INTRODUCTION

Bullying, which is defined as repeated aggressive behavior often rooted in a power imbalance between the victim and the bully (Espelage & Colbert, 2016), leads to negative academic (Lacey & Cornell, 2013) and psychological (Stoliker, 2018) effects for those impacted, including those who witness bullying (Rivers et al., 2009). Moreover, the prevalence of bullying is quite high, with studies indicating that over 20% of youth ages 12–18 reported being bullied at school in the United States (Musu-Gillette et al., 2018). Importantly, findings also suggest that those who are targeted by bullies because of their group membership or identity (for instance, race/ethnicity, gender, sexual orientation, disability, or religion) report experiencing more negative outcomes than those who report generalized bullying (Rivers et al., 2009). Moreover, the prevalence of bullying is quite high, with studies indicating that over 20% of youth ages 12–18 reported being bullied at school in the United States (Musu-Gillette et al., 2018). Importantly, findings also suggest that those who are targeted by bullies because of their group membership or identity (for instance, race/ethnicity, gender, sexual orientation, disability, or religion) report experiencing more negative outcomes than those who report generalized bullying (Rivers et al., 2009).

Bias-based bullying can be defined as repeated aggression involving a power imbalance that targets victims due to a group membership (Mulvey et al., 2018) while generalized bullying is related to victimization because of interpersonal characteristics (Juvonen & Graham, 2014). Compared to generalized bullying, bias-based bullying is mostly driven by intergroup attitudes since it is rooted in prejudicial and discriminatory intentions (Palmer & Abbott, 2018). However, both types of bullying can be detrimental; thus, we aimed to examine bystander intervention responses to both types of bullying involving an immigrant-origin victim.

Immigrants represent a growing part of the population in the USA (14.6% of the USA population, Camarota & Zeiglar, 2022). Children and adolescents constitute a significant percentage of the immigration population in the USA. Previous research, across different countries, has demonstrated that immigrant children and adolescents are at higher risk of experiencing bias-based bullying due to their immigration background (for review see Xu et al., 2020). Therefore, it is particularly important to examine bystander responses to bullying incidents that involve an immigrant-origin victim. These interactions can either be intergroup or intragroup in nature, depending on the immigrant status of the bystander. Consequently, a theoretical framework that incorporates intergroup processes into adolescents’ social evaluations can inform hypotheses about bystander behaviors.
Theoretical framework

While research has found that youth who experience bias-based bullying report more negative outcomes, including greater school avoidance, and more fear than those who report generalized bullying (Mulvey et al., 2018; Russell et al., 2012); less is known about whether bystanders are likely to intervene in instances of bias-based bullying. The Social Reasoning Development Perspective (SRD; Rutland & Killen, 2015) argues that individuals might consider both group functioning and moral concerns while justifying their judgments and responses to intergroup social conflicts. Thus, one may prioritize group membership, in particular a shared group membership with the bully or the victim, in deciding who to support in a bullying incident. On the other hand, an individual may prioritize moral principles, focusing on the harm the victim experiences and selecting to intervene on behalf of the victim irrespective of a shared group membership. Much research has been dedicated to identifying the factors that promote the prioritization of moral concerns in these intergroup contexts.

For the most part, this research has taken an additive approach, exploring the various factors that contribute to positive intergroup outcomes, but also highlighting the conditions that may weaken or strengthen these contributions (i.e., moderators). While this work is important in determining the conditions required for positive intergroup behaviors, less research has focused on the processes that would motivate such behaviors, particularly around bystander intervention in response to bias-based bullying. Recent theoretical discussions propose a model for examining such processes in intergroup behaviors (Turner & Cameron, 2016). Specifically, Turner and Cameron (2016) proposed that intergroup contact and the desire for such contact may be required to propel those with low prejudice or inclusive peer norms to behave positively in intergroup situations by mediating this relationship. This is different from previous models that posit intergroup contact as a condition that strengthens or weakens the likelihood of positive intergroup behavior in those with low prejudice or inclusive peer norms.

Contact and desire for social contact in bullying incidents

Why might contact or the desire for contact be the impetus for intervening in bias-based bullying situations? In the absence of contact experiences or a desire to engage in these experiences with peers who do not share group membership, anxiety about interacting with outgroup peers may impede positive intergroup behaviors (Turner & Cameron, 2016; van Zalk et al., 2021). Similarly, we argue that, without contact, or the desire for contact, adolescents would not be motivated to intervene on behalf of a cross-group victimized peer in a bullying situation. Evidence has been established in support of the role of contact with outgroups when it comes to bullying incidents involving victims of immigrant-origin children and adolescents (Abbott & Cameron, 2014; Gönültaş & Mulvey, 2021). In particular, children and adolescents who report more contact with immigrant youth are more likely to judge bias-based bullying as wrong and more likely to report that they would say something to the bully or talk to the victim (Gönültaş & Mulvey, 2021). Less research has examined the role of the desire for contact with outgroups or immigrant peers.

Desire for contact, and not just opportunity for contact, may be needed to drive children to actually form cross-group friendships (Turner & Cameron, 2016; van Zalk et al., 2021). Interestingly, the desire for contact may not always align with actual contact experiences, as youth may desire contact, but not have the opportunity to engage in intergroup contact in their daily life, for instance because of homogenous schools or community environments. Turner and Cameron (2016) posit that measures of desires for social contact should also be considered when exploring processes that promote positive intergroup behaviors, because without these desires one may not be motivated to engage in such behaviors. Therefore, in the current study, we focused on adolescents’ desire for contact with an immigrant peer as well as their contact experiences with immigrants to explain the processes that hinder or encourage active intervention on behalf of an immigrant peer.

