Race-based Bullying Victimization and Adjustment Difficulties: Racial-Ethnic Differences in the Protective Role of School Equity

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Fu, R., Perepezko, A.L., Bradshaw, C.P. *et al.* Race-based Bullying Victimization and Adjustment Difficulties: Racial-Ethnic Differences in the Protective Role of School Equity. *Int Journal of Bullying Prevention* (2023). https://doi.org/10.1007/s42380-023-00175-9

ACKNOWLEDGEMENTS: The research reported here was supported in part by the Institute of Education Sciences, U.S. Department of Education, through Grant R305H150027 and the National Institute of Justice through Grant 2014-CK-BX-0005 to the University of Virginia. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education, or the National Institute of Justice.

Abstract

Race-based bullying (RBB) victimization is a significant concern among youth and can translate into a range of adjustment problems. As such, additional research is needed on possible protective factors that may buffer these effects among RBB victims. One potential factor is school equity, as it may buffer race-based bullying victims from maladjustment. This study sought to explore the role of school equity as a potential buffer for adjustment difficulties (i.e., internalizing, externalizing, sleep, and substance use problems) among race-based bullying victims and possible racial-ethnic differences in this association. Self-report data were collected from 8,977 middle and high school youth who self-identified as a bullying victim (51.31% were middle schoolers; 47.7% were males), of which 22.6% reported experiencing RBB. Results of multilevel analyses indicated that RBB victims showed higher levels of adjustment difficulties than victims who experienced general, non-RBB victimization. Student perceptions of school equity, at both the individual- and school-level, appeared to buffer the association between RBB and adjustment difficulties. Although a potential factor for all racial-ethnic groups, the function of individual-level equity was more pronounced among some ethnic groups (i.e., Asian and Latinx) than in others (i.e., Black), and the potential influence of school-level equity was stronger among Black victims than among others. Taken together, the findings highlight the importance of promoting school equity to buffer the potential influence of RBB victimization on adjustment difficulties, which was particularly salient among racial-ethnic minoritized subgroups. Implications for the Olweus Bullying Prevention Program and other prevention efforts are discussed.

Keywords: race-based bullying victimization, race-ethnicity, school equity, adjustment difficulties

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A large proportion of youth are involved with bullying at some point during their childhood and many of these youth in turn experience adjustment problems (see Schoeler et al., 2018 for review). Peer victimization often focuses on individual characteristics, including one's group membership or perceived identity based on gender, race-ethnicity, and/or sexual orientation (Mulvey et al., 2018). These social identity-based victimization incidents are motivated by distinct, bias-related factors and perpetrated by a member of a social group with majority status toward a member of a minoritized group (Russell et al., 2012). One type of peer victimization experienced by minoritized students is bullying motivated by racial and ethnic biases, termed *race-based bullying* (e.g., Baams et al., 2017; RBB hereafter). Approximately 16~20% of youth in the U.S. reported being a target of RBB, many of whom experience elevated risk for poor physical and mental health (Mendez et al., 2016; Rosenthal et al., 2015).

The unique experience of RBB of warrants further exploration, as it has received less attention in the literature compared to other forms of bullying. Given the prevalence and potential negative impact of RBB, there is a significant need to identify potential factors that may prevent or buffer its detrimental effects (Earnshaw et al., 2014). Studies have shown the positive function of school equity, a critical aspect of school climate (Lea et al., 2021), in reducing perceived vulnerability to racial discrimination and in promoting school engagement (Baysu et al., 2016; Debnam et al., 2014) and could, therefore, protect RBB victims from maladjustment and these effects could vary across racial-ethnic groups.

Given these literature gaps, the present study aimed to explore the unique contribution of RBB victimization to youth adjustment and the role of school equity as a potential buffer for

adjustment difficulties among RBB victims and possible racial-ethnic differences in this association. Exploring these associations could inform school bullying prevention efforts specific to RBB victims during adolescence. For example, since Dan Olweus' 1970s seminal work on bullying, there have been concerted efforts to identify and address individual and contextual factors that contribute to peer bullying and programming designed by Olweus (Olweus et al., 2019). Previous implementations of the Olweus Bullying Prevention Program (OBPP) have shown reductions in youth bullying behaviors as well as improvements in school climate (Limber, 2018). However, evaluations of the OBPP in the U.S. show significant program effects for victimization among White youth, but less consistent effects for their minoritized peers (Limber et al., 2018; Olweus et al., 2019). This illustrates a need for more research specifically on RBB experiences and especially on factors that may lessen its influence and could inform universal bullying prevention programming (e.g., Olweus et al, 2019).

RBB Victimization and Its Influence

RBB victimization has received less attention in the literature than other forms of bullying, despite its pronounced prevalence during adolescence (e.g., Mendez et al., 2016). In the extant literature, RBB is often lumped with other bias-based victimization experiences (e.g., Bucchianeri et al., 2016; Price et al., 2019) or not examined (e.g., studies of homophobic or disability-based bullying) (De Pedro et al., 2019; Rose et al., 2012). Moreover, RBB is of heightened concern due to the increases in harassment and bullying towards racial-ethnic minoritized (minoritized hereafter) youth in parallel to an increasingly toxic sociopolitical climate around race and ethnicity issues (Huang & Cornell, 2019). Given this, it is crucial to examine the unique association of RBB victimization and youth maladjustment.

Indeed, one study found that controlling for non-RBB victimization, RBB was associated with depressive symptoms in a sample of Latinx students (Cardoso et al., 2018). In another study, engagement in violent behaviors was uniquely predicted by RBB victimization when controlling for non-RBB victimization in a sample of immigrant middle schoolers in Sweden (Bayram Özdemir et al., 2019). However, neither study compared the association between RBB victimization and adjustment with that of non-RBB victimization and adjustment. One study that did compare the association in a sample of U.S. youth who self-identified as a bullying victim, reported that RBB victimization was more strongly associated with victims' perceived emotional pain (Mendez et al., 2016). As such, additional work is needed more specifically on RBB to better understand its unique role in racially and ethnically diverse samples across a multitude of youth outcomes such as externalizing problems, substance use, and sleep problems that contribute to the comorbidities of adjustment difficulties (Quach et al., 2018).

RBB Victimization and Adjustment Difficulties: The Moderating Role of Student Perceptions of School Equity

School equity is typically defined as the extent to which all students, regardless of their racial-ethnic, gender, socioeconomic status, and other backgrounds, are treated fairly, ensuring that each student receives what they need for school success (Debnam et al., 2014; Golden et al., 2018). Students' higher perceptions of school equity have implications for their stronger sense of connection to and engagement in school (Debnam et al., 2014) and fewer school-related and socioemotional difficulties (Byrd, 2017). Conceptually, school equity is also largely equivalent to school procedural justice, which is defined as the extent to which schools consistently and fairly implement rules and discipline (e.g., Dunning-Lozano et al., 2019; Peguero & Bracy, 2015). School equity is also regarded as a core construct underlying authoritative school climate

that contributes to reduced delinquency and out-of-school suspensions (Dunning-Lozano et al., 2019; Huang & Cornell, 2018). This contribution is particularly meaningful for minoritized and immigrant youth who are disproportionately subject to school discipline (Mendez et al., 2016; Peguero & Bracy, 2015). This raises the importance of examining whether school equity also mitigates the impact of other negative, bias-based school experiences, such as RBB, on youth adjustment.

