



Black Adolescent Self-Perceptions: The Roles of Ethnic Identity and Stress Exposure

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Abstract

Ethnic identity is associated with various positive outcomes for Black adolescents, but more information is needed about its potential to protect adolescents exposed to stress. Stressful life events predict a range of health outcomes, yet few studies have examined their association with adolescent self-perception. Ethnic identity may serve as protection from stress. This study examines longitudinal data to understand relationships between ethnic identity, stressful life events, and self-perception (i.e., social competence, behavioral conduct, and global self-worth). The sample included 140 adolescents (65% female; 93% Black) with an average age of 12.55 ($SD = 0.85$). Results indicate stressful life events are associated with behavioral conduct self-perception, and ethnic identity is associated with global self-worth. Ethnic identity behavior and other group orientation are associated with self-perception. Ethnic identity and ethnic identity behavior moderate the relationship between stressful life events and behavioral conduct self-perception. Understanding the connections between adolescent stressors and strengths provides insight into research, practice, and policy directions to promote positive outcomes.

Keywords Ethnic identity · Stressful life events · Self-perception · Black adolescents

Introduction

Exploring the risks and resiliencies associated with young people's environmental conditions and life experiences is a prominent approach to understanding adolescent development (e.g., Luthar et al., 2000). Stressful life events at individual and family levels, such as witnessing violence, parental divorce, and experiencing abuse during adolescence have enormous effects on development and long-term health outcomes (Nurius et al., 2015). Conceptualized within a stressor model of development, stressful life experiences lead to negative mental health outcomes for adolescents (Grant et al., 2003). Given the disproportionately higher levels of adverse childhood experiences faced by adolescents of color relative to others (Sacks & Murphey, 2018), it is crucial to understand the implications of this heightened risk for adolescents who identify as ethnic minorities as well as the characteristics that may protect them from adverse outcomes. These protective characteristics, such as self-

perception (Harter, 1985), can be identified using resilience theory as a theoretical approach (Luthar et al., 2000). This study examines adolescent ethnic identity as a potential protective factor in the relation between stressful life experiences and self-perception outcomes (i.e., social competence, behavioral conduct, and global self-worth).

Resilience Theory and the Stressor Model of Adolescent Development

Resilience is a dynamic process of positive adaptation in the face of stress and adversity (Luthar et al., 2000). This strengths-based approach seeks to understand healthy adolescent development despite exposure to environmental risks by identifying protective factors that promote positive outcomes. These factors are typically individual, family, or community characteristics that can mitigate the effects of certain stressors on adolescent outcomes. Resilience theory has grown in popularity in recent decades as an approach to understanding human diversity in adaptation to stress, but it is not without criticism regarding the consensus of how adversity, resilience, and outcomes are conceptualized (see Van Breda, 2018). With these concerns in mind, this study considers resilience a multilevel process and acknowledges the complexity of the intermediate factors that explain resilience.

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The stressor model of adolescent development comprises reciprocal, dynamic, and specific relationships between adolescent stressors and psychopathology (Grant et al., 2003). Stressful life events, including chronic conditions and events, are associated with long-term health concerns, such as psychopathology, cancer, heart disease, violent behavior, and substance use disorders (Hughes et al., 2017). However, because stressful life events do not invariably lead to negative outcomes for adolescents, it is important to identify factors that may explain why certain adolescents fare better than others under stressful circumstances (Kushner, 2015). Therefore, models designed to understand the influence of stressors on adolescent outcomes should consider mediating variables, such as biological, psychological, and social processes, as well as moderating influences of individual characteristics and environmental contexts (Grant et al., 2003) that will provide insight into whether and how specific stressors uniquely impact specific psychological outcomes (McMahon et al., 2003). Current literature lacks a nuanced understanding of how individual adolescent characteristics impact their experiences of stress (Kushner, 2015). The integration of the stressor model of adolescent development (Grant et al., 2003) with resilience theory (Luthar et al., 2000) provides researchers the tools necessary to deepen our understanding of the effects of stressful conditions for adolescents.