Other explanations for bystander responses to bias-based bullying

Based on both SRD (Rutland & Killen, 2015) and Turner and Cameron (2016), it is argued that individual and situational factors may forage different pathways for attitudes and relationships with outgroup peers, and hence bystander responses. Individual factors may include expectations for being different from someone who does not share group membership and one's initial attitudes about outgroups. Situational factors can include messages from one's peers or teachers about how to treat others, such as peer norms about inclusivity toward outgroup peers (Rutland & Killen, 2015; Turner & Cameron, 2016). Turner and Cameron (2016) discuss the effect of these factors on intergroup behaviors as being driven by contact experiences or desires for contact with outgroups, while SRD posits that these factors may directly be related to one's intention to intervene on behalf of an outgroup victim. Below we outline how past research provides evidence for both associations.

Shared group membership

Previous studies demonstrated that shared identities can shape the way how children and adolescents’ reasons about and respond to bullying situations (Gönültaş & Mulvey, 2021; Palmer et al., 2015, 2022). For example, immigrant adolescents compared to nonimmigrant
adolescents expected they would be more likely to intervene in bias-based bullying of an immigrant peer (Gönültat & Mulvey, 2021). Further, Palmer et al. (2022) demonstrated that Cypriot youth were more likely to report prosocial bystander responses following the social exclusion of Cypriot peers compared to the social exclusion of non-Cypriot immigrant peers.

Shared group membership is also associated with who youth choose to have contact with. Same-ethnic friendships are more common than cross-ethnic friendships, particularly during adolescence, suggesting adolescents may prefer contact with those who share their group membership (Graham, 2018). This has been documented in studies across diverse populations (Chen & Graham, 2015; Tropp et al., 2014). For example, Tropp et al. (2014) showed that both European American and Latine American adolescents reported low numbers of cross-ethnic friendships. Given these documented preferences for same-ethnic interactions among both immigrant and nonimmigrant-origin youth, sampling adolescents from both backgrounds was important to gain greater clarity on processes involving intergroup and intragroup interactions.

Shared immigrant background, however, is a broader superordinate category compared to ethnicity in the context of the United States, where the current study was conducted. Thus, those who have lived the immigrant experience in the United States come from varying ethnic backgrounds. Often superordinate categories can highlight shared identity thus encouraging contact with and improving attitudes toward individuals who one has considered an outgroup based on some other social category (Dovidio et al., 2017; Gaertner et al., 2016). Therefore, in the current study, it was also important to examine the extent to which a shared immigrant group membership generalized across victims of bullying belonging to different immigrant ethnic groups, specifically, Latine and Arab. These victim backgrounds were chosen because they share an immigrant superordinate identity with immigrant background participants, but they differed in the opportunities for contact for both immigrant and nonimmigrant-origin participants. Specifically, participants in the current study had high opportunities for contact with Latine peers (and most immigrant-origin participants reported that they were Latine), while all participants had low opportunities for contact with Arab-origin peers, given school demographics. It may be the case that in the absence of such contact opportunities desires for social contact with immigrants are enough to motivate an intervention response on behalf of an immigrant group. Thus, testing two immigrant groups, Latine and Arab, allowed us to examine if the factors which motivate bystander intervention generalize across different immigrant groups.

Discriminatory tendencies

Attitudes about outgroups are related to one’s experiences with members of an outgroup, especially when those attitudes are negative (Rutland & Killen, 2015). In the context of bias-based bullying, higher levels of discriminatory tendencies predicted children’s and adolescents’ approval of bias-based bullying of immigrant background victims (Gönültat & Mulvey, 2021). While contact has often been used to predict intergroup attitudes, Turner and Cameron (2016) suggest the reverse relation is also possible. Thus, intergroup attitudes may predict one’s desire for intergroup contact and the number of experiences one has with outgroups. For example, research on adolescents indicates that the likelihood to sit and interact with outgroup peers in the cafeteria is lower for those with more negative attributions toward outgroups (Al Ramiah et al., 2015). Given that individual differences in attitudes toward outgroups contribute to differences in behaviors toward outgroups, it was important to understand the varying pathways that may drive the association between discriminatory attitudes toward immigrants and adolescents’ intent to intervene on behalf of immigrant-origin victims.

Peer norms

Similar to individual differences, situational obstacles might exist that inhibit youth from taking advantage of opportunities for intergroup contact, such as the lack of inclusive social norms among their peer group (Tropp et al., 2014). For example, Tropp et al. (2014) found that both European and Latine American adolescents showed more interest in cross-ethnic friendships when they perceived their own ethnic peers to be inclusive toward ethnic outgroups. This was the case when controlling for existing cross-ethnic friendships. Furthermore, in longitudinal studies initial perceptions of peer group inclusivity affected later interest in, comfort with, and quality of cross-ethnic friendships (Tropp et al., 2016), as well as attitudes about contact (Rivas-Drake et al., 2019). The extent to which adolescents perceive their peers to be inclusive toward immigrants predicts attitudes and behaviors toward immigrant-origin peers (Gönültat & Mulvey, 2021; Hitti et al., 2021). Similarly, in a study in Northern Ireland (McKeown & Taylor, 2018), it was demonstrated that inclusive peer norms increased one’s willingness to engage in prosocial behaviors with an outgroup member, but contact experiences with outgroups were driving this willingness to help an outgroup.