Further, school equity sets the foundation for students' behavioral norms with respect to interactions involving students of different backgrounds and social identities (Rivas-Drake et al., 2019). In an equitable school context, peer bystanders are less concerned about being retaliated against, and thus more motivated to defend RBB victims (Mulvey et al, 2019). Moreover, school norms that endorse equity among all students may strengthen RBB victims' feelings of trust and connection to school staff and thus prompt them to seek support from these adults. This argument is aligned with a prior study showing that student perceptions of school equity were protective against negative outcomes for targets who experienced non-bias-based and multiple types of bias-based victimization but not for those who experienced a single type of bias-based bullying (Mulvey et al., 2018). However, because specificity in the types of bias-based bullying was not the focus of that study, it is unclear if the reported protective effect of school equity would hold for RBB victims. Therefore, more studies are needed to investigate the role of school equity in moderating the associations between RBB victimization and youth outcomes, which would extend our understanding of the protective nature of school equity.

School climate is largely examined at the individual level yet rising research has suggested the importance of conceptualizing it as an aggregation of individual perceptions as well (e.g., Wang et al., 2014). While the former represents one's subjective reflections of the

school environment and varies among individuals, the latter reflects the shared, collective perceptions at a higher, school level representing a distinctive social process (Snijders & Bosker, 2012). Both perspectives are important and it is thus critical to consider the impact of school climate at both individual and school levels on youth simultaneously (Konishi et al., 2017; Wang et al., 2014). Moreover, researchers have called for more studies on how perceptions of school climate at the individual and school levels operate in tandem. This would help us better understand how the interaction between the two levels of school climate impacts youth adjustment, particularly among RBB victims.

Racial-Ethnic Differences in the Moderating Role of Student Perceptions of School Equity

As the school-age population in the U.S. is becoming more racially-ethnically diverse, research has documented racial-ethnic disparities in educational and mental health outcomes associated with peer victimization experiences (e.g., Huang & Vidourek, 2019; Peguero & Hong, 2020). Minoritized youth appear to be more susceptible to the detrimental consequences of bullying, especially when navigating race-based stereotypes and biases (e.g., Williams & Peguero, 2013), indicating that youth racialization is associated with their racial-ethnic group's social status. Additionally, emerging research has shown racial-ethnic differences in the impact of a positive school climate (including school equity as a dimension) on academic achievement and school suspension (Bottiani et al., 2017; Jones et al., 2021). Nevertheless, because the racialized experiences of these minoritized students (e.g., RBB) were not a focus of these studies, potential racial-ethnic differences in the impact of school equity on the adjustment of bias-based bullying victims require further examination. This line of research adds to the literature by addressing the intersections of race-ethnicity and school context for victimized youth.

School Contextual Factors and Adjustment Difficulties Among Race-Bullying Victims

Research has shown that school poverty level and student out-of-school suspension rates are critical indicators of school disorder; specifically, out-of-school suspension rates tend to reveal school-wide, disruptive behavior problems which likely lead to students' negative perceptions of the school disciplinary environment (Pas et al., 2019) and internalizing and substance use problems (reference withheld, 2021). The percentage of students receiving free and reduced-price lunch is considered a proxy for school poverty and may increase youth's risk for being victimized and negative perceptions of school climate (e.g., Larson et al., 2019). Given the prior findings, examining the associations between percentages of students receiving free meals and student suspension rates and adjustment difficulties among RBB victims would provide a closer look at how the contextual aspects of school disorder may contribute to the harmful effects of RBB victimization.

Another contextual factor, school ethnic diversity, is particularly relevant to racially and ethnically diverse student populations. This indicator of student race-ethnicity numerical balance assesses both the number of different ethnic groups and their relative sizes in the school. A growing number of studies have reported positive associations between greater school ethnic diversity and student perceptions of positive school climate and fewer victimization experiences, suggesting that this contextual factor may attenuate youth's normative challenges and strengthen their mental health and school adaptation (e.g., Graham, 2018; Juvonen & Graham, 2014). Noticeably, there is a gap in understanding, for RBB victims, the contributions of school ethnic diversity to behavioral problems and to the associations between student perceptions of equity and behavioral problems. Such information may contribute to a more nuanced understanding of whether school ethnic diversity moderates the protective role of school equity against maladjustment outcomes among RBB victims. In other words, filling this gap would help us

better understand whether the protective effects of school equity for RBB victims vary by the levels of school ethnic diversity.

Current Study

The present study aimed to address several of the abovementioned gaps in the literature by first examining the unique associations between RBB victimization and youth's adjustment difficulties, above and beyond that of general, non-RBB victimization (Aim 1). Given the literature, we hypothesized that RBB victimization was associated with youth maladjustment more strongly than non-RBB victimization. A second aim was to investigate the contribution of student perceptions of school equity, at both the individual-and school-level, to the associations between RBB victimization and youth's adjustment difficulties (Aim 2). It was hypothesized that student perceptions of school equity at both levels would buffer the associations between RBB victimization and problems. Moreover, school-level equity could strengthen the contributions of individual-level equity to youth problems.

Aim 3 was to explore whether the moderating role of individual-and school-level equity perceptions varied across racial-ethnic groups. To our knowledge, this is the first study to explore the role of school equity in buffering adjustment difficulties among RBB victims, which contrasted different racial-ethnic groups in the U.S. We hypothesized that the protective role of student perceptions of school equity would differ by the racial-ethnic backgrounds of RBB victims with possibly, stronger contributions among minoritized groups because of their heightened awareness of racialized experiences (e.g., Benner et al., 2015). The present study could provide insights into how to utilize our knowledge of school norms on equity to bolster the effectiveness of school-based bullying prevention programs that address RBB, from a strength-based approach (Hong et al., 2021). In addition to the three main aims, this study also examined

the influence of school-level contextual factors, including the percentage of students receiving free and reduced meals, the percentage of out-of-school suspensions, and school ethnic diversity, on victimized youth's adjustment difficulties. Given the increasing ethnic diversity of U.S. schools, this study also examined the contributions of school ethnic diversity to the associations between RBB victimization, student perceptions of school equity, and adjustment difficulties.

Method

Participants

Data come from a subsample of 8,977 self-reported victimized youth in 113 middle and high schools, which averages to approximately 21 victimized students (Mean percentage =14.89%, *SD* = 4.04) per school. This subsample of victimized youth was drawn from the larger sample of 69,244 youth who were participating in a statewide survey study of school climate, the Maryland Safe and Supportive Schools (MDS3) Initiative. In this sample of victimized youth, 47.70% of them self-identified as male and 50.41% self-identified as White, followed by Black (23.10%), Bi-/Multi-racial (8.46%), Latinx (9.21%), Asian (8.82%), and 22.6% (*N* = 2,029) experienced RBB. Descriptive characteristics of the school-level characteristics can also be seen in Table 1.

