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# Young Children's Ethnic–Racial Identity Moderates the Impact of Early Discrimination Experiences on Child Behavior Problems

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**Objectives:** Experiences of ethnic–racial discrimination are associated with a host of problems in adolescence and adulthood, yet little is known about if and how such experiences influence children. Likewise, ethnic–racial identity (ERI) research has focused on adolescent and adult development to the detriment of understanding if and how ERI might influence early development, particularly in the context of ethnic–racial discrimination. To address these gaps, this study tested the hypotheses that a) children's perceived experiences of ethnic–racial discrimination would predict elevated behavior problems, and b) children's ERI with respect to their exploration of the meaning of their ethnicity–race and their sense of commitment to their ethnic–racial group(s) would mitigate this relation. **Method:** Path analyses evaluated the prospective contribution of children's perceived ethnic–racial discrimination at age 7 ( $N = 172$ ) to examiner ratings of internalizing and externalizing behavior problems one year later as moderated by child-reported ERI. **Results:** Perceived experiences of ethnic–racial discrimination predicted increased internalizing and externalizing behavior problems one year later, but only among children who had relatively less-well developed ERI, particularly with regard to their sense of commitment to their ethnic–racial group(s). **Conclusion:** These findings document the incidence and the prospective negative impact of children's experiences of ethnic–racial discrimination on their behavioral adjustment, while illuminating the heretofore underappreciated protective role of ERI on children's development in contexts of discrimination. By cultivating ERI among children, parents, educators, and other community leaders can help children navigate institutionalized racism, and the prejudicial attitudes and discriminatory practices it engenders.

**Keywords:** behavior problems, ethnic–racial identity, moderation, perceived discrimination, school-age children

Structural inequalities (e.g., racism, sexism), as well as biased prejudicial beliefs and discriminatory actions that are supported by these systems, are pernicious threats to positive development. However, research on the developmental significance of perceived discrimination experiences in childhood have lagged behind discrimination studies in adolescent and adult samples. Likewise, although ethnic–racial identity (ERI) is associated with positive outcomes throughout development, the majority of prior research has focused on ERI during adolescence and adulthood with less consideration given to whether or how ERI may influence devel-

opment prior to adolescence, particularly in contexts of perceived discrimination. This prospective investigation sought to address gaps in the literature regarding (a) the nature of young children's experiences of ethnic–racial discrimination, (b) the impact of perceived discrimination experiences on children's behavioral adjustment, and (c) the influence of children's ERI on the magnitude of predicted relations between perceived discrimination and child behavior problems.

## Ethnic–Racial Discrimination in Development

In the current study, we conceptualized ethnic–racial discrimination as behavioral expressions of prejudicial attitudes based on race, country of origin and characteristics associated with ethnicity, such as language and accent (Pachter, Szalacha, Bernstein, & Coll, 2010). Studies of ethnic–racial discrimination experiences in adulthood and, to a lesser degree, adolescence have documented its multifaceted and consistently negative effects on human development and adjustment (e.g., Niwa, Way, & Hughes, 2014; Sutin, Stephan, Carretta, & Terracciano, 2015). However, relatively few studies have examined young children's encounters with ethnic–racial discrimination, despite evidence that children as young as 6 years of age can identify discrimination and understand the core components of racism (Hirschfeld, 1995, 2008). Indeed, Brown and Bigler (2005) developmental model of discrimination experi-

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ences holds that 6-year-old children can understand their ethnicity–race, and, by extension, perceive instances of ethnic–racial discrimination. The gap in knowledge about experiences of discrimination in early development is particularly glaring because, as noted by García Coll and Szalacha (2004), children encounter heightened levels of ethnic–racial discrimination during the transition to formal school (Quintana, 1998; Wasserberg, 2014) and the quality of this transition has enduring implications for development (Gillison, Standage, & Skevington, 2008; Lohaus, Elben, Ball, & Klein-Hessling, 2004). Moreover, these early encounters with discrimination occur at the same time children’s cognitive capacities to recognize and understand the meaning of discriminatory experiences on the basis of their ethnicity–race are increasing.

In studies of adults, experiences of ethnic–racial discrimination have been associated with a wide range of negative biopsychosocial adjustment outcomes (Astell-Burt, Maynard, Lenguerrand, & Harding, 2012; Pachter & Coll, 2009; Schmitt, Branscombe, Postmes, & Garcia, 2014). For example, experiences of discrimination are detrimental to adult physical health outcomes with documented contributions to cardiovascular disease, adult-onset diabetes, and allostatic load (see Brody et al., 2013 and Pachter & Coll, 2009 for review). Socioemotional effects are similarly robust with documented decrements in life satisfaction (Sutin et al., 2015) and elevated anxiety symptoms (Soto, Dawson-Andoh, & BeLue, 2011) in the wake of perceived experiences of ethnic–racial discrimination.

Although less prevalent than adult studies, research with adolescent samples also points to detrimental effects of ethnic–racial discrimination on adaptation. African American adolescents who report more experiences of discrimination also endorse more internalizing and externalizing behavior problems, including depressive symptoms (Seaton, Neblett, Upton, Hammond, & Sellers, 2011), substance use (Copeland-Linder, Lambert, Chen, & Ialongo, 2011), and risky sexual behaviors (Stock, Gibbons, Walsh, & Gerrard, 2011). Huynh (2012) found similar relations between discrimination experiences endorsed by Latin- and Asian American adolescents and higher levels of internalizing problems, such as anxiety and depressive symptoms. Extending to the school context, perceived experiences of discrimination among youth from varied ethnic–racial backgrounds have been associated with lower levels of school engagement, school success, and motivation for learning (Dotterer, McHale, & Crouter, 2009).

