstone, M., Kenworthy, J., & Cairns, E. (2009). Intergroup trust in Northern Ireland. *Personality and Social Psychology Bulletin*, 35(1), 45-59. <https://doi.org/10.1177/0146167208325004>
- Tankard, M. E., & Paluck, E. L. (2016). Norm perception as a vehicle for social change. *Social Issues and Policy Review*, 10(1), 181-211. <https://doi.org/10.1111/sipr.12022>
- Titzmann, P. F., & Jugert, P. (Eds.). (2019). *Youth in superdiverse societies: Growing up with globalization, diversity, and acculturation*. Routledge.
- Valente, T. W. (2012). Network interventions. *Science*, 337(6090), 49-53. <https://doi.org/10.1126/science.1217330>
- van Zalk, M., Christ, O., Jaspers, E., Lubbers, M. J., Bukowski, M., Shani, M., ... Middendorf, W. M. (2023). Inclusivity norms to counter polarization in European societies (INCLUSIVITY). <https://doi.org/10.17605/OSF.IO/N7C4Y>
- van Zalk, M. H. W., & Kerr, M. (2014). Developmental trajectories of prejudice and tolerance toward immigrants from early to late adolescence. *Journal of Youth and Adolescence*, 43, 1658-1671. <https://doi.org/10.1007/s10964-014-0164-1>
- Velthuis, E., Verkuyten, M., & Smeekes, A. (2021). The different faces of social tolerance: Conceptualizing and measuring respect and coexistence tolerance. *Social Indicators Research*, 158(3), 1105-1125. <https://doi.org/10.1007/s11205-021-02724-5>
- Verkuyten, M. (2022). *The social psychology of tolerance*. Routledge. <https://doi.org/10.4324/9781003335030>
- Wade, L., Leahy, A. A., Babic, M. J., Beauchamp, M. R., Smith, J. J., Kennedy, S. G., ... & Lubans, D. R. (2022). A systematic review and meta-analysis of the benefits of school-based, peer-led interventions for leaders. *Scientific Reports*, 12(1), 21222. <https://doi.org/10.1038/s41598-022-25662-9>
- Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology*, 73(1), 73-90. <https://doi.org/10.1037/0022-3514.73.1.73>
- Yeager, D. S., Dahl, R. E., & Dweck, C. S. (2018). Why interventions to influence adolescent behavior often fail but could succeed. *Perspectives on Psychological Science*, 13(1), 101-122. <https://doi.org/10.1177/1745691617722620>

- Zingora, T., Stark, T. H., & Flache, A. (2020). Who is most influential? Adolescents' intergroup attitudes and peer influence within a social network. *Group Processes & Intergroup Relations*, 23(5), 684-709. <https://doi.org/10.1177/1368430219869460>
- Zitzmann, S., Loreth, L., Reininger, K. M., & Simon, B. (2022). Does respect foster tolerance? (Re) analyzing and synthesizing data from a large research project using meta-analytic techniques. *Personality and Social Psychology Bulletin*, 48(6), 823-843.

### Bio Sketches

*Maor Shani*, Ph.D. Postdoctoral researcher since 2020 at the Department of Developmental Psychology, Institute for Psychology, Osnabrück University. Research on interventions to promote peace and improve intergroup relations among young people, the role of emotions in intractable conflicts, and coping with racism and discrimination.

*Sophie de Lede*, graduate student of Cross-Cultural Psychology and research assistant at the department of Developmental Psychology at Osnabrück University, Germany. Research interests in interpersonal and intergroup relations, conspiracy beliefs, and climate action.

*Stephanie Richters*, Ph.D. student at the department of Developmental Psychology, Osnabrück University, Germany. Research on network dynamics in schools, (cyber-)bullying and social influence through norms.

*Malin Kleuker*, Ph.D. student at the department of Development Psychology, Osnabrück University, Germany. Research on development and implementation of network-based preventions.

*Wilma Middendorf*, Ph.D. student at the department of Developmental Psychology, Osnabrück University, Germany. Research on transmission of intergroup attitudes, equality-based respect, and intergroup relations.

*Juliane Liedtke* and *Sandrine Witolla*, pedagogical staff members, active in several projects on civic education and conducting workshops with teachers, social workers, and students.

*Maarten van Zalk*, Ph.D. Professor of Developmental Psychology since 2017, Osnabrück University, Germany. Research on adolescent development of intergroup relations, personality, and social relationships.