Procedure

Data for this project were collected through a Maryland state-wide school climate project in partnership with Johns Hopkins University which focused on the use of a self-report school climate measure called MDS3 (see Bradshaw et al., 2014 for details). School districts across the state of Maryland were approached for participation in the MDS3 Project. Participation was voluntary for both schools and individual youth, and a waiver of active consent process for parents and youth assent was used. All of the middle and high schools approached agreed to

participate; students not present in school on the day of survey administration were not provided an additional opportunity to participate, resulting in a response rate of 76%, including completions and partials (i.e., RR2 formula; American Association for Public Opinion Research, 2016). The self-report MDS3 School Climate Survey was administered online and responses were anonymous. The non-identifiable data used in the current study were obtained and approved for analysis by the Institutional Review Board at the researchers' institutions.

Measures

Demographics

Youth responded to a series of demographic questions, including self-reported sex (0 = *female*, 1 = *male*), grade (high school is the reference group), and race-ethnicity which was coded with the largest proportion of the sample as the reference group (i.e., White) to the other racial/ethnic groups: Black, Latinx, Asian, and Bi-/Multi-racial.

Bullying and Victimization Status

Youth read a definition of bullying: "A person is bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons. Bullying often occurs in situations where there is a power or status difference. Bullying includes actions like threatening, teasing, name-calling, ignoring, rumor spreading, sending hurtful emails and text messages, and leaving someone out on purpose" (Gladden et al., 2014). Youth were then asked, "During the past 30 days: how often have you been bullied" and "During the past 30 days: how often have you bullied" using a 5-point scale (*several times a week, once a week, 2-3 times during the month, 1 time during the month, and not at all*). These items were based on the work of Olweus and were dichotomized in order to categorize youth with a victim or bully status, using a threshold of *2-3 times or more during the month* = 1 to align with the uniform definition

that the behavior occurred multiple times or is very likely to be repeated (Gladden et al., 2014), this resulted in 28.14% of the victims reporting that they bullied others 2-3 times or more during the month. Given children who bully and are victims seem to have increased maladaptive outcomes (e.g., Holt et al., 2015; Hysing et al., 2019), perpetration status was included in the model to control for this possibility.

After youth were asked if they were bullied with the above question, they were asked 'was it related to your race/ethnicity' and their responses were categorized as *no* (0) and *yes* (1) to indicate their RBB victimization status.

Externalizing Problems

Youth responded to a 4-item measure of externalizing symptoms based on Buss and Perry's (1992) *Aggression Scale* (e.g., "I have threatened to hit or hurt someone", "I have trouble controlling my temper"; Cronbach's alpha = .81) using a 4-point Likert scale from *never* (1) to *almost always* (4), with a higher score indicating greater externalizing symptoms.

Internalizing Problems

Youth responded to a 5-item measure of internalizing symptoms based on the Youth Self-Report (Achenbach & Rescorla, 2001) (e.g., "feel depressed", "feel nervous or anxious", "worried something bad is going to happen"; Cronbach's alpha = .85) using a 4-point Likert scale from *never* (1) to *almost always* (4), with a higher score showing more internalizing symptoms.

Substance Use

Substance use was assessed utilizing 4 questions, asking "During the past 30 days (month), how often did you 1) have at least one drink of alcohol; 2) smoke cigarettes; 3) use marijuana; and 4) prescription drugs or other medications for non-medical reasons" (Cronbach's

alpha in the current study = .92). Responses choices were provided on a 7-point Likert scale, with 0 (*0-days*), 1 (*1 or 2 days*), 2 (*3–5 days*), 3 (*6–9 days*), 4 (*10–19 days*), 5 (*20–29 days*) and 6 (*everyday*). The frequency measure was based on the composite score of the four substance use items with higher scores indicating more substance use. These items were derived from the Youth Risk Behavior Surveillance System (Centers for Disease Control and Prevention, 2011).

Sleep Problems

Sleep problems were assessed using two items "*During the past 30 days how often did you (1) Have trouble falling asleep, (2) Feel you did not get enough sleep or rest."* (The inter-item correlation was .50, $p < .001$). With responses ranging from 1= *Never* to 4= *Almost always*. These two items were averaged with higher scores indicating more sleep troubles (Centers for Disease Control and Prevention, 1999; National Center for Health Statistics, 2000).

Student Report of School Equity

Adapted from the *School Development School Climate Survey* (Haynes et al., 2001), four items were used to assess student perceptions of school equity. Three items assessed students' perception of fair treatment by race, sex, and socio-economic status (e.g., at this school, students of all races [whether boys or girls, whether parents are rich or poor] are treated fairly; Haynes et al., 2001). One item assessed the cultural representativeness of educational materials (e.g., school provides instructional materials that reflect my culture, ethnicity, and identity; Hanson & Kim, 2007). Response options were on a 4-point scale from 1 (*strongly disagree*) to 4 (*strongly agree*) and item scores were averaged with higher scores indicating student perceptions of greater school equity (individual perceptions of school equity hereafter). The measure was used and shown to be reliable and valid in previous studies (Bradshaw et al., 2014; Debnam et al., 2021). The internal reliability (Cronbach's α) was .82 in the current study. Student self-report school

equity was further aggregated up to represent a school-level average (aggregated school-level school equity hereafter), indicating students' collective perceptions of the schoolwide norms on equity.

School-Level Demographic Variables

Student out-of-school suspension rate (i.e., the total number of suspension incidents divided by the total number of students enrolled at the school) and the percentage of students receiving free and reduced-price lunch were included in this study. These variables were obtained from the Maryland State Department of Education for the 2015 school year.

School Ethnic Diversity

This was computed using Simpson's index of diversity, which accounts for both the number of different racial-ethnic groups and the relative size of each group. The index is calculated as a probability from 0 to 1, with higher scores showing greater school ethnic diversity and this is a recommended method for determining the diversity of social contexts (Juvonen et al., 2018).

Analytical Strategy

Regarding Aim 1, multilevel modeling was used to account for students being nested in schools (model 1). All maladjustment outcomes were included to account for comorbidities. At the student/individual level (level-1), predictors included youth self-identified sex, grade level, race-ethnicity (i.e., Black, Latinx, Asian, and Bi-/Multi-racial, treating the majority race/ethnic group, White as the reference group), and self-reported bullying perpetration, and RBB victimization status. At the school level (level-2), school characteristics were entered in the model including the percentage of students receiving free and reduced-price lunch, school ethnic diversity, and out-of-school suspension rate. For Aim 2, to examine the moderating role of

individual perceptions of school equity, its interaction with RBB victimization was entered at level 1 in addition to the predictors and all four maladjustment outcomes used in Aim 1 (model 2). In addition, to examine whether the associations between RBB victimization, individual perceptions of school equity and adjustment difficulties varied as a function of aggregated school-level school equity variable, the respective regression coefficients of RBB victimization and individual perceptions of school equity on the four adjustment difficulties were regressed on aggregated school-level equity at level 2 (i.e., cross-level interactions) (model 3). The same analytical strategy was applied to examine whether the associations between RBB victimization, aggregated school-level school equity, and adjustment difficulties vary as a function of school ethnic diversity (model 4). The analytic sample included 8,977 youth who self-identified as a bullying victim after 179 youth with missing on all variables were excluded. Descriptive analysis found very little missing data (<7% of each of the included variables) at the individual level and no missing data at the school level. Full-information maximum likelihood (FIML) estimation was used to handle the missing data for youth.