Although a handful of studies have evaluated the effects of ethnic–racial discrimination on adaptation in late childhood and early adolescence, researchers have not yet evaluated the potentially detrimental effects of perceived discrimination in samples of children younger than 10 years of age. For example, Coker and colleagues (2009) found that fifth graders experiences of ethnic–racial discrimination were positively associated with both internalizing (i.e., depression) and externalizing (i.e., attention-deficit/hyperactivity disorder, oppositional defiant disorder, and conduct disorder) symptomatology. Likewise, Bogart and colleagues (2013) demonstrated that perceptions of ethnic–racial discrimination accounted for significant variance in concurrent externalizing behavior problems (i.e., aggression and delinquency) in a large sample of 10 year olds. Studies of African American children (ages 10 to 12) have also documented significant relations of perceived discrimination experiences with internalizing problems, such as

depressive symptoms (Simons et al., 2002), and with externalizing problems, such as substance use (Gibbons et al., 2014). Among African American boys (ages 10 to 15), Nyborg and Curry (2003) found that youths’ reports of ethnic–racial discrimination were correlated with self- and parent-reports of internalizing and externalizing behavior problems, hopelessness, and poor self-concept. Although these studies suggest that older children are sensitive to experiences of ethnic–racial discrimination, the current investigation was among the first to evaluate whether and under what conditions children younger than 10 years of age perceive experiences of ethnic–racial discrimination, and how such experiences influence children’s behavioral adjustment over time.

### Ethnic–Racial Identity in Development

Extant theories focus on the development of ERI, as well as its promotive and protective effects, in adolescence and adulthood (Phinney, 1988; Spencer, Dupree, & Hartmann, 1997; Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004). As conceptualized by Phinney (1988) and Umaña-Taylor et al. (2004), ERI is a multidimensional construct that includes several processes, including (1) efforts to understand the meaning of one’s ethnicity and race (i.e., search or exploration), (2) a strong sense of understanding and belonging to one’s ethnic–racial group or groups (i.e., commitment or resolution), and (3) positive feelings toward one’s ethnic–racial group or groups (i.e., affirmation). However, as suggested by Bernal and colleagues (1990) nearly 30 years ago, recent studies demonstrate that young children have the capacity to engage in ERI processes of exploration and commitment and consolidate clear feelings and preferences regarding activities, behaviors, and attitudes associated with their ethnic–racial group(s); e.g., Brown, Alabi, Huynh, & Masten, 2011; Brown & Chu, 2012; Derlan, Umaña-Taylor, Updegraff, & Jahromi, 2017; Serrano-Villar & Calzada, 2016).

Until recently, investigations of ERI and adaptation typically employed composite measures that occluded potentially meaningful distinctions across distinct ERI processes (see Byrd, 2012 for review). For example, studies with adolescents and adults demonstrate positive associations between global measures of ERI and varied adjustment indicators, including decreased drug use (Gray & Montgomery, 2012), improved academic achievement (Miller-Cotto & Byrnes, 2016), and higher self-esteem (Xu, Farver, & Pauker, 2015). Amid calls for increased consideration of individual ERI processes (see Rivas-Drake et al., 2014, for review and discussion), studies of specific ERI processes in adolescent and adult samples have shown significant associations between higher ERI exploration and greater psychological well-being (Syed et al., 2013), higher ERI commitment and lower violence engagement (Irwin et al., 2017), higher ERI commitment and affirmation and fewer externalizing behavior problems (Wissink, Deković, Yağmur, Stams, & de Haan, 2008), and higher ERI affirmation and better mental health (Mandara, Gaylord-Harden, Richards, & Ragsdale, 2009). Given the dearth of information regarding specific ERI processes in early development, this investigation evaluated both a global index of ERI and specific ERI processes of exploration and commitment.

In addition to main effect relations with positive development, a small but growing body of evidence suggests that ERI may buffer adolescents and adults from the negative effects of ethnic–racial discrimination on adaptation. For example, in studies using a

composite measure of global ERI, greater ERI has been shown to mitigate the strength of associations between ethnic-racial discrimination and hopelessness (Jaramillo, Mello, & Worrell, 2016), poor self-esteem (Tynes, Umaña-Taylor, Rose, Lin, & Anderson, 2012), and school disengagement (Dotterer et al., 2009). More recently, studies of specific ERI processes and adaptation in contexts of ethnic-racial discrimination have shown protective effects with regard to both internalizing and externalizing outcomes. For example, ERI affirmation and belonging has been shown to buffer relations between discrimination and substance use (Stock et al., 2011) and ERI commitment mitigates relations with both depressive symptoms (Torres & Ong, 2010) and conduct problems (Williams, Aiyer, Durkee, & Tolan, 2014) in the wake of ethnic-racial discrimination. Of note, across studies evaluating the protective effects of specific ERI processes, commitment (i.e., a sense of understanding and belonging to one's ethnic group) has emerged as a particularly potent protective factor (e.g., see Rivas-Drake et al., 2014 for review; Tabbah, Chung, & Miranda, 2016), particularly in contexts of ethnic-racial discrimination (Umaña-Taylor, Tynes, Toomey, Williams, & Mitchell, 2015; Umaña-Taylor, Vargas-Chanes, Garcia, & Gonzales-Backen, 2008).

Although theorists have long appreciated ERI as an emergent and potentially protective aspect of the self-system from a young age (e.g., Bernal et al., 1990; Corenblum & Armstrong, 2012; Umaña-Taylor et al., 2014), relatively few studies have evaluated relations between ERI processes and early childhood development and adaptation. Prior studies have tended to examine specific skills that are central to the capacity to engage in ERI processes, such as ethnic labeling, constancy, and knowledge (e.g., Aboud & Doyle, 1993; Ackroyd & Pilkington, 1999; Brown et al., 2011; Kowalski & Lo, 2001; Ocampo, Knight, & Bernal, 1997; Umaña-Taylor et al., 2008), rather than ERI processes, such as exploration and commitment. For example, in a study of young Mexican American and Dominican American children (ages ~5), Serrano-Villar and Calzada (2016) found that a composite measure of children's ethnic self-identification, ethnic knowledge, and ethnic preference, was positively related to adaptive functioning at home and at school. In a unique study of ERI processes among young children (ages 4 to 6), Smith and colleagues (2009) found that ERI commitment was negatively related to parents' concurrent reports of children's internalizing and externalizing behavior problems. Building on these studies, the current investigation evaluated the moderating effects of both global ERI and specific ERI processes, namely exploration and commitment, on predicted relations between young children's experiences of ethnic-racial discrimination and later internalizing and externalizing behavior problems.