Present study

To examine whether the desire for contact and contact with immigrants are what drive bystander responses to bullying situations with immigrant victims, two models must be tested. The first is a full mediational model, consistent
with a model posited by Turner and Cameron’s (2016) for predicting intergroup and intragroup behaviors. In this mediation model, the effects of individual (immigrant background, discriminatory tendencies) and situational factors (peer norms) on the likelihood of bystander intervention are driven by one’s desires for social contact and contact experiences with immigrant peers. The second model tested is a partial mediation model. In the partial mediation model both individual factors (immigrant background, discriminatory tendencies) and situational factors (peer norms), are added to predict the likelihood of bystander intervention. It was important to examine both models to establish an account of which model more adequately describes bystander intentions to intervene.

In the present study, we chose to examine bystander responses to both generalized and bias-based bullying targeting immigrant-origin youth using hypothetical stories. Targets were of immigrant-origin because immigrant-origin youth face bullying and hate speech more often than other social groups (Sanders-Phillips et al., 2009), but may experience either bullying targeting them because of their immigrant identity (bias-based) or bullying targeting them because of other reasons (for instance, interpersonal characteristics; generalized). Both nonimmigrant-origin and immigrant-origin youths’ bystander responses to bullying of immigrant-origin victims were examined to gain further insight into the role of the group membership.

Further, to gain a more comprehensive understanding of the model across different immigrant-origin victims, we also separately examined responses to two different victims; one of Arab origin (with whom participant had less contact and no shared ethnicity) and one of Latine origin (where participants had greater contact and immigrant-origin participants largely shared ethnicity). We examined bystander responses in adolescent ninth graders as this is the transition from middle school to high school and the bullying ecology may shift, with rates of bullying increasing during such transitions and adolescents often reporting bullying to be more acceptable with age (e.g., Mulvey et al., 2019; Pepler et al., 2006). We specifically examined bystanders’ responses to repetitive verbal aggression as children and adolescents show more variation in their responses to such behaviors compared to more physical forms of bullying (hitting, kicking, etc.). This may be because physical aggression is perceived as more severe than relational or verbal aggression (Goldstein et al., 2002). We controlled for the type of bullying across stories and only manipulated the reason for bullying, a methodology adopted by other studies examining bullying, a methodology adopted by other studies examining bullying across stories and only manipulated the reason for bullying intervention. It was important to examine both models to establish an account of which model more adequately describes bystander intentions to intervene.

Hypotheses

We expected the full mediation model to represent a better account of the associations between the factors of interest (immigrant background, discriminatory tendencies, peer norms, contact with outgroups, desire for contact with outgroups) and bystander intentions to intervene. According to Turner and Cameron (2016), both one’s desire for social contact with an immigrant-origin peer and one’s contact experiences with immigrants would be important in promoting one’s intentions to intervene on behalf of an immigrant-origin victim and would drive the effects of individual (immigrant background, discriminatory tendencies) and situational factors (peer norms). However, to test whether previous findings (Gönültaş & Mulvey, 2021), regarding the effects of individual (immigrant background, discriminatory tendencies) and situational factors (peer norms), as well as contact with immigrants and desire for contact on bystander responses were also supported, it was important to also examine a model in which effects of individual and situational factors on bystander responses were examined directly (partial mediation model).

Based on the previous research reviewed, we expected that lower discriminatory tendencies would be related to a higher likelihood of intervening, but, importantly, that this relationship would be driven by a desire for social contact and contact with immigrant peers. In other words, we expected this association would be negatively mediated by desires for social contact and contact with immigrants. We also expected that participants with an immigrant background would be more likely to intervene if they observed an immigrant peer being victimized (ingroup member) than would those who did not have an immigration background and that desires for social contact and contact with immigrant peers would account for this increased likelihood of intervening. In other words, we expected that both contact variables would positively mediate the relationship between own’s own immigration background and likelihood of intervening to support an immigrant victim. Similarly, we expected the more inclusive one perceived their peer to be, the greater one’s intentions to intervene would be, and that this relationship would be driven by desires for social contact and contact with immigrant peers. In other words, we expected contact variables would positively mediate this relationship as well. Finally, given participants’ reduced exposure to Arab-origin peers compared to Latine-origin peers in this sample, we expected different pathways would emerge for intentions to intervene on behalf of an Arab-origin victim compared to a Latin-origin victim and that our models may explain more variance in responses for Latine-origin victims than for Arab-origin victims.

METHODS

Participants

Participants consisted of 168 ninth grade students (M = 14.54, SD = 0.94 57% female and 43% male). Of these participants 33.7% were White-European American, 8.4% were Black-African American, 42.2% were Hispanic-Latine, 9.6% were bi-racial/multi-racial, and 6% were American Indian/Native American, Asian/Asian American or other. Data were collected from two public high schools in the same district in the Southeastern United States. For the
purpose of the study, only ninth graders were approached. The response rate for schools was 68% and 44%. Total enrollment of ethnic minoritized students in the schools was 61% and 42%, respectively, and was majority of Latine background.