For Aim 3, a multilevel model was applied to RBB victims (22.6%; n = 2,029), and the main predictors at level 1 included youth race-ethnicity, individual perceptions of school equity and its interaction with youth race-ethnicity. Other level-1 covariates were youth sex, grade level, and bullying perpetration. At level 2, the same school characteristics were included in this model as was done for Aim 2 (model 5). In addition, cross-level interactions of youth race-ethnicity and aggregated school-level school equity and of individual perceptions of and aggregated school-level school equity on adjustment difficulties were modeled to examine whether aggregated school-level school equity moderated racial-ethnic differences in adjustment difficulties and the associations between individual perceptions of school equity and the

problems, among RBB youth (model 6). The Mplus 8.3 software program was used for data analysis.

Results

Descriptive Data

Among victimized youth, independent-sample t-tests were conducted to compare RBB victims and non-RBB victims on adjustment variables and the results showed that RBB victims showed more externalizing, internalizing, substance use, and sleep problems, t = 13.86, 11.70 8.23, and 20.46, ps <.001, respectively. Chi-square tests were performed to compare RBB and non-RBB victims on grade level, sex, race-ethnicity (White vs minoritized), and bullying perpetration status. Results showed that the proportion of RBB victims differed by sex and race-ethnicity (treating minoritized students as the reference), $\underline{X}^2(1)$ = 88.39, 320.24, and 177.45, ps < .001. Further explorations among RBB victims showed that there were more boys (56%), minoritized youth (65.4%), and fewer self-identified bullies (38.8%). The proportion of RBB victims did not differ by grade level, $X^2(1)$ = .98, p > .05.

The Associations Between RBB Victimization and Adjustment Difficulties

For Aim 1, multilevel modeling was used to examine the associations between RBB victimization and adjustment difficulties (model 1). As shown in Table 2, RBB victimization was positively associated with all indices of adjustment difficulties (i.e., externalizing and internalizing symptoms, sleep problems, and substance use), controlling for youth demographics and their bullying perpetration, suggesting that RBB showed higher levels of adjustment difficulties than victims who experienced non-RBB victimization. Victimized youth in schools with higher school ethnic diversity exhibited less externalizing, sleep problems, and substance use; victims in schools with a higher suspension rate displayed more internalizing problems yet

fewer sleep problems; victims in schools with a higher percentage of students receiving free and reduced-price lunch exhibited more externalizing and sleep problems.

Moderating Effects of Individual Perceptions of and Aggregated School-Level School Equity

For Aim 2 (model 2) first examined the moderating role of individual perceptions of school equity in the association between RBB victimization and adjustment difficulties (model 2). Results showed significant interactions between RBB victimization and individual perceptions of school equity in predicting all four indices of adjustment difficulties (see the two-way interactions at level 1 in Table 3). To explore the nature of the interactions, the simple slope effects were examined on RBB victimization at low and high values (1 *SD* below and 1 *SD* above the mean) of individual perceptions of school equity, as described by Aiken and West (1991). The results indicated that when youth reported low and high levels of individual perceptions of school equity, RBB victimization was positively associated with all four indices of problems, yet the magnitude of the associations was significantly stronger when individual perceptions of school equity were high in comparison to when individual perceptions of school equity were low (ΔB = .09, .08, .55, and .06, *SE* = .04, .04, .08, and .03, t = 2.35, 2.00, 6.55, and 1.98, $p < .05$, .05, .001, and .05, for externalizing and internalizing problems, substance use, and sleep problems, respectively).

Then, the moderating role of aggregated school-level school equity in the association between RBB victimization and adjustment difficulties was examined (model 3). There were significant cross-level interactions of aggregated school-level school equity and RBB victimization in predicting internalizing and sleep problems (see the cross-level interaction of RBB victimization*Agg. equity in Table 3). The simple slope effects of RBB victimization on

internalizing and sleep problems were probed at low and high values (1 *SD* below and 1 *SD* above the mean) of aggregated school-level school equity. Results showed that RBB victimization was positively associated with internalizing and sleep problems in schools with both low and high aggregated school-level school equity, yet the magnitude of this association was stronger in schools with low aggregated school-level school equity in comparison to in schools with high aggregated school-level school equity, ΔB = .33 and .14, *SE* = .10 and .07, *t* = 2.68 and 2.00, $p < .01$ and $< .05$. Similarly, there were also significant cross-level interactions of individual perceptions of and aggregated school-level school equity in predicting externalizing and internalizing problems (see the cross-level interaction of Ind. equity *Agg. equity in Table 3). Simple slope results indicated that for victimized youth who were in schools with both low and high aggregated school-level school equity, individual perceptions of school equity were negatively associated with externalizing and internalizing problems, yet the magnitude of this negative association (absolute value) was stronger in schools with high aggregated school-level school equity than in schools with low aggregated school-level school equity, ΔB = .06 and .11, *SE* = .03 and .02, *t* = 1.99 and 4.78, $p < .05$ and $< .001$. The associations between other individual-level covariates and adjustment difficulties were similar to the descriptive results above.

A significant cross-level interaction between school-level ethnic diversity and RBB victimization on substance use (model 4) showed that the positive association between RBB victimization and substance abuse varied by the level of school ethnic diversity (see the two cross-level interactions concerning school ethnic diversity in Table 3). Further probing results revealed that RBB victimization was positively associated with substance abuse at both low and high levels of school ethnic diversity yet the magnitude of this association was significantly

smaller in schools with a high level of ethnic diversity relative to in schools with a low level of ethnic diversity, ΔB = -.31, SE = .14, t = -2.18, $p < .05$. The cross-level interactions on externalizing, internalizing, and sleep problems were nonsignificant, suggesting that the positive associations between RBB victimization and these problems did not vary as a function of school ethnic diversity. The cross-level interactions between school ethnic diversity and individual perceptions of school equity were nonsignificant in predicting adjustment difficulties, suggesting that the negative associations between individual perceptions of school equity and adjustment difficulties did not differ by the level of school ethnic diversity.