### Study Overview

As noted by Garcia Coll and colleagues (1996) in their integrative model for conceptualizing and studying child development in children from minority ethnic-racial groups, children's early experiences of their ethnicity-race, including ethnic-racial discrimination and ERI development, have significant implications for children's adjustment in age-relevant adaptive domains. Therefore, this investigation drew on a large and diverse community sample of 172 Black, Latinx, and multiethnic-racial children to (a) evaluate prospective associations between children's perceived experiences of ethnic-racial discrimination at age 7 and changes in

examiner-reported internalizing and externalizing child behavior problems from ages 7 to 8 and (b) test the buffering influence of children's global ERI and specific ERI processes (i.e., exploration and commitment) on the magnitude of predicted associations between ethnic-racial discrimination and increased child behavior problems. We hypothesized that experiences of discrimination at age 7 would predict higher levels of internalizing and externalizing behavior problems at age 8, even after controlling for prior behavior problems. Further, we predicted that children's global ERI, as well as specific ERI processes, particularly commitment, would buffer the effect of discrimination on child behavior problems. Importantly, all analyses controlled for factors with known effects on perceived discrimination, ERI, and/or child behavior problems, including children's IQ, gender, ethnicity-race, socioeconomic status (SES), and prior internalizing and externalizing behavior problems (Derlan et al., 2017; Marcelo & Yates, 2014; Rapport, Denney, Chung, & Hustace, 2001). By evaluating the individual and interactive influences of perceived discrimination and ERI on changes in young children's behavioral adaptation, the current study sought to inform the identification and amplification of risk and protective factors, respectively.

## Method

### Participants

The current sample was drawn from an ongoing study of development among 250 caregiver-preschooler dyads. Participants in these analyses ( $N = 172$ ; 47.70% female) were members of one or more ethnic-racial minority groups and completed a laboratory assessment at age 7 ( $M_{\text{age}} = 85.5$  months;  $SD = 2.722$ ). One year later, 161 of these children (93.6%) completed a second laboratory assessment at age 8 ( $M_{\text{age}} = 97.10$  months;  $SD = 2.88$ ). Caregivers described children's ethnicity-race as Black (19.2%), Latinx (56.4%), and multiethnic-racial, including Latinx and White (9.3%), Black and White (2.9%), Black and Latinx (2.9%), and the remaining 8.1% of children belonged to three or more ethnic-racial groups. Participating caregivers were biological mothers (93.4%), female extended kin (3%), or foster/adoptive mothers (3%). The average family SES score based on the Hollingshead (1975) Four-Factor Index of Social Status was 32.86 ( $SD = 12.09$ ), which corresponds to semiskilled employment (e.g., sales clerk). Chi-square analyses and independent samples  $t$  tests indicated that participants who returned at age 8 did not differ from those who did not across all study variables, including child gender, ethnicity-race, IQ, family SES, perceived discrimination experiences, and child behavior problems. Likewise, the 172 children in these analyses did not differ significantly from the broader subset of 222 ethnic-racial minority youth in the full sample or from the 50 ethnic-racial minority youth who did not complete the age 7 assessment.

### Procedures

Caregivers were recruited to participate in a longitudinal study of children's early learning and development via flyers placed in community-based preschool programs and child development centers. Caregivers completed a brief intake screening by phone before scheduling a 3-hr laboratory assessment. Exclusionary cri-

teria included children with diagnosed developmental disabilities and delays ( $n = 3$ ), children who were not able to understand English ( $n = 4$ ), and children outside the target age range of 45 months to 54 months (not tracked). At each data wave, dyads completed a 3-hr laboratory assessment that consisted of measures with the child, the caregiver, and the caregiver and child interacting. Caregivers were compensated with \$25/hr of assessment, and children received a small gift each visit. Informed consent and assent were obtained from the child's legal guardian and the child, respectively. All procedures were approved by the human research review board of the participating university.

## Measures

**Perceived experiences of discrimination.** At age 7, children completed the Perceptions of Racism of Children and Youth Questionnaire (PRaCY; Pachter et al., 2010), which is a self-report measure designed to assess perceived experiences of racism and discrimination in 7 to 13 year olds. Prior to administering the measure, the examiner provided the following definition of discrimination to the child:

When people discriminate against other people, it means they treat people badly, or do not respect them, because of the color of their skin, because they speak a different language or have an accent, or because they come from a different country or culture. For each of the following situations, think whether you have ever in your life felt discriminated against because of the color of your skin, your language or accent, or because of your culture or country of origin.

Following this definition, children completed eight of the original 10 PRaCY items identified for young children (e.g., Have you ever in your life had your teachers assume that you are not smart or intelligent because of the color of your skin, your language or accent, or your culture or country of origin?). Two items were omitted from this study due to their low relevance for children of this age (i.e., Have you ever in your life been watched closely or followed around by security guards or store clerks at a store or mall because of . . .? Have you ever in your life received poor service at restaurants because of . . .?). Perceived experiences of discrimination were indicated by a composite of the child's frequency of endorsement across the eight items on a five-point scale (i.e., once, twice, about once a year, about once a month, or weekly;  $M = 3.79$ ,  $SD = 6.11$ ; Kuder–Richardson 20  $\alpha = .74$ ). The PRaCY is gaining popularity as a valid measure of perceived discrimination experiences in studies with adolescents (Namazi, Alexander, Braje, & Kawahara, 2014; Park, Wang, Williams, & Alegría, 2017; Sangalang, Chen, Kulis, & Yabiku, 2015) and young children (B. S. Schwartz, 2014).