We used Suárez-Orozco et al. (2018)’s conceptualization to categorize participants based on immigration background. Participants who reported both parents were born in the United States were considered as nonimmigrant-origin youth ($N = 105, 11.3\%$ Latine background) while participants reported either parent as having not been born in the United States were classified as immigrant-origin youth, $N = 63 (92\%$ Latine background). Power analysis was conducted using the semPower package in R (Moshagen & Erdfelder, 2016) and an online statistical software program developed by Soper (2022). To test global hypotheses related to fit, power analysis indicated that a sample size of 124 participants would be needed to detect an RSMEA model fit index of .05 for a model with $df = 166$ (df for the partial mediation model), $\alpha = .05$ and 80% statistical power. Soper’s (2022) calculator indicated a sample size of 150 was needed to detect medium-size effects of 0.30, with 5 latent factors and 21 observed variables. Finally, we also aimed to test for invariance based on victim’s immigrant-origin. To assess power for this invariance testing, we used methods recommended by Moshagen and Erdfelder (2016). This analysis indicated that a minimum sample size of 75 in each group was required to achieve 80% power and to detect a lack of invariance across regression coefficients.

Procedure

The Institutional Review Board (IRB) approval was obtained from North Carolina State University (Protocol Number: 12780), and school district and school manager approval was obtained. The consent forms were sent home to families in coordination with teachers and school manager. Passive consent was collected; thus, adolescents whose parents had not denied them permission and who assented to participate individually completed the survey in their classrooms using a paper-pencil format. Participants received electronic cards ($\$ 10) as an incentive for their time.

Design

All surveys were gender-matched to participants and include scenarios regarding bullying incidents involving victims of immigrant background. Two versions of the surveys were randomly administered. Each participant responded to one version. In one version, the victim was of Hispanic-Latine background, and in the other version, the victim was of Arab background. Both the story and outcome measures of active bystander responses were based on earlier measures and adapted to focus on immigrants (Gönültaş & Mulvey, 2021; Mulvey et al., 2019). For the bias-based bullying scenario, participants read a story where an immigrant-origin peer is bullied by a nonimmigrant-origin peer because of the peer’s immigration background:

Let’s say that Lucía (Hispanic-Latine context)/ Fawzia (Arab context) is from another country and now lives in the USA. Imagine that some of Lucía’s/Fawzia’s classmates shout rude words to Lucía all the time because Lucía/Fawzia is from another country and now lives in the USA. No one stands up for her and she does not know what to do about it.

Following this prompt, participants were asked to evaluate the likelihood of possible active bystander responses (‘How likely do you think it is that you would?’). Then, they were presented with several active bystander responses to evaluate (‘say something to them; get help from a friend; talk to the victim; get help from an adult’) on a 6-point Likert-type scale ($1 = \text{not likely at all}; 6 = \text{really likely}$). Cronbach’s alpha for this scale was $\alpha = .74$. Reliability was slightly higher for those of nonimmigrant backgrounds ($\alpha = .76$), compared to those with immigrant backgrounds ($\alpha = .71$).

For the generalized bullying scenario, participants read about an immigrant youth who is bullied by a nonimmigrant-origin peer because of an interpersonal characteristic (shyness):

Let’s say that María Victoria/ Mouhsina (is from another country and now lives in the USA. Imagine that some of María Victoria’s/Mouhsina’s classmates shout rude words to María Victoria/Mouhsina all the time because María Victoria/Mouhsina is very shy and remains quiet all the time. No one stands up for her and she does not know what to do about it.

Also following this prompt, participants were asked to evaluate the likelihood of possible active bystander responses (‘How likely do you think it is that you would: say something to them; get help from a friend; talk to the victim; get help from an adult’) on a 6-point Likert-type scale ($1 = \text{not likely at all}; 6 = \text{really likely}$). Cronbach’s alpha for this scale was $\alpha = .83$. Reliability for those of nonimmigrant backgrounds ($\alpha = .82$) was comparable to those with immigrant backgrounds ($\alpha = .83$).

Predicting variables

Contact with immigrants

The Developmental Intergroup Contact Survey (Crystal et al., 2008) was adapted to measure participants’ contact
Desire for social contact

Participants' desire for social contact with an immigrant peer was measured using four items adapted from (Berger et al., 2016) after they read the following scenario: 'Let's imagine that one day, after school, you go to the park to hang out. You realize that there is another girl at the park. Let me introduce her to you! Her name is Carmen Escalera/Shukira (شوكيرا)). She is the same age as you. She is from another country and now lives in the USA. Adolescents were then asked to indicate their desire to interact (e.g., 'How much would you like to hang out with Carmen Escalera/Shukira (شوكيرا)?) on a 5-point Likert-type scale going from 1 = not at all to 5 = very much so. This scale produced Cronbach's $\alpha = .91$. Reliability was higher for those of nonimmigrant backgrounds ($\alpha = .92$), compared to immigrant backgrounds ($\alpha = .86$). Validity of this measure was demonstrated showing that desire for social contact with refugees was negatively correlated with threat perception and discrimination and positively correlated with empathy (Gönültaş et al., 2020).

Perceived peer norms

Participants' perceptions about their peer attitudes toward immigrants were evaluated using three items adapted from Turner et al. (2008; e.g., 'Do you think your friends like people who are from a different country but now live in the USA?'). Responses were given using a 7-point Likert-type scale (1 = Not Likely at All; 7 = Really Likely). This scale had Cronbach's $\alpha = .86$, with comparable reliabilities across those of nonimmigrant ($\alpha = .85$) and immigrant backgrounds ($\alpha = .85$). In previous research, this measure was correlated with less intergroup anxiety and prejudice toward outgroups (Turner et al., 2008).