Racial-Ethnic Differences in the Moderating Role of Individual Perceptions of and Aggregated School-Level School Equity

Aim 3 was to examine possible racial-ethnic differences in the moderating role of individual perceptions of school equity (model 5) and of aggregated school-level school equity (model 6) by utilizing a multilevel model among RBB victims. As presented in Table 4, among youth who experienced RBB victimization, the main effect of individual perceptions of school equity was significantly correlated with the four measures of adjustment difficulties. In addition, there were significant interactions between individual perceptions of school equity and Asian group membership on RBB victims' externalizing and sleep problems (see the two-way interactions at level 1 in Table 4). Simple slope tests indicated that individual perceptions of school equity were positively and negatively associated with externalizing and sleep problems in both Asian and White RBB victims yet the magnitude of the associations (absolute value) were stronger the former, ΔB = .16 and .20, SE = .08 and .07, Δt = 2.09 and 2.87, $p < .05$ and $< .01$. Similarly, there was a significant interaction of individual perceptions of school equity and Latinx group membership on RBB victims' sleep problems and the simple slope test suggests

that the negative association between individual perceptions of school equity and sleep problems was significant in both Latinx and White RBB victims yet the magnitude of this association (absolute value) was stronger in Latinx RBB victims than in their White counterparts, $\Delta B = .18$, $SE = .09$, $\Delta t = 2.08$, $p < .05$. The magnitudes of these associations were not significantly different between victimized Black, Bi-/Multi-racial, and White youth. Regarding internalizing problems, there was a significant interaction between individual-level equity and Black group membership. Simple slope results showed that the significant association between individual perceptions of school equity and internalizing problems was weaker in Black, RBB victims than in victimized White youth, $\Delta B = -.13$, $SE = .06$, $\Delta t = -1.99$, $p < .05$. The magnitudes of the associations were not significantly different between victimized Asian, Latinx, Bi-or Multi-racial, and White youth. On the other hand, there were no significant interactions between individual perceptions of school equity and youth ethnicity in predicting substance use, suggesting that the negative association between individual perceptions of school equity and substance use did not differ across youth racial-ethnicity groups.

Among RBB victims, there was a significant cross-level interaction of aggregated school-level school equity and Black group membership (model 6) in predicting sleep problems (see the cross-level interactions in Table 4). The simple slope result showed that the difference between Black and White RBB victims on sleep problems was significantly larger in schools with high levels of aggregated school-level school equity, $\Delta B = .13$, $SE = .06$, $t = 2.04$, $p < .05$. There were no other significant cross-level interactions between aggregated school-level school equity and youth ethnicity group membership in predicting other adjustment difficulties.

Finally, RBB victims in schools with higher school ethnic diversity reported fewer externalizing problems and more sleep problems; in schools with a higher suspension rate and

higher percentages of students receiving free and reduced-price lunch, RBB victims tend to show more substance use.

Discussion

Emerging literature has indicated that bias-based victimization is associated with victimized youth's school and psychological adjustment (e.g., Mulvey et al., 2018; Russell et al., 2012), yet one of its most prevalent forms, RBB victimization and its distinctive influence on victims is not well understood. Furthermore, possible protective factors, particularly in the school context, that buffer some of the harm of RBB victimization are understudied. This study was among the first to compare the implications of RBB victimization and general, non-RBB victimization for youth behavioral problems and revealed the unique harm of RBB victimization on youth adjustment. It also provided supporting evidence that students' own perceptions of equity and the school-level collective perception of equity may function to lessen the harm of RBB victimization as protective factors. The current study sought to examine the unique associations between RBB victimization and youth's adjustment difficulties, the role of students' own perceptions and school-level of equity in moderating the associations, and possible racial-ethnic differences in this moderating role of school equity.

The Associations Between RBB Victimization and Youth Adjustment Difficulties

Consistent with the hypothesis for Aim 1, results revealed that RBB victims showed more adjustment difficulties than victims who experienced non-RBB. This finding is consistent with prior research exploring the influence of RBB, and more broadly, bias-based bullying (e.g., Earnshaw et al., 2014; Mulvey et al., 2018; Rosenthal et al., 2013). Yet it further expands upon the existing literature by showing that RBB victims were more susceptible to externalizing, internalizing, and sleep problems and substance abuse than general bullying victims (Cardoso et

al., 2018; Mendez et al., 2016). As this finding drew attention to the unique severity and scope of the negative associations with RBB, it calls for school bullying interventions to pay special attention to the underlying motive of peer bullying. The effectiveness of school-based bullying prevention programs in reducing victimization may be compromised when failing to account for youth's bullying experiences uniquely related to their racial and ethnic identities (Earnshaw et al., 2014; Mulvey et al., 2018). Understanding the influence of RBB victimization may inform how OBPP can be more individually tailored, particularly in racially and ethnically diverse communities (Olweus et al, 2019; Sullivan et al., 2021).

The Protective Role of Student Perceptions of Equity

Results revealed that RBB victims showed fewer adjustment difficulties with greater, individual-level perceptions of equity among students, suggesting that students' perception of equity may serve as a protective factor against maladjustment associated with RBB victimization. Similarly, RBB victims exhibited fewer internalizing and sleep problems in schools with high levels of equity indicating school-level equity as a protective factor for RBB victims. These results were in line with our hypotheses for Aim 2 and added to previously established connections between students' equity perceptions and improved school connectedness and engagement, and better emotional adjustment (e.g., Byrd, 2017; Debnam et al., 2014). In addition, the protective role of school equity against problems among RBB victims is aligned with the literature on school disciplinary structure in Authoritative School Climate Theory (Huang & Cornell, 2018). That is, fair and equitable school rules offer protective benefits in the aftermath of RBB. Perhaps in such a school environment, RBB victims may feel a strong sense of security and trust in school staff properly holding bullies accountable for engaging in harmful discriminatory acts, which may in turn lead to fewer adjustment problems. Thus, RBB

victims may be more likely to seek help from teachers and other school staff who have been evidenced to be a key component in curbing school bullying in general (Waasdorp et al., 2021). Moreover, prior research has highlighted the significance of school procedural justice in mitigating the impact of disciplinary disparities on minoritized youth (e.g., Dunning-Lozano et al., 2019). Our findings add to this line of research by suggesting a similar, protective function of equitable treatment in all aspects in the school that goes beyond fair school discipline.

Additionally, our findings suggest that positive school-level equity (referred to above as aggregated school-level school equity) may help buffer some of the harm of RBB. Greater levels of school-level equity reflect the prevailing, positive perceptions of schoolwide norms in the school (Benner et al., 2015; Vitoroulis & Georgiades, 2017). When the school norm is perceived to support equity, fairness, and inclusion, bystander peers may be more likely to intervene on behalf of and defend victims when RBB occurs (Mulvey et al., 2019). Victims may thus feel less frustration, anger, and distress, which is less likely to result in externalizing problems if these negative emotions are directed toward others, and internalizing problems if they are directed toward the self (Chen & Liu, 2016). Taken together, the present findings illustrate the importance of improving school equity given its benefits being particularly meaningful for minoritized youth who are subject to many types of racial mistreatment in school, including the disproportionate use of discipline and RBB (e.g., Mendez et al., 2016; Peguero & Bracy, 2015). Also, this study lends support to the OBPP's emphasis on the positive and active role of school context, such as establishing and sustaining a just and fair learning environment, as a key component that has been associated with the greatest effect sizes (Gaffney et al., 2021; Nickerson & Ostrov, 2021).

Racial-Ethnic Differences in the Protective Role of School Equity

As hypothesized, our findings also revealed racial-ethnic differences in the protective function of individual- and school-level perceptions of equity in RBB victims. This interplay of school equity and racial-ethnic membership among the victims reflects the person-process-context concept from Bronfenbrenner's ecological theory (Bronfenbrenner & Morris, 1998) in that youth from racial-ethnic groups that have traditionally been vulnerable to stereotypes and differential treatment in school, namely RBB, are likely to be differentially impacted by their perceptions of school equity.