**Ethnic–racial identity.** Child-reports of ERI were collected at age 8 using the Multigroup Ethnic Identity Measure–Revised Version (MEIM-R; Phinney & Ong, 2007). The MEIM-R consists of six items that assess two ERI process components, namely exploration (e.g., “I have often talked to other people in order to learn more about my ethnic group”) and commitment or sense of belonging (e.g., “I understand pretty well what my ethnic background means to me”), as adapted from Phinney's (1992) original 20-item MEIM. Children rated each ERI item on a five-point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Prior to item administration, the examiner provided the following definition of ethnicity to the child:

In this country, people come from a lot of different cultures and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Mexican American, Hispanic, Black, Asian American, American Indian, Anglo American, and White. Every person is born into one or more ethnic groups, but people differ on how important their ethnicity is to them, how they feel about it, and how much their behavior is affected by it. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Studies of young children's ERI development using the MEIM and MEIM-R have examined either a total ERI score (e.g., Dulin-Keita, Hannon, Fernandez, & Cockerham, 2011; Smokowski et al., 2017) or constituent process components of ERI exploration and ERI commitment (e.g., Peifer, Lawrence, Williams, & Leyton-Armakan, 2016; Smith et al., 2009; Spiegler, Verkuyten, Thijs, & Leyendecker, 2016). Given the lack of clarity regarding how best to operationalize ERI, particularly in young children, we conducted separate analyses to evaluate the moderating influences of the ERI composite score ( $\alpha = .70$ ), the component scores for ERI exploration ( $\alpha = .49$ ) and ERI commitment ( $\alpha = .39$ ).

**Child behavior problems.** Independent examiners completed the Test Observation Form (TOF; McConaughy & Achenbach, 2004) following each of the laboratory assessments at ages 7 and 8. Examiners rated the child across 125 behavioral descriptors using a four-point scale that ranged from 0 (*no occurrence of the behavior*), 1 (*very slight or ambiguous occurrence of the behavior*), 2 (*a definite occurrence with mild to moderate intensity and frequency and less than three minutes total duration*), to 3 (*a definite occurrence with severe high intensity, high frequency, or three or more minutes total duration*). The TOF contains two broadband psychopathology scales that assess internalizing (e.g., withdrawn/depressed) and externalizing (e.g., attention difficulties) problems.

Although not available from the single rater data in this study, McConaughy and Achenbach (2004) reported interrater reliabilities of .43 and .78 for the broadband internalizing and externalizing behavior problem scores, respectively, and test–retest reliabilities of .83 for both scale scores in their validation sample. Moreover, they used a diverse sample to develop and validate the TOF, which has since been used as a single-rater observational report in similarly diverse samples (McConaughy, Ivanova, Antshel, & Eiraldi, 2009; Rettew, Stanger, McKee, Doyle, & Hudziak, 2006; Rudd, Alkon, & Yates, 2017; Sher-Censor, Khafi, & Yates, 2016).

**Child IQ.** During the first assessment in the broader study, which occurred at age 4, children completed the Vocabulary and Block Design subtests of the Wechsler Preschool and Primary Scale of Intelligence–III (Wechsler, 2002) to assess child IQ. Verbal IQ was assessed using the Vocabulary test in which the child pointed at pictures to identify orally presented words for children who were less than 48 months of age, or verbally defined orally presented words for children who were 48 months or older. The age-appropriate measure of vocabulary was used to assess each child's verbal ability ( $M = 97.25$ ,  $SD = 14.62$ ). Performance IQ was assessed using the Block Design subtest in which the child was asked to assemble red and white blocks to match models ( $M = 94.02$ ,  $SD = 17.62$ ). Estimated verbal and performance IQs were averaged to yield a prorated measure of full scale IQ ( $M = 965.74$ ,  $SD = 12.65$ ).

## Data Preparation and Analysis

All data were examined for univariate nonnormality (Afifi, Kotlerman, Ettner, & Cowan, 2007). The frequency of experienced discrimination at age 7 and externalizing behavior problem scores at ages 7 and 8 evidenced moderate positive skew (pretransformation skew = 2.34–3.06). These variables were transformed using a square root transformation (Tabachnick & Fidell, 2007; post-transformation skew = .57–.90). Data were missing for ERI ( $n = 11$ ), internalizing and externalizing behavior problems at age 7 ( $n = 21$ ), and internalizing and externalizing behavior problems at age 8 ( $n = 8$ ). Missing data were addressed with full-information maximum likelihood using Mplus (Schafer & Graham, 2002).

A multivariate analysis of variance (MANOVA) followed by Bonferroni-corrected post hoc comparisons evaluated group differences in the study variables as a function of child gender, ethnicity–race, and their interaction. Bivariate analyses examined relations between study variables. Path models were evaluated in Mplus 6.1 using multiple group comparisons to evaluate children scoring above versus below the mean on each ERI measure (Muthén & Muthén, 1998–2010). Perceived discrimination and ERI were grand-mean centered to minimize collinearity. Absolute model fit was evaluated based on the comparative fit index  $\geq .90$ , root mean square error of approximation  $\leq .08$ , and standardized root mean square residual  $\leq .05$  (Hu & Bentler, 1999; Marsh, Hau, & Wen, 2004).

## Results

### Descriptive Findings

Table 1 depicts the number and percent of children who endorsed experiencing each discrimination event and the mean frequency and standard deviation of each discrimination event by gender and ethnicity–race. A MANOVA revealed no significant effects of gender (Wilks'  $\lambda = .97$ , *ns*), ethnicity–race (Wilks'  $\lambda = .88$ , *ns*), or their interaction (Wilks'  $\lambda = .95$ , *ns*) across the different event frequencies. Likewise, a MANOVA revealed no

significant main effects of gender (Wilks'  $\lambda = .91$ , *ns*), ethnicity–race (Wilks'  $\lambda = .80$ , *ns*), or their interaction (Wilks'  $\lambda = .81$ , *ns*) across the remaining study variables (see Table 2).