Discriminatory tendencies

To measure adolescents' discriminatory tendencies toward immigrants, a measure adapted from and validated by earlier studies was used (Berger et al., 2016; Gönültaş et al., 2020). In this measure, participants saw drawings of a neighborhood with eight houses (one of the houses was labeled 'my house') and read 'Let's imagine that a new child will move to your neighborhood. She is Ariana Martinez/ Najiya (نجية). She is the same age as you. She is originally from a different country, and she lives in the USA. In your neighborhood, all houses seen in the picture are available (except yours). Ariana Martinez/Najiya (نجية) and her family will move into the house that you choose for them. Please choose one of the houses below for Ariana Martinez/ Najiya (نجية) and her family'. The distance (number of houses) between 'my house' and the house the participant selected was tallied (1 = the lowest and 7 = the highest discriminatory tendencies). In previous studies, this measure was positively correlated with threat perception, normative beliefs about aggression (Gönültaş et al., 2020) and negatively correlated with motivation to establish social contact and intergroup contact (Berger et al., 2016).

Overview of analyses

Missing data on individual variables were minimal. On average, 0.79% (range: 0%–2.4%) of each variable's data were missing across the variables used in this study. The SEM analyses in the present study were conducted using maximum likelihood estimation (to handle missing data; Hancock et al., 2010) within R using the lavaan package (Rosseel, 2012) and included two phases: a measurement phase and a structural phase (see, e.g., Anderson & Gerbing, 1988). First, in computing our measurement model, a confirmatory factor analysis (CFA) model in which latent variables were allowed to covary was imposed on the variance–covariance matrices. The measurement model was also evaluated to see whether model fit could be improved by adding residual covariances into the model. Such improvements were only made if they made sense theoretically (see Byrne, 1994). Once the final measurement model was identified, measurement invariance, comparing participants of nonimmigrant background and immigrant background, was tested and both metric and scalar invariance was found (see Appendix S1).

The structural phase of analysis was then initiated by testing a partial mediation model shown in Figure 1a. This partial mediation model includes Immigrant Background, Discriminatory Tendencies, Peer Norms, Desires for Social Contact and Contact with Immigrants as all exogenous variables predicting our two outcomes. The partial mediation model was then compared to a more parsimonious full mediation model (see Figure 1b) in which direct paths from Immigrant Background, Discriminatory Tendencies, and Peer Norms to Bias-Based Bullying Intervention and Generalized Bullying Intervention were fixed to zero, thus leaving the effect of the former on the latter to be fully mediated by desires for social contact and contact with immigrants. The partial and full mediation models were compared using chi-square difference test. If there is a mediational effect, the addition of the direct path to the full mediation model should not improve the fit (Holmbeck, 1997). Once
the final structural model was determined, standardized indirect effects (ab) were estimated with 95% bias-corrected confidence intervals derived from 1000 bootstrap random samples in lavaan. The final model was then subject to a multi-group analysis to examine differences in structure and associated regression coefficients for intentions to intervene when the victim is of Arab background and when the victim is of Latine background, thus testing the final hypothesis. Theoretically sound modification indices improving fit by adding residual covariance were made across both groups.

**RESULTS**

Descriptive item statistics are included in the Appendix S1. Data model fit was assessed using fit indices as recommended by Hu and Bentler (1999). These included the comparative fit index (CFI; Bentler, 1990), which compares the theoretical model relative to a null model with complete variable independence. CFI values above .95 were used to indicate satisfactory fit (Hu & Bentler, 1999, p. 27). The second index is the standardized root-mean-square residual (SRMR), which reflects an average
of all standardized residual covariances. SRMR values below .08 were used to indicate satisfactory fit (Hu & Bentler, 1999, p. 27), lastly root-mean-square error of approximation (RMSEA; Steiger & Lind’s, 1980), with 90% confidence interval, with values below .06 indicating adequate fit (Hu & Bentler, 1999, p. 27). RMSEA represents both fit and parsimony of the model tested. While Hu and Bentler’s (1999) recommendations were derived from single-sample models, the current study examined both single-sample models and multi-sample analyses; therefore, these recommendations will be used as an approximate guideline when examining multi-sample models.

**Measurement models**

An initial CFA measurement model was tested, in which all factors were allowed to covary, along with the single-item exogenous variables of discriminatory tendencies and immigrant background. This included five latent factors (Bias-based Bullying Intervention, General Bullying Intervention, Desire for social contact, Contact with Immigrants, Peer Norms, see Figure 2) and their relations to 19 observed variables, and correlations among the latent factors with discriminatory tendencies and immigrant background. This initial CFA model had promising fit indices, ($\chi^2$ (170) = 380.618, CFI = 0.875, SRMR = 0.063, and RMSEA = 0.086, RMSEA 90% CI (0.074, 0.097)). However, modification indices were examined using information from the Lagrange multiplier modification indices provided by R. These indicated that covarying residuals of items belonging to the intervention factors would result in improvement. Therefore, the residuals for items representing bias-based bullying intervention (i.e., saying something, getting help from an adult, getting help from a friend, talk to the victim) were covaried with residuals of similar items representing general bullying intervention. These residual covariances made theoretical sense given the items are worded identically for both bias-based and general bullying intervention. This resulted in a statistically significant improvement $\Delta \chi^2(4) = 128.52, p<.001$, with good model fit ($\chi^2$ (166) = 252.096, CFI = 0.949, SRMR = 0.055, and RMSEA = 0.056, RMSEA 90% CI (0.041, 0.069)). Figure 2 includes factor loadings for the final measurement model. Metric and scalar invariance was then established between participants of immigrant-origin and nonimmigrant-origin (see Appendix S1).
Covariances among the five latent constructs (Bias-based Bullying Intervention, General Bullying Intervention, Desire for social contact, Contact with Immigrants, Peer Norms), and the two single-item predictors (Immigrant background, Discriminatory tendencies) are shown in Table 1. These indicate that the two outcome latent variables were highly correlated but the measurement model combining these into a single factor produced statistically significantly poorer fit (models $\Delta \chi^2 (6) = 48.256, p < .001$). As seen in Table 1, discriminatory tendencies and peer norms statistically significantly covaried with both outcome latent constructs in the expected directions as well as with the mediator desires for social contact. Shared immigrant background did not covary with the latent outcomes but positively covaried with contact with immigrants and negatively covaried with discriminatory tendencies. Peer norms statistically significantly negatively covaried with discriminatory tendencies. Additionally, statistically significant positive covariances between outcome constructs and the desires for social contact were found, but this was not the case for contact with immigrants.