Specifically, the strength of individual-level equity in protecting against adjustment difficulties appears to be weaker in victimized Black youth than in other groups. This result extends prior finding that Black youth reported their schools to be less equitable than White youth (e.g., Bottiani et al., 2017; Debnam et al., 2014) by revealing that adaptive meaning of individual perceptions of school equity in addressing the influence of RBB was weaker in this population. This could be due to a variety of factors, including Black youth being more aware of and sensitive to societal stereotypes attached to their racial-ethnic group (Gray et al., 2020). Such awareness and sensitivity may activate the influence of stereotype vulnerability, "the tendency to expect, perceive and be influenced by negative stereotypes about one's social category" (see Aronson & Inzlicht, 2005, p. 829), which has been shown to impair Black youth's academic-related knowledge and efficacy. Given this possibility, when a target of RBB, Black youth's individual-level perceptions of equity were not as protective as it was for victims in other groups. This could also be attributed to systemic barriers which serve as an overarching reinforcement of inequalities in multiple domains (Henderson et al., 2019). Perhaps, systemic issues may perpetuate and turn the RBB victimization experiences among Black victims into racial trauma (e.g., Tynes et al., 2019), which cannot be easily compensated for by promoting individual

perceptions of school equity. However, school-level perceptions of equity were a more pronounced protective factor for Black youth than for other groups. Although promoting how school equity is perceived individually is important, it might be even more important to shift the schoolwide norms on equity, which shows particular promise in buffering some of the harm of RBB among Black youth.

The Influence of School-level Contextual Characteristics

It was found that when RBB victims were in schools with greater levels of student suspension and poverty, they tended to exhibit more substance use. This finding substantiates prior research that suggested the impact of school-level indicators of disorder on youth's maladjustment in academic, social, and psychological domains (e.g., Booth & Shaw, 2020; Pas et al., 2019). It further drew attention to the specific significance of these structural aspects of a school in shaping RBB victims' involvement in substance abuse. When youth are in disadvantageous, disordered school contexts, they may lack social support in coping with bullying experiences motivated by racial and ethnic biases and thus turn to substances for "self-mediation". Additional research is needed to examine these associations in greater depth.

Concerning the potential role of school ethnic diversity, results suggested that RBB victimization was negatively associated with substance abuse, and this association was stronger in more ethnically diverse schools. In other words, the unique association between RBB victimization and youth substance use was weaker as school ethnic diversity increased, suggesting increased diversity as a protective factor. This echoes the literature that school ethnic diversity buffers many of the normative challenges of adolescence including mental health difficulties associated with peer victimization (see Graham, 2018 for an overview). In ethnically diverse schools, youth who were victimized because of their race-ethnicity may get more peer

support from ingroup members to positively cope with bullying incidents and were thus less likely to resort to substances to "feel better".

Among RBB victims, those in ethnically more diverse schools reported fewer externalizing problems yet more sleep problems. The former finding is consistent with previous findings focused on non-bias-based bullying victims (e.g., Juvonen & Graham, 2014), showing that school ethnic diversity creates a safe climate where aggression and other externalizing problems are not condoned (e.g., Juvonen & Graham, 2014). The current study adds to this literature with a unique focus on RBB. Interestingly, the latter finding appears to be inconsistent with the literature in support of the positive implications of school ethnic diversity for youth. Perhaps, the numerical balance of power across ethnic groups alone may not be sufficient in lowering sleep problems in RBB victims. Future studies are warranted to examine possible mechanisms underlying the positive association between school ethnic diversity and sleep problems.

The current findings are also applicable in a global context where attention to issues of equity, diversity, and inclusion in schools is similarly prevalent (Schachner, 2019). Specifically, in many European countries where there are influxes of immigrants, students' racial and ethnic diversity is increasing and promoting the integration of immigrant youth has become a priority yet challenge for European schools (e.g., Bayram Özdemir et al., 2019; Bayram Özdemir & Özdemir, 2020; Caravita et al., 2021). Research in Sweden and Italy, respectively, has shown that immigrant youth are susceptible to RBB and its detrimental impact (e.g., Bayram Özdemir et al., 2019; Caravita et al., 2021). Furthermore, these studies have reported a negative association between RBB and positive views on school norms about diversity and equity, suggesting the role of an equitable school climate in curbing the occurrence of RBB. More importantly, the present

study echoes the prior finding of Bayram Özdemir and Özdemir (2020) in Swedish youth, suggesting that the harm of RBB cannot be reduced without teachers' implementations of fair and equitable treatment of students and anti-RBB efforts. Therefore, anti-bullying programs appear to hold promise, both in the U.S. and internationally, when teachers and students are involved in fostering positive social norms related to equity and school climate.

Limitations and Future Directions

Several limitations of this study should be addressed in future research. First, the survey asked youth to self-identify if they were a target of RBB. However, information regarding the frequency of their RBB victimization experiences and the forms of such experiences (e.g., physical, verbal, relational, cyber-bullying) were not collected. Therefore, we could not further probe the severity of RBB victimization or examine if racial-ethnic differences in the protective role of school equity against adjustment difficulties would differ by the forms of RBB victimization. Given that research has shown that Asian youth were particularly vulnerable to the impact of relational victimization (measured generally; Kawabata & Crick, 2013), it would be helpful to explore if association also holds for RBB victims. Because of the cross-sectional nature of the data, the present study could not address the temporal precedence between RBB victimization and adjustment difficulties. Youth with adjustment difficulties may be more vulnerable to the negative influence of RBB victimization. The developmental cascade model highlights the need for longitudinal studies are needed to unravel the possible reciprocal relations between RBB victimization and adjustment difficulties. In addition, the measure of school equity did not exclusively tap student perceptions related to race-ethnicity equity but included items on gender, cultural, and socioeconomic status. Because it is unclear if students' perceptions of equity were fully focused on race-ethnicity, our findings on the protective effects of school

equity on RBB victims may be diminished. Notably, the issue of peer bullying within schools in the U.S. is complex and diverse because it is stratified by many marginalized characteristics beyond race and ethnicity such as gender, gender identity, socioeconomic status, age, and/or disability status, creating overlapping systems of disadvantage or oppression (e.g., Price et al., 2019). Inequalities of bullying are multidimensional and these dimensions (e.g., race-ethnicity, gender, etc.) are intrinsically correlated and mutually constitute and reinforce one another. This calls for future studies to examine the intersectionality of RBB with other types of bias-based bullying (e.g., disability status, immigrant status) and social-contextual factors that may buffer the impact of intersectional, bias-based bullying. This knowledge would contribute to a more comprehensive understanding of how students perceive and experience bias in the school environment and developing culturally appropriate interventions to protect youths from multiple marginalized backgrounds (e.g., Peguero, 2012; Peguero & Hong, 2020).