### Bivariate Relations

Table 3 depicts bivariate relations among study variables for the total sample. Child IQ was related to higher family SES, lower levels of perceived discrimination, and fewer internalizing and externalizing behavior problems at ages 7 and 8. Perceived discrimination was related to more internalizing and externalizing behavior problems at ages 7 and 8. Behavior problems at age 7 were correlated with one another and with behavior problems at age 8.

### Path Analyses

A path analysis revealed significant main effects of children's perceived discrimination experiences at age 7 on increases in both internalizing and externalizing behavior problems from ages 7 to 8 over and above select covariates, including child IQ, gender, ethnicity–race, SES, and prior internalizing and externalizing behavior problems. A multiple group comparison to evaluate the moderating influence of children's global ERI at age 8 on these pathways indicated that children with below-average levels of ERI evidenced significant relations between perceived discrimination and increased internalizing ( $B = 1.364$ , 95% confidence interval [CI; .42, 2.59]) and externalizing ( $B = .306$ , 95% CI [.09, .53]) behavior problems, but these relations were not significant among children who endorsed above-average levels of ERI ( $B_{\text{internalizing}} = .416$ , 95% CI [-.22, 1.19];  $B_{\text{externalizing}} = .150$ , 95% CI [-.04, .36]; see Table 4 and Figure 1).

Next, we evaluated the moderating influence of ERI exploration and ERI commitment (see Table 5 and Figure 1), which revealed similar findings as the ERI composite model. However, only the main effect of perceived discrimination on internalizing, but not on externalizing, problems was qualified by a significant interaction

Table 1  
Descriptive Statistics for the PRaCY Items by Child Gender and Ethnicity–Race

	Total % <sub>yes</sub> <i>M (SD)</i>	Child gender		Child ethnicity/race		
		Male % <sub>yes</sub> <i>M (SD)</i>	Female % <sub>yes</sub> <i>M (SD)</i>	Black % <sub>yes</sub> <i>M (SD)</i>	Latinx % <sub>yes</sub> <i>M (SD)</i>	Multi % <sub>yes</sub> <i>M (SD)</i>
Have you ever in your life [insert item from the column below] because of the color of your skin, your language or accent, or because of your culture or country of origin?	25%					
Had someone not be friends with you	.716 (1.536)	.690 (1.465)	.744 (1.616)	1.193 (1.939)	.698 (1.543)	.716 (1.536)
Had your teachers assume you're not smart or intelligent	.260 (.934)	.310 (1.015)	.207 (.842)	.419 (1.33)	.302 (.953)	.048 (.309)
Been accused of something you didn't do at school	.314 (.894)	.253 (.702)	.3780 (1.062)	.484 (1.060)	.302 (.860)	.214 (.842)
Been treated badly or unfairly by a teacher	.325 (1.078)	.379 (1.080)	.268 (1.078)	.839 (1.772)	.302 (.964)	.000 (.000)
Had the feeling that someone was afraid of you	.391 (1.191)	.517 (1.363)	.256 (.966)	.258 (.773)	.417 (1.295)	.429 (1.213)
Been called an insulting name	.456 (1.249)	.690 (1.550)	.207 (.749)	.548 (1.287)	.490 (1.338)	.310 (1.000)
Had someone be rude to you	.645 (1.411)	.805 (1.554)	.476 (1.230)	1.064 (1.806)	.615 (1.356)	.405 (1.149)
Seen your parents or other family members treated unfairly or badly	.438 (1.229)	.494 (1.354)	.378 (1.084)	.387 (1.054)	.510 (1.376)	.310 (.975)

Table 2  
Descriptive Statistics for Study Variables by Child Gender and Ethnicity–Race

Study variable	Minimum–maximum	Child gender		Child ethnicity/race		
		Male <i>M (SD)</i>	Female <i>M (SD)</i>	Black <i>M (SD)</i>	Latinx <i>M (SD)</i>	Multi <i>M (SD)</i>
Child IQ	67–137	94.740 (12.212)	98.079 (13.563)	94.375 (12.970)	95.468 (11.670)	99.682 (15.233)
Socioeconomic status	13–66	32.030 (12.852)	30.920 (12.336)	30.860 (13.407)	30.900 (11.413)	33.610 (14.612)
Perceived discrimination	0–33	4.051 (6.493)	3.000 (5.016)	5.500 (7.366)	3.671 (6.014)	1.727 (3.054)
ERI Exploration	3–15	9.766 (3.770)	10.349 (2.622)	9.643 (3.200)	10.177 (2.526)	10.00 (3.052)
ERI Commitment	3–15	10.584 (2.633)	11.143 (2.221)	10.857 (2.240)	11.152 (2.265)	10.061 (2.957)
ERI Total	6–30	5.00 (5.511)	3.73 (4.228)	4.00 (5.041)	4.730 (5.387)	4.060 (3.976)
Internalizing problems at Age 7	0–21	5.000 (5.511)	3.730 (4.228)	4.00 (5.041)	4.730 (5.387)	4.060 (3.976)
Externalizing problems at Age 7	0–77	11.900 (13.522)	8.130 (11.990)	14.070 (16.393)	9.350 (12.840)	8.940 (9.110)
Internalizing problems at Age 8	0–33	4.350 (5.088)	5.250 (6.640)	11.000 (13.038)	10.610 (12.717)	8.560 (9.359)
Externalizing problems at Age 8	0–87	10.260 (12.047)	6.870 (8.239)	10.500 (11.488)	7.900 (10.609)	9.240 (9.912)

Note. ERI = ethnic–racial identity.

between perceived discrimination and ERI commitment, but not ERI exploration. A follow-up analysis probed this moderation effect using a multiple group analysis between children with above-average versus below-average ERI commitment. Children with below-average levels of ERI commitment evidenced significant relations between perceived discrimination and increased internalizing behavior problems ( $B = 1.493$ , 95% CI [.38, 2.59]), but this relation was not significant among children who endorsed above-average levels of ERI commitment ( $B_{\text{internalizing}} = .421$ , 95% CI [–.14, .96]).