### Structural models

First, model fit for the partial mediation model (Figure 1a) was tested. The model included covariances among intervention item residuals that were made in the measurement phase (Note: these residual covariances were included in each subsequent model). As shown in Table 2, fit indices for this partial mediation model were adequate. Second, the full mediation model (Figure 1b) was tested, and the fit indices for this model were also adequate (see Table 2), and the chi-square test associated with this model was not statistically different from the first partial mediation model ($\Delta \chi^2 (6) = 3.07, p = .80$). The full mediational model thus provided a more parsimonious account of the relationships among these variables than a partial mediation model, and is therefore preferred (Holmbeck, 1997). Next, we examined Lagrange multiplier modification indices to see if fit could be improved. Two theoretically sound modifications were made. First, we added residual covariances between items within bias-based bullying. Specifically, we covaried the residuals of the item ‘say something’ with ‘help from adult’. Additionally, residual covariances were recommended for the desire for contact with immigrants, thus the desire to go to the movies was covaried with the desire to sit next to an immigrant peer. This model indicated a slightly but statistically significant improvement on the unconstrained multigroup analysis, $\Delta \chi^2 (2) = 12.26, p = .002$ (see Table 2).

Figure 3a shows the significant effects found in the full mediation model. Namely, discriminatory tendencies were negatively associated with one’s desire for social contact ($p < .001$) which in turn was positively associated with the two latent intervention outcomes ($p < .001$). Peer norms were positively associated with desires for social contact ($p < .001$). Shared immigrant background was also associated with higher levels of contact with immigrants ($p < .001$); however, contact with immigrants was not statistically predictive of the two intervention constructs. The full mediation model also partially supported our mediational hypotheses in the expected directions. As shown in Table 3, statistically significant indirect effects were found for pathways from discriminatory tendencies ($ab = -0.104, p = .027$) and peer norms ($ab = 0.168, p = .009$), to bias-based bullying interventions via the desire for social contact with immigrant peers. This indicates that the effects of discriminatory tendencies and peer norms are mediated by the desire for social contact, and this desire for social contact may be needed to illicit a response to an immigrant being bullied in youth with discriminatory tendencies and inclusive peer norms. Similarly, statistically significant indirect effects were found for pathways from discriminatory tendencies ($ab = -0.139, p = .010$) and peer norms ($ab = 0.224, p = .002$) on the likelihood to intervene in a general bullying incident involving an immigrant-background victim via the desire for social contact with immigrant peers. Counter to expectations, contact with immigrants did not mediate the effects of discriminatory tendencies, peer norms, or shared immigrant background on bullying interventions. Additionally, the model explained 14.6%, 24.2%, 10.9%, 43% of variance in bias-based bullying intervention, generalized bullying intervention, contact with immigrants, and desires for social contact with peers of immigrant-origin, respectively.

### Table 2

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<th>Model</th>
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<th>CFI</th>
<th>SRMR</th>
<th>RMSEA</th>
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<td>0.957</td>
<td>0.056</td>
<td>0.051</td>
<td>(0.035, 0.064)</td>
</tr>
<tr>
<td>Full mediation model (Unconstrained: multigroup comparison Arab victim vs. Latine victim)</td>
<td>459.743</td>
<td>340</td>
<td>0.932</td>
<td>0.073</td>
<td>0.065</td>
<td>(0.049, 0.079)</td>
</tr>
<tr>
<td>Full mediation model (Constrained: multigroup comparison Arab victim vs. Latine victim)</td>
<td>490.396</td>
<td>350</td>
<td>0.921</td>
<td>0.102</td>
<td>0.069</td>
<td>(0.054, 0.083)</td>
</tr>
</tbody>
</table>
Multi-group analysis

To test whether effects differed across immigrant victims of bullying from different ethnic backgrounds, a multigroup analysis was conducted, with the victim’s immigration background (Arab or Latine) as the group variable. Initially, two models were compared, one model in which unstandardized estimates for coefficient parameters in the path analysis were shown in plain text. Standardized paths are shown in bold. *p < .05, **p < .01, ***p < .001
were constrained to be equal and one in which they were unconstrained. Model fit was statistically significantly better for the unconstrained model ($\Delta \chi^2 (10) = 30.653, p < .001$, see Table 2), indicating that coefficient parameters did differ for each victim.

As shown in Figure 3b,c, differing paths emerged for Arab victims compared to Latine victims. While the Arab victim model (Figure 3b), replicated regression effects found in the full model, the Latine victim model (Figure 3c) indicated different pathways to intervention. Notably, unlike with Arab victims, contact with immigrants had an effect on the likelihood to intervene with Latine victims (Bias-based bullying: $p = .002$, Generalized bullying: $p = .017$), and contact with immigrants was more likely when participants were from an immigrant background ($p < .001$). Unlike in the Arab victim model ($p < .001$), the path from peer norms to desires for social contact was not significant for Latine victims ($p = .323$). Additionally, consistent with the full model, statistically significant negative paths were found for both victims going from discriminatory tendencies to desire for social contact (Arab victim: $p = .016$; Latine victim: $p < .001$). Finally, significant positive paths were found from desire for social contact to each type of intervention (Bias-based bullying: $ps < .01$, Generalized bullying: $ps < .01$).