Conclusion and Implications for Practice

The present study highlights the potential harm of race-based bullying victimization on youth's adjustment, above and beyond that of non-RBB victimization. Moreover, high levels of student perceptions of school equity function to protect youth from some of the harm of RBB victimization, and more importantly, this protective strength of school equity is likely more pronounced in some ethnic groups than in others. These findings are an important step toward understanding the ecology of RBB victimization in the school context and supplement the foundation of Olweus' work on bullying research and programming. It is important to develop and incorporate specific components that address race-based and other forms of bias-based victimization into existing universal bullying prevention programs like OBPP, as a strategy for bolstering the program's impact, particularly among racial-ethnic minoritized youth. Another

strategy involves targeting and promoting school equity in OBPP to further highlight its emphasis on a multilevel, whole-school approach. For those implementing school-based bullying prevention programs, these results suggest that although an equitable school climate can be a protective factor for RBB victims of all races and ethnicities, the strength of student perceptions of equity appears to be stronger in some racial-ethnic subgroups than in others and therefore, some groups will need supports in other ways to protect against adjustment difficulties. Taken together, these findings highlight the value of shifting the equity and diversity aspect of school climate in order to lessen the negative implications of RBB victimization in school-based bullying prevention programs, particularly among ethnic minoritized youth.

Declarations

Funding

The research reported here was supported in part by the Institute of Education Sciences, U.S. Department of Education, through Grant R305H150027 and the National Institute of Justice through Grant 2014-CK-BX-0005 to the University of Virginia. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education, or the National Institute of Justice.

Conflict of Interest

The authors declare that they have no conflict of interest.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the Institutional Review Board at the Johns Hopkins Bloomberg School of Public Health and the University of Virginia and are consistent with the 1964 Helsinki declaration in order to ensure proper treatment, safety, and confidentiality of all participants.

Informed Consent

Passive consent was obtained from parents of students who participated in the study.

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Table 1

Victimized Youth and School Descriptives

	Full sample of victimized youth (N = 8,977)	Subsample of race-based bullying victims (N = 2,029)
Individual characteristics		
Male	47.70%	55.98%
Middle school	51.31%	52.08%
White	50.41%	34.63%
Black	23.10%	26.95%
Latinx	9.21%	11.80%
Asian	8.82%	11.12%
Bi-/Multi-racial	8.46%	15.50%
Bullying perpetration	28.18%	38.79%
	M (SD)	M (SD)
Student self-report school equity	2.43(.82)	2.06(.86)
Externalizing problems	2.37(.84)	2.59(.92)
Internalizing problems	2.52(.83)	2.70(.89)
Substance use	.72(1.02)	1.31(1.88)
Sleep problems	2.79(.85)	2.93(.87)
School characteristics (N = 113 schools)	M (SD)	
% Suspension	.12(.01)	----------
School ethnic diversity	.52(.17)	----------
% Free and reduced meals rate	38.70(.17)	----------
Aggregated school-level school equity	2.76(.18)	----------

Notes. % Free and reduced meals rate = the percentage of students receiving free and reduced-price lunch.

Table 2

Multilevel Modeling for Examining the Associations Between RBB Victimization and Adjustment Difficulties

Note. CI = confidence interval. [a] 0= high school, 1=middle school. [b] 0= female, 1=male. [c d e f] White youth were the reference group. [g] 0=did not bully/bullied others once during the month, 1= bullied others 2-3 times or more during the month. [h] 0= non-RBB victimization; 1= RBB victimization. % Free and reduced meals rate = the percentage of students receiving free and reduced-price lunch.

* $p < .05$. ** $p < .01$. *** $p < .001$.

	Externalizing problems		Internalizing problems		Substance use		Sleep problems	
Predictors	*B (SE)*	95% CI	*B (SE)*	95% CI	*B (SE)*	95% CI	*B (SE)*	95% CI
Level 1								
Middle School[a]	-.05(.05)	[-.16, .05]	-.14(.03)***	[-.21, -.08]	-.23(.21)	[-.65, .19]	-.18(.04)***	[-.27, -.10]
Male[b]	-.07(.02)***	[-.11, -.03]	-.28(.02)***	[-.31, -.24]	.22(.03)***	[.15, .28]	-.34(.02)***	[-.38, -.30]
Latinx[c]	-.03(.04)	[-.11, .05]	-.06(.03)	[-.12, .00]	.03(.06)	[-.08, .15]	-.09(.04)*	[-.17, -.01]
Asian[d]	-.02(.04)	[-.10, .05]	-.10(.04)**	[-.17, -.03]	.22(.09)*	[.05, .40]	-.10(.04)*	[-.17, -.01]
Black[e]	.08(.03)**	[.02, .13]	-.16(.03)***	[-.21, -.10]	-.00(.05)	[-.10, .09]	-.18(.03)***	[-.24, -.12]
Bi-/Multi-racial[f]	.10(.03)***	[.04, .16]	-.04(.03)	[-.10, .02]	.03(.05)	[-.06, .13]	-.11(.03)**	[-.18, -.05]
Bullying perpetration[g]	.43(.02)***	[.39, .47]	.05(.02)*	[.01, .09]	1.05(.07)***	[.91, 1.18]	-.02(.02)	[-.06, .03]
RBB victimization[h]	.23(.02)***	[.18, .27]	.28(.02)***	[.23, .33]	.60(.06)***	[.47, .72]	.24(.03)***	[.18, .29]
Level 2								
% Suspension	.29(.20)	[-.11, .68]	.24(.12)*	[.00, .48]	1.24(.65)	[-.04, 2.51]	-.34(.15)*	[-.62, -.05]
School ethnic diversity	-.21(.10)*	[-.41, -.01]	.03(.07)	[-.11, .18]	-.83(.30)**	[-1.41, -.24]	-.27(.11)*	[-.49, -.05]
% Free and reduced meals rate	.26(.10)*	[.06, .44]	.02(.07)	[-.12, .17]	-.37(.34)	[-1.03, .28]	.27(.10)*	[.06, .48]

Table 3

Moderating Effects of Individual Perceptions of and Aggregated School-Level School Equity on Relations Between RBB Victimization and Adjustment Difficulties

	Externalizing		Internalizing		Substance abuse		Sleep	
Predictors	*B (SE)*	95% CI	*B (SE)*	95% CI	*B (SE)*	95% CI	*B (SE)*	95% CI
Level 1								
Middle School	-.02(.06)	[-.14, .10]	-.08(.04)*	[-.18, -.01]	-.09(.29)	[-.66, .48]	-.13(.06)*	[-.24, -.01]
Male	-.06(.02)***	[-.10, -.02]	-.27(.02)***	[-.30, -.23]	.23(.03)***	[.17, .30]	-.33(.02)***	[-.37, -.29]
Latinx	-.02(.04)	[-.10, .05]	-.05(.03)	[-.11, .00]	.05(.06)	[-.06, .16]	-.09(.04)*	[-.16, -.01]
Asian	-.03(.04)	[-.10, .04]	-.10(.04)**	[-.17, -.03]	.21(.08)**	[.05, .37]	-.10(.04)*	[-.18, -.02]
Black	.08(.03)**	[.03, .14]	-.15(.03)***	[-.20, -.09]	.02(.05)	[-.08, .11]	-.17(.03)***	[-.23, -.11]
Bi-/Multi-racial	.10(.03)**	[.04, .16]	-.05(.03)	[-.10, .01]	.02(.05)	[-.07, .11]	-.11(.04)**	[-.18, -.05]
Bullying perpetration	.40(.02)***	[.36, .44]	.02(.02)	[-.02, .06]	.97(.06)***	[.84, 1.09]	-.03(.02)	[-.07, .01]
RBB victimization	.28(.06)***	[.16, .40]	.32(.07)***	[.19, .46]	1.18 (.14)***	[.91, 1.45]	.26(.07)**	[.12, .39]
Ind. equity	-.13(.02)***	[-.16, -.10]	-.14(.02)***	[-.18, -.11]	-.23(.03)***	[-.28, -.18]	-.14(.02)***	[-.18, -.11]
RBB victimization * Ind. equity	-.06(.02)*	[-.10, -.01]	-.05(.03)*	[-.11, -.00]	-.35(.05)***	[-.45, -.24]	-.03(.01)*	[-.05, -.00]
Level 2								
% Suspension	.14(.17)	[-.19, .47]	.33(.11)**	[.11, .55]	.68(.45)	[-.21, 1.56]	-.35(.13)**	[-.60, -.09]