Self-perception

Adolescent self-perception constitutes a collection of domain-specific evaluations that originate during middle childhood and comprise judgments about one's behavioral conduct, physical appearance, and scholastic, social, and athletic competence (Harter, 1985). Respectively, these self-perceptions reflect adolescent evaluations of their satisfaction with the way they behave, how they look, their performance in school, their confidence in social groups, and their athletic abilities (Harter, 1985). Self-perception also includes a distinct value judgment of an adolescent's overall worth as a person, which is referred to as global self-worth or self-esteem (Harter, 1985). Although self-perception is best conceptualized and measured as a multidimensional construct, most research continues to represent self-worth and self-esteem as general, unidimensional constructs.

In a review of longitudinal studies, Orth & Robins (2014) found that self-perception is positively associated with a range of beneficial outcomes, including mental and physical well-being, social satisfaction and support, educational and professional success, and prosocial behavior. For individuals identifying as Black, self-perception is associated with perceived stress, symptoms of anxiety and depression, and academic functioning (Hope et al., 2013). However, the effects of self-perception are not always straightforward.

The relationship between self-esteem and various positive outcomes is often modest and indirect, suggesting other factors may be at play. Further, important details emerge when domains of self-perception were examined individually. While self-competence generally becomes more stable throughout development, research with an ethnically diverse sample demonstrated middle school students experience declines in social competence while behavioral conduct self-perception tends to decrease when students enter high school (Cole et al., 2001). Overall, Black adolescents are particularly underrepresented in the modest amount of literature that investigates various self-perception domains.

Stressful Life Events

Stressful life events during adolescence are common and harmful experiences that impact a wide array of psychological outcomes (Nurius et al., 2015), including self-esteem (Baldwin & Hoffmann, 2002). These events involve life transitions or acute traumatic events, such as parental divorce or separation, school transition, sickness or loss of a family member, family drug use, or crime (Dubow et al., 1997). Stressful life events during adolescence are consistently linked with increased risk for internalizing and externalizing mental health symptoms for adolescents (March-Llanes et al., 2017) and have long-term impacts on adult psychological well-being (Nurius et al., 2015). These risks are multiplicative in nature, such that risk levels increase exponentially when adolescents are exposed to multiple stressful events (Attar et al., 1994).

When adolescents experience stressful life events, such as parental divorce, loss of a family member, breaking up with a romantic partner, and physical illness, they demonstrate an increased risk for mood problems, which can be associated with low self-perception (Creemers et al., 2013). This connection between stressful life events and self-perception may be explained in part by the reciprocal association between stressful life events and internalizing and externalizing adolescent maladjustment. Specifically, adolescents who experience negative outcomes due to stressful life events are more at risk for experiencing additional traumatic events (Kim et al., 2003).

Rather than stressful life events, most research on the impact of adolescent stress on self-perception has focused on adverse childhood experiences. As opposed to a broad conceptualization of stressful life events, which include relatively typical stressful life events along with more extreme incidents, adverse childhood experiences refer to objectively disruptive experiences such as incarceration of a family member, mental illness, substance use, and exposure to violence (Sacks & Murphey, 2018). In this way, adverse childhood experiences can be thought of as a type of

stressful life experience. While not identical, the overlap of these constructs indicates understanding the impact of adverse childhood experiences may reveal important information about broader stressful experiences as well. A challenge of this body of literature is that studies often focus on a unique type of adverse childhood experience within specific populations, making it difficult to assess the broader impact across stressors (Shen, 2009). However, a review of the specificity of adolescent stressors found that varied stressors lead to similar psychological issues regardless of the type of event a young person experiences (McMahon et al., 2003). The detrimental outcomes of stressful life events are well-established, but their effects on self-perception have rarely been studied, especially when self-perception is conceptualized as a multidimensional construct. Further, adolescents' unique risks and resiliencies are often unexamined. Potential protective factors, such as self-perception and ethnic identity, should be examined in the context of stressful life experiences among diverse adolescents.