In addition, partially supporting our expectation that more variance would be explained in responses for Latine victims than Arab victims, due to greater exposure to Latine peers, more variance was explained by the Latine victim model for bias-based bullying intervention (Latine victim model: 52.3%; Arab victim model: 14.1%) and for contact with immigrants (Latine victim model: 24.7%; Arab victim model: 10%). Variance explained for generalized bullying intervention (Latine victim model: 32.6%; Arab victim model: 32.6%) and desires for social contact with immigrant peers (Latine victim model: 46.1%; Arab victim model: 47.8%), were comparable across both victims.

## DISCUSSION

Overall, the current study sheds light on the processes relevant when adolescent bystanders consider actively intervening in a bullying incident involving an immigrant-origin peer. Psychological processes that may explain intergroup behaviors are understudied in developmental research (Turner & Cameron, 2016). While more research has focused on the conditions that result in positive intergroup interactions, less work examines models that explain how individuals can be motivated to behave positively. This study addressed a gap in research by considering intergroup experiences and attitudes, such as contact with immigrants and the desire for social contact with immigrant-origin peers as possible drivers for previously established predictors of bystander interventions in intergroup contexts. In fact, findings from the current study indicated that the desire for social contact with an immigrant peer can be an important driver in linking low discriminatory tendencies and inclusive peer norms to adolescents’ intentions to actively intervene on behalf of an immigrant peer, in both bias-based bullying and generalized bullying situations.

While contact with immigrants is associated with more positive bystander responses involving immigrant-origin peers (Abbott & Cameron, 2014; Gönültaş & Mulvey, 2021), theory calls for additionally testing one’s desire for social contact as a possible predictor of bystander responses (Turner & Cameron, 2016). This is because contact alone may not be sufficient: it may be that one needs to have a desire for engaging with an immigrant-origin peer to be motivated to step in on behalf of an immigrant victim of bias-based bullying.

### Table 3

<table>
<thead>
<tr>
<th>Exogenous</th>
<th>Mediator</th>
<th>Endogenous</th>
<th>Indirect Effect</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discrimination</td>
<td>Desires for social contact</td>
<td>Bias-based bullying</td>
<td>$-0.104^{**}$</td>
<td>0.047</td>
<td>$-0.196$ to $-0.012$</td>
</tr>
<tr>
<td>Peer norms</td>
<td>Desires for social contact</td>
<td>Contact with immigrants</td>
<td>0.008</td>
<td>0.012</td>
<td>$-0.015$ to 0.031</td>
</tr>
<tr>
<td>Immigrant</td>
<td>Desires for social contact</td>
<td>Contact with immigrants</td>
<td>0.168*</td>
<td>0.064</td>
<td>0.042 to 0.294</td>
</tr>
<tr>
<td>background</td>
<td>Desires for social contact</td>
<td>Contact with immigrants</td>
<td>0.012</td>
<td>0.013</td>
<td>$-0.014$ to 0.037</td>
</tr>
<tr>
<td>Discrimination</td>
<td>Desires for social contact</td>
<td>General bullying</td>
<td>$-0.139^{*}$</td>
<td>0.054</td>
<td>$-0.244$ to $-0.033$</td>
</tr>
<tr>
<td>Peer norms</td>
<td>Desires for social contact</td>
<td>Contact with immigrants</td>
<td>0.008</td>
<td>0.012</td>
<td>$-0.016$ to 0.031</td>
</tr>
<tr>
<td>Immigrant</td>
<td>Desires for social contact</td>
<td>Contact with immigrants</td>
<td>0.224**</td>
<td>0.071</td>
<td>0.084 to 0.363</td>
</tr>
<tr>
<td>background</td>
<td>Contact with immigrants</td>
<td>Contact with immigrants</td>
<td>0.011</td>
<td>0.013</td>
<td>$-0.014$ to 0.036</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01.
The findings support this need to examine factors other than contact experiences, such as one’s desire for contact, in research involving intergroup relations with minority groups (Turner & Cameron, 2016).

Pathways for bystander intervention

Prior research documents that anti-bullying efforts are often not very effective in the US and indicates that the heterogeneity of US schools may explain the lack of efficacy (Evans et al., 2014). Our findings provide important guidance that suggests anti-bullying efforts could focus on both situational (building inclusive peer norms) and individual (reducing prejudicial or discriminatory tendencies) factors as foundational components of interventions, but also try to promote a desire for social contact which can then motivate students’ intentions to intervene to help victims of bias-based bullying. It will be important for future research to experimentally test such interventions and to longitudinally follow intervention participants in order to document causal pathways. In our sample, however, our cross-sectional findings did suggest that the relationships between individual and situational factors, and intentions to intervene to aid an immigrant victim, were driven by one’s desires for social contact. Unexpectedly, having had contact with immigrants did not help these processes along. Our multi-group analysis, however, suggested that pathways to bystander intervention may differ for immigrant victims of bullying from different ethnic backgrounds.