### Discussion

This investigation evaluated the prospective contribution of children’s perceived experiences of ethnic–racial discrimination at age 7 to examiner ratings of their internalizing and externalizing behavior problems one year later, as moderated by children’s ERI. Consistent with our hypotheses, children’s early experiences of ethnic–racial discrimination predicted increased internalizing and externalizing behavior problems at follow up, even after controlling for relevant covariates, including prior behavior problems. Moreover, children’s ERI, particularly ERI commitment, buffered the negative impact of perceived experiences of ethnic–racial discrimination on later behavioral adjustment, particularly internalizing problems.

The current findings indicate that young children perceive and process experiences of discrimination on the basis of their ethnic–racial phenotype from both peer and adult social partners. This pattern is consistent with prior evidence that young children are aware of ethnic–racial features and attribute varied meanings to those features (Hirschfeld, 1995, 2008; McKown, 2004), as well as with Brown and Bigler (2005) developmental model of experiences of discrimination in relation to children’s emergent ERI. As in recent studies with adolescent and adult samples (Seaton et al., 2011; Soto et al., 2011; Sutin et al., 2015), a majority of these 7-year-old children from ethnic–racial minority groups endorsed at least one experience of discrimination. Moreover, mirroring the findings of Bogart and colleagues (2013) in a sample of 10-year-old children, experiences of ethnic–racial discrimination appeared to negatively affect children’s behavioral adjustment as was indicated by significant associations between perceived ethnic–racial discrimination and later internalizing and externalizing problems over and above previous problems.

Consistent with prior studies of ERI in samples of older children (e.g., Dulin-Keita et al., 2011; Fisher, Reynolds, Hsu, Barnes, & Tyler, 2014), we evaluated a composite ERI model, which combined the scores for ERI exploration and ERI commitment. However, in light of recent calls to evaluate specific ERI processes (S. J. Schwartz et al., 2014; Umaña-Taylor, 2016; Umaña-Taylor et al., 2014), and following studies with adolescent and adult

Table 3  
Bivariate Relations Among Study Variables

Variable	1	2	3	4	5	6	7	8	9	10
1. Child IQ	—									
2. Socioeconomic Status	.292**	—								
3. Perceived Discrimination	–.175*	–.063	—							
4. ERI Exploration	–.023	–.091	.087	—						
5. ERI Commitment	.023	–.065	.032	.533**	—					
6. ERI Total	–.002	–.090	.070	.889**	.861**	—				
7. Internalizing Problems at Age 7	–.061	.081	.197*	–.162	–.006	–.102	—			
8. Externalizing Problems at Age 7	–.276**	.024	.440**	–.087	–.030	–.069	.421**	—		
9. Internalizing Problems at Age 8	–.200*	–.068	.317**	–.062	–.076	–.078	.396**	.306**	—	
10. Externalizing Problems at Age 8	–.268**	–.026	.340**	–.084	–.079	–.094	.211*	.618**	.283**	—

Note. ERI = ethnic–racial identity.

\*  $p < .05$ . \*\*  $p < .01$ .

Table 4  
*Child Behavior Problems on Perceived Discrimination as Moderated by Children's ERI Total*

Path	B	Bootstrapped SE	p	95% CI (bias corrected)	
				LLCI	ULCI
Internalizing Problems at age 7 → Internalizing Problems at age 8	.453	.117	.000	.273	.668
Externalizing Problems at age 7 → Internalizing Problems at age 8	-.153	.297	.606	-.673	.323
Internalizing Problems at age 7 → Externalizing Problems at age 8	-.032	.030	.296	-.081	.018
Externalizing Problems at age 7 → Externalizing Problems at age 8	.472	.094	.000	.320	.633
Perceived Discrimination → Internalizing Problems at age 8	1.025	.364	.005	.429	1.619
Perceived Discrimination → Externalizing Problems at age 8	.245	.095	.010	.095	.410
ERI Total → Internalizing Problems at age 8	-.199	.105	.057	-.364	-.027
ERI Total → Externalizing Problems at age 8	-.039	.030	.198	-.088	.011
Perceived Discrimination * ERI Total → Internalizing Problems at age 8	-.198	.090	.029	-.334	-.045
Perceived Discrimination * ERI Total → Externalizing Problems at age 8	-.045	.022	.043	-.079	-.007

Note. ERI = ethnic-racial identity; LLCI = lower limit of the 95% confidence interval; ULCI = upper limit of the 95% confidence interval.

samples (Phinney, 2007; Rivas-Drake et al., 2014), we also evaluated the specific moderating influences of ERI exploration and ERI commitment. In support of our hypotheses, both the ERI composite and the specific process of ERI commitment, but not exploration, moderated relations between perceived discrimination and child behavior problems. However, whereas the ERI composite moderated pathways to both internalizing and externalizing behavior problems, ERI commitment only buffered children against the negative effects of perceived discrimination on internalizing behavior problems. This pattern is consistent with prior

studies, which have shown that, relative to ERI exploration, ERI commitment evidences stronger direct relations with positive outcomes, such as academic achievement (see Miller-Cotto & Byrnes, 2016 for review) and self-esteem (e.g., Corenblum & Armstrong, 2012; Xu et al., 2015). The obtained findings are also consistent with prior suggestions that ERI commitment is a particularly potent protective factor, relative to other ERI processes, in contexts of discrimination because it provides youth with a sense of confidence about their ethnicity-race and ethnic-racial group or groups (Umaña-Taylor et al., 2015; Umaña-Taylor et al., 2008).