School ethnic diversity (SED)	-.22(.11)*	[-.45, -.00]	.03(.08)	[-.13, .19]	-.66(.25)**	[-1.14, -.17]	-.27(.11)*	[-.49, -.05]
% Free and reduced meals rate	.04(.13)	[-.22, .30]	-.07(.08)	[-.23, .10]	-.89(.46)	[-1.79, .01]	.36(.13)**	[.10, .61]
Agg.equity	-.38(.13)**	[-.62, -.13]	-.26(.11)*	[-.48, -.04]	-1.48(.60)*	[-2.65, -.30]	-.33(.17)*	[-.61, -.04]
Cross-level interactions								
RBB victimization* Agg. equity	-.31(.43)	[-1.16, .54]	-.93(.35)**	[-1.60, -.25]	-.45(.89)	[-2.21, 1.31]	-.40(.18)*	[-.75, -.04]
Ind. equity* Agg. equity	-.16(.07)*	[-.29, -.02]	-.31(.06)**	[-.44, -.18]	.05(.12)	[-.18, .28]	-.04(.08)	[-.19, .11]
RBB victimization* SED	-.01(.16)	[-.31, .30]	-.02(.16)	[-.34, .30]	-.91(.42)*	[-1.73, -.09]	.29(.15)	[.00, .58]
Ind. equity*SED	.03(.09)	[-.15, .22]	.09(.10)	[-.10, .29]	.48(.27)	[-.04, 1.01]	.03(.09)	[-.15, .22]

Note. CI = confidence interval. Ind. equity = Individual perceptions of school equity; Agg. equity= Aggregated school-level school equity. % Free and reduced meals rate = the percentage of students receiving free and reduced-price lunch.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

Racial and Ethnic Differences in the Contributions of Individual Perceptions of and Aggregated School-Level School Equity to Adjustment Difficulties Among RBB Victims

	Externalizing		Internalizing		Substance abuse		Sleep	
Predictors	*B (SE)*	95% CI	*B (SE)*	95% CI	*B (SE)*	95% CI	*B (SE)*	95% CI
Level 1								
Middle School	.01(.07)	[-.13, .15]	-.01(.06)	[-.13, .12]	.03(.31)	[-.58, .63]	-.07(.07)	[-.21, .06]
Male	-.07(.03) *	[-.14, -.00]	-.22(.04) ***	[-.29, .15]	.26(.07) ***	[.12, .39]	-.29(.04) ***	[-.37, -.21]
Latinx	-.06(.19)	[-.42, .31]	.12(.19)	[-.24, .49]	-.12(.40)	[-.90, .66]	.35(.19)	[-.02, .71]
Asian	.21(.18)	[-.14, .56]	.03(.18)	[-.32, .38]	.13(.38)	[-.62, .88]	.40(.16) *	[.09, .72]
Black	-.16(.14)	[-.44, .12]	-.50(.16) **	[-.82, -.18]	-.32(.29)	[-.88, .25]	-.28(.14) *	[-.55, -.01]
Bi-/Multi-racial (BMR)	-.16(.16)	[-.47, .16]	-.16(.16)	[-.47, .15]	-.44(.33)	[-1.09, .21]	-.23(.17)	[-.56, .10]
Bullying perpetration	.61(.04) ***	[.53, .69]	.13(.04) **	[.04, .22]	1.71(.13) ***	[1.45, 1.97]	.01(.04)	[-.07, .08]
Ind. equity	-.19(.04) ***	[-.27, -.11]	-.21(.04) ***	[-.29, -.14]	-.54(.09) ***	[-.73, -.36]	-.17(.04) ***	[-.25, -.09]
Latinx* Ind. equity	-.03(.07)	[-.19, .12]	-.09(.08)	[-.25, .08]	-.09(.15)	[-.39, .20]	-.18(.09) *	[-.35, -.01]
Asian * Ind. equity	-.16(.08) *	[-.31, -.01]	-.10(.08)	[-.26, .05]	-.14(.16)	[-.46, .18]	-.20(.07) **	[-.34, -.06]
Black * Ind. equity	.06(.06)	[-.06, .17]	.17(.07) **	[.04, .29]	-.01(.12)	[-.24, .22]	.07(.07)	[-.06, .20]
BMR* Ind. equity	.05(.07)	[-.08, .18]	.01(.07)	[-.12, .14]	.09(.13)	[-.16, .33]	.05(.07)	[-.09, .19]
Level 2								
% Suspension	.37(.25)	[-.11, .85]	-.16(.24)	[-.62, .31]	1.69(.70) *	[.32, 3.06]	-.34(.27)	[-.87, .20]
School ethnic diversity (SED)	-.48(.19) *	[-.84, -.11]	-.01(.17)	[-.33, .32]	-.65(.52)	[-1.67, .37]	.34(.16) *	[.02, .66]

% Free and reduced meals rate	.16(.20)	[-.24, .55]	-.19(.17)	[-.52, .13]	2.14(.58)***	[1.00, 3.28]	.32(.20)	[-.08, .72]
Agg. equity	-.11(.17)	[-.45, .23]	-.35(.15)*	[-.64, -.05]	-1.43 (.72)*	[-2.84, -.01]	-.31(.21)	[-.71, .09]
Cross-level interactions								
Latinx * Agg. equity	.08(.40)	[-.71, .87]	-.05(.29)	[-.61, .51]	1.30(.67)	[-.01, 2.61]	.11(.34)	[-.55, .78]
Asian * Agg. equity	-.17(.36)	[-.88, .54]	-.47(.29)	[-1.04, .09]	-1.68(1.13)	[-3.88, .53]	-.23(.34)	[-.90, .43]
Black * Agg. equity	-.03(.25)	[-.53, .46]	-.22(.29)	[-.79, .36]	.03(.62)	[-1.18, 1.24]	-.33(.16)*	[-.65, -.01]
BMR * Agg. equity	-.001(.30)	[-.60, .59]	-.31(.27)	[-.84, .21]	-.17(.69)	[-1.53, 1.19]	-.06(.31)	[-.67, .55]

Note. CI = confidence interval. Ind. equity = individual perceptions of school equity; Agg. equity= Aggregated school-level school equity. % Free and reduced meals rate = the percentage of students receiving free and reduced-price lunch.
* $p < .05$. ** $p < .01$. *** $p < .001$.