Differential pathways for immigrant victims of bullying

While the desire for social contact was relevant for the likelihood to intervene on behalf of both Arab and Latine victims of bullying, contact with immigrants was only important for Latine victims. This was demonstrated by an association involving shared immigrant background which indicated that immigrant-origin youth who shared ethnic identity with immigrant victims (92% of the immigrant-origin youth reported Latine heritage) also have more contact with peers from similar immigration backgrounds and this increased experience was associated with higher likelihood to help a Latine victim. It is unclear if shared ethnic identity was driving participants’ responses or whether it was the opportunity for contact that was available. More research is needed to clarify this, perhaps by sampling adolescents of diverse immigrant backgrounds (such as Asian American youth) and asking them about intervening on behalf of Latine victim in regions where there are ample opportunities to engage with Latine peers. Additionally, even though participants were asked about contact with immigrant-origin peers it may be that participants were thinking about ethnic group membership as opposed to a broader immigrant social category when completing the contact measure, because they did complete these items after being introduced to the victim.

Shared-immigrant background, however, was not important for intentions to intervene on behalf of an Arab immigrant peer. This is counter to research and theoretical approaches that emphasize the importance of superordinate identities, such as those based on immigrant background, which highlight similarities among individuals as opposed to more specific identities, such as ethnicity, which may draw attention to differences (Dovidio et al., 2017). One explanation for this lack of association for Arab victims of bullying could be that shared group membership works only when there are opportunities for contact and does not promote a desire or interest per se in interacting with immigrant-origin peers who are not around to interact with. However, when opportunities for direct contact are limited, as they were for this sample with peers of Arab backgrounds, a desire for social contact becomes more salient.

These differing pathways may begin to explain why existing anti-bullying interventions are not as effective in heterogeneous schools. The multi-group analysis suggested that contact with immigrants may not generalize to increased intentions to intervene on behalf of victims from varying immigrant backgrounds (Latine and Arab). Thus, interventions may seek to draw from the research on extended or indirect contact (Aboud & Spears Brown, 2013; Cameron et al., 2011; Pettigrew et al., 2007), to encourage intervention on behalf of victims of bias-based bullying in contexts where there may not be ample opportunities for direct contact. Nevertheless, contact with immigrants was important for victims where opportunities for contact were available (i.e., Latine background). In fact, as expected, the model for the Latine victim resulted in more variance explained in bystander intentions to intervene in response to bias-based bullying (52.3%) compared to the model for the Arab victim (14.1%).

Limitations

Our study should be evaluated in light of some limitations. First, our study evaluated the bystander intervention through hypothetical scenarios. Although previous research has documented the relationship between individuals’ actual responses and their responses in hypothetical scenarios (Mulvey et al., 2018), future studies should examine intergroup factors as possible correlates of bystander responses in actual situations. Second, we evaluated adolescents’ contact with immigrants in terms of contact with immigrants generally (without referencing a specific immigrant group) and by emphasizing the quantity aspects of participants’ intergroup friendship. Thus, future studies might explore contact with immigrants for specific targeted immigrant groups and focus on the quality of the contact in addition to the quantity. Third, the current study examined one form of bullying (i.e., name-calling and teasing) and one set of bystander responses (active responses) but future research can examine similar research questions in different forms of bullying (physical, social exclusion) and
bystanders’ responses (supporting bullies, passive responses). Additionally, the cross-sectional nature of the current research precludes conclusions regarding causality. Future research should examine bystander responses through longitudinal/cross-sequential studies to provide a more comprehensive developmental picture with causality patterns. Additionally, other pathways are plausible; it is possible that contact with outgroups can lead to lower discriminatory tendencies which then result in more positive intergroup behaviors but approaches examining these processes are underdeveloped in the literature (Turner & Cameron, 2016). Meditational models offer valuable insight into breaking cycles of biases, that are difficult to break with contact interventions that overlook how youth can be motivated to take action. The current study offers evidence for the possibility of process variables like the desire for social contact that have not been adequately examined, but have the potential to motivate positive action. We only examined some intergroup-related factors as possible predictors of bystander responses to bias-based bullying of immigrants. However, other possible predictors (e.g., empathy, normative beliefs about aggression, bystander self-efficacy and moral disengagement) of bystander responses may also be important. Lastly, we were underpowered to test indirect effects separately for Latine and Arab victims in our multigroup models. Thus, future research should explore if mediational pathways differ depending on the ethnic background of the immigrant victim.

CONCLUSION

Despite some limitations, the study offers many novel findings. For example, the results documented similar patterns for bias-based and generalized bullying. Although the reasons of bullying were different, the victims were of immigrant background in both stories, indicating that these types of bullying can illicit similar responses when the victim has an immigrant background. We also found that both contact and the desire for contact can function as possible mediators for other known predictors of bullying responses. The desire for contact was particularly important in the absence of opportunities for contact with an immigrant group (e.g., Arab background). In the absence of these opportunities, environments with inclusive peer norms and youth’s positive intergroup attitudes are needed to foster the desire for contact, which in turn can motivate bystander intervention. Thus, the current study highlights new implications for having a desire to engage with immigrant-origin peers in motivating bystander responses to bullying involving an immigrant-origin victim. Promoting desire for contact may be an important target for anti-bullying interventions for ethnically heterogenous schools. Finally, while superordinate categories like immigrant background are helpful in creating shared group membership, the current study provides evidence for different pathways based on the ethnic origin of victim. This adds to growing evidence that assumptions of generalizability do not always hold, and careful consideration of specific social groups is needed. In summary, while adolescents navigate different social groups and make decisions about intervening to help others from different social groups, it is important to take stock of the factors that influence their decisions and motivate them to take action.

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