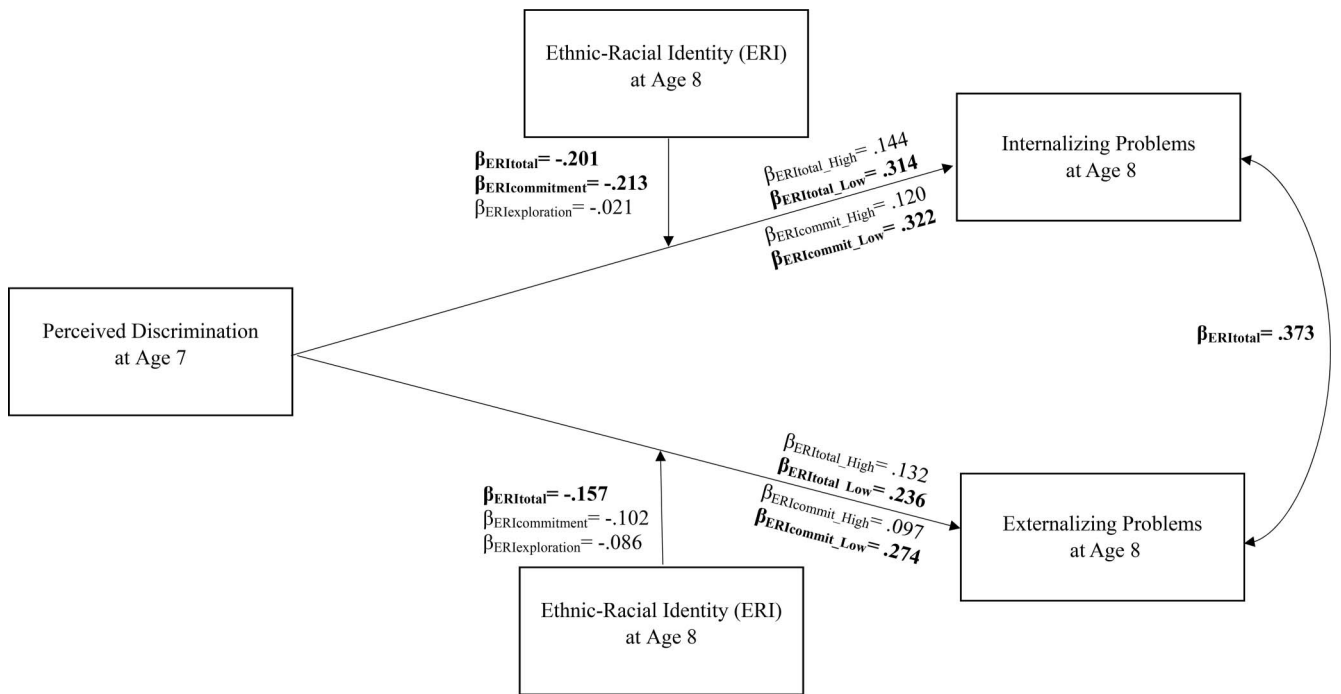


Figure 1. Path analysis of the contribution of children's perceived discrimination to examiner-reported behavior problems as moderated by global ERI, ERI exploration (ns), and ERI commitment. Final model fit:  $\chi^2(21) = 30.75$ ,  $p = .08$ ; CFI = .92; RMSEA = .05 ( $CI_{90\%} = .00-.09$ ); SRMR = .05. Covariates (i.e., child IQ, child gender, SES, and prior behavior problems) not shown for clarity. Standardized parameter estimates with CIs that do not cross zero are shown in bold.

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Table 5  
*Child Behavior Problems on Perceived Discrimination as Moderated by Children's ERI Exploration and Commitment*

Path	B	Bootstrapped SE	p	95% CI (bias corrected)	
				LLCI	ULCI
Internalizing Problems at age 7 → Internalizing Problems at age 8	.442	.118	.000	.263	.654
Externalizing Problems at age 7 → Internalizing Problems at age 8	-.083	.283	.768	-.580	.357
Internalizing Problems at age 7 → Externalizing Problems at age 8	-.033	.031	.288	-.084	.016
Externalizing Problems at age 7 → Externalizing Problems at age 8	.475	.095	.000	.326	.636
Perceived Discrimination → Internalizing Problems at age 8	.968	.354	.006	.387	1.554
Perceived Discrimination → Externalizing Problems at age 8	.244	.095	.010	.086	.406
ERI Exploration → Internalizing Problems at age 8	-.114	.231	.622	-.493	.266
ERI Commitment → Internalizing Problems at age 8	-.274	.233	.239	-.676	.121
ERI Exploration → Externalizing Problems at age 8	-.053	.059	.370	-.150	.044
ERI Commitment → Externalizing Problems at age 8	-.026	.061	.665	-.127	.071
Perceived Discrimination * ERI Explor. → Internalizing Problems at age 8	-.034	.200	.865	-.375	.287
Perceived Discrimination * ERI Commit. → Internalizing Problems at age 8	-.375	.202	.063	-.685	-.010
Perceived Discrimination * ERI Explor. → Externalizing Problems at age 8	-.042	.046	.362	-.113	.040
Perceived Discrimination * ERI Commit. → Externalizing Problems at age 8	-.054	.045	.226	-.122	.019

Note. ERI = ethnic-racial identity; LLCI = lower limit of the 95% confidence interval; ULCI = upper limit of the 95% confidence interval.

Moreover, this buffering effect may be especially salient for internalizing problems because ERI commitment is closely tied to intrapsychic processes, such as self-esteem and the capacity to cope with negative social feedback (Santos & Collins, 2016; Umaña-Taylor et al., 2015). It is important to note that, though the bootstrapped CI indicated a significant interaction between perceived discrimination and ERI commitment in the prediction of internalizing behavior problems, the *p* value was only marginally significant (see Table 5). This warrants caution in the interpretation of this interaction. However, as discussed by Hayes (2013), bootstrapped bias-corrected CIs are a more robust indicator of significance than *p* values, which has led some to suggest that CIs should be interpreted in lieu of *p* values (Fidler, Thomason, Cumming, Finch, & Leeman, 2004; Ranstam, 2012).

### Strengths and Limitations

Notable strengths of this investigation include our use of a longitudinal research design, multiple informants, and an analytic model wherein we accounted for the covariation of internalizing and externalizing behavior problems over time. We also evaluated moderation models to test both the influence of a composite ERI score and the individual influences of ERI exploration and ERI commitment components on the obtained pathways while accounting for their covariation. Despite these strengths, several limitations qualify the interpretability and generalizability of our findings while also illuminating directions for future research.

Self-report measures, such as the PRaCY (Pachter et al., 2010) and MEIM-R (Phinney & Ong, 2007), are standard approaches in research on discrimination and ERI, respectively, but they also introduce potential bias as a result of concomitant psychological processes or vulnerabilities, including negative or hostile attribution biases and depressive symptoms (Schwarz, 1999; Schwarz & Oyserman, 2001). Moreover, both the PRaCY and MEIM-R evidenced modest reliabilities in this sample, though they were comparable to those obtained in prior studies with young children (Dulin-Keita et al., 2011; Pachter et al., 2010; Smith et al., 2009). The apparent developmental significance of perceived discrimina-

tion and ERI in this study, as well the modest reliabilities obtained in this sample, highlight the need for future measurement development efforts to assess these constructs in early development. Likewise, additional research is needed to evaluate the validity of these measures for use with samples that include ethnically and racially diverse groups of young children, particularly children who identify with multiple ethnic and racial groups.

Although this study used a diverse sample, some ethnic-racial groups were not well-represented, particularly children of Asian descent. In addition, the current sample included a large proportion of children who identified with multiple ethnic-racial groups. The absence of Asian participants limits the generalizability of the obtained findings and is particularly important given some evidence that the nature and sources of discriminatory experiences may vary in important ways for Asian groups (Greene, Way, & Pahl, 2006). Likewise, there is a pressing need to redress the dearth of research on both discrimination experiences and ERI in children who belong to multiethnic-racial groups (see Gillen-O'Neel et al., 2015 for a notable example of a study examining experiences of ethnicity and race among multiracial children). Although the vast majority of the children in this sample (86.95%) were able to accurately identify their racial/ethnic groups, it is noteworthy that 9.52% of the children from multiple ethnic-racial groups did not identify all the groups of which they were a member per the caregiver's report (e.g., a child who was African American, Latinx, and White identified as only African American and White). Given the potentially heightened complexity of both discrimination experiences and ERI development among multiethnic-racial children, future studies with these samples are sorely needed.

Finally, as noted previously, our use of multiple informants and our consideration of varied discrimination experiences, including in salient childhood relationships with teachers and peers, are valuable strengths of this study. However, additional contextual features merit consideration to develop a comprehensive model of how perceived discrimination relates to later adjustment and how ERI moderates this relation. Relevant contextual factors might include the demographic composition of the school, family ethnic

socialization, or teachers' beliefs about ethnic-racial phenotypes. Prior studies suggest that these factors may further influence experiences of discrimination and ERI development in early childhood (Derlan et al., 2017; Graham, Munniksma, & Juvonen, 2014; Oyserman & Yoon, 2009; Rivas-Drake & Witherspoon, 2013; Seaton, Yip, & Sellers, 2009).

In sum, the current study extends the extant literature by demonstrating the risk and protective effects of discrimination and ERI, respectively, in a diverse sample of young children. However, future research is needed to replicate and extend the obtained findings. In particular, there remains a need to identify processes that may underlie these relations, especially those by which ERI engenders positive youth development (Neblett, Rivas-Drake, & Umaña-Taylor, 2012). Candidate mechanisms may include ethnic-racial and cultural socialization, or ethnic-racial diversity of the child's school and neighborhood, but these and additional possibilities warrant further inquiry. Building on the short-term prospective design of the current study, future studies should examine these relations in the same sample over longer periods of time and across multiple settings, including children's schools, neighborhoods, and their broader community (Witherspoon, Daniels, Mason, & Smith, 2016).

### Concluding Comments

Overall, both the global and process-based models of ERI examined here supported prior evidence that early ERI, particularly ERI commitment, can buffer children against the negative effects of ethnic-racial discrimination (Dulin-Keita et al., 2011; Serrano-Villar & Calzada, 2016; Tabbah et al., 2016). Of note, the current data were collected between 2011 and 2013, which was well before the widespread public discourse regarding racially motivated violence that has risen to prominence over the past few years. Recent events and media coverage may serve to increase children's experiences of discrimination and/or their awareness of discriminatory experiences directly via media exposure or indirectly via parental socialization in response to these violent events. Thus, the current climate magnifies the significance of our findings, which support prior assertions that exposure to ethnic-racial bias and discrimination at an early age has negative implications for later development (Spencer et al., 1997; Swanson et al., 2003).

Although this investigation reveals a cautionary tale about how ethnic-racial minority status can be a risk factor in development, there is a silver lining. Children's understanding of what their ethnicity and race mean to them, particularly a subjective sense of belonging to one's ethnic-racial group or groups (i.e., ERI commitment), can mitigate the negative effects of discriminatory experiences on later behavioral adjustment. Parents, educators, and other community leaders can help children navigate institutionalized racism and the prejudicial attitudes and discriminatory practices it foments by cultivating their ERI. Coupled with family ethnic socialization (Umaña-Taylor, Alfaro, Bámaca, & Guimond, 2009; Umaña-Taylor & Fine, 2001; Umaña-Taylor & Guimond, 2010), systematic efforts to encourage children's sense of identification and sense of belonging to their ethnic-racial group(s) through education, media, and community engagement are important to promote positive ERI development. At the same time, documenting the

salience of early ethnic-racial discrimination and the power of ERI is only half the battle. Preparing children for the harsh realities of racism and discrimination and equipping them with a strong sense of ERI can only carry them so far. Moving forward, the challenge for researchers and practitioners alike is to understand and change structural systems of disadvantage based on ethnicity-race that perpetuate educational, economic, and adjustment disparities.

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