Ethnic Identity in Adolescence

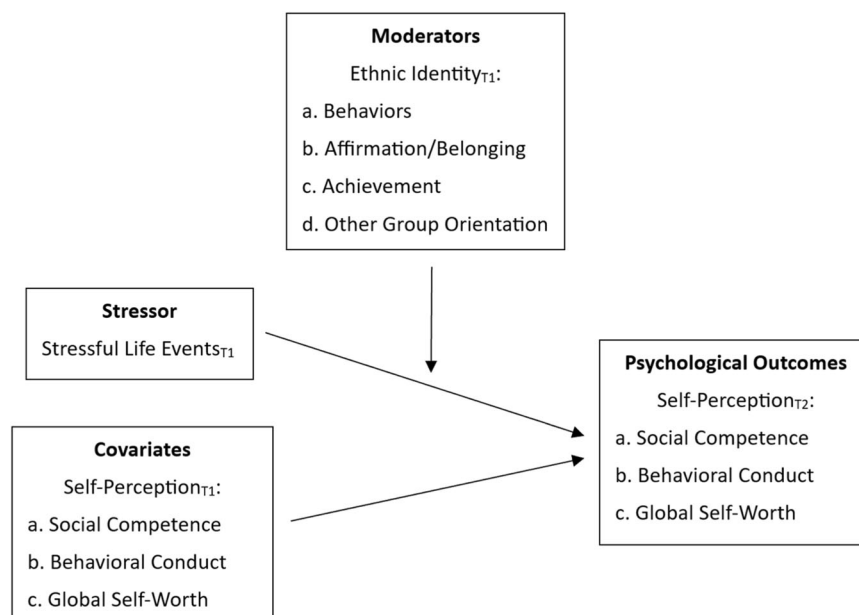
Ethnic identity is a spectrum of attitudes and behaviors associated with the self-identification of an individual within an ethnic group (Phinney et al., 1997). For adolescents, families are a primary source of ethnic-racial socialization information (Reynolds & Gonzales-Backen, 2017). Simultaneously, as adolescents begin to rely more on peers than family for social support, their ethnic identity development is influenced by various sources (Jones et al., 2020). Given the pivotal psychological and social changes adolescents experience (e.g., improvements in abstract thinking, shifting social circles) that influence their ethnic identity development (Jones et al., 2020), adolescence is a crucial period for investigation.

Ethnic identity is positively associated with psychosocial functioning, academic success, and health behaviors and attitudes for Black adolescents (Rivas-Drake et al., 2014). In a latent profile analysis of ethnic identity and self-concept with Black and Latina/o adolescents, participants who endorsed high levels of ethnic/racial identity also reported the highest levels of psychosocial adjustment, including less anxiety and higher global identity, life satisfaction, and self-esteem (Wantchekon & Umaña-Taylor, 2021). Stronger ethnic identity is also associated with fewer aggressive behaviors (e.g., hitting, threatening) and beliefs about the acceptability of aggressive behaviors (McMahon & Watts, 2002). Ethnic-related messages from families are protective against adolescent negative mental health, especially when messages are focused on ethnic-related pride. Ethnic identity is a central factor in adolescent identity development that is associated with psychological functioning, including self-esteem (Umaña-Taylor, 2011).

While ethnic identity is most commonly examined as a comprehensive construct, it includes four distinct components: behaviors, affirmation, achievement, and other group orientation (Phinney, 1992). Ethnic identity behaviors include activities that serve as expressions of identity (e.g., exploring customs and cuisine, interacting with members of one's own ethnic group; Phinney & Ong, 2007). Engagement in cultural socialization is linked with positive perceptions of school climate and academic performance (Wang et al., 2023). Ethnic identity affirmation/belonging refers to pride and connection with one's ethnic group (Umaña-Taylor et al., 2009) and predicts positive mental health for ethnic minority adolescents (Fisher et al., 2014). Ethnic identity achievement describes one's understanding of the meaning of ethnic group membership, and predicts ethnic group-related self-worth, which is subsequently associated with global self-worth (Grindal et al., 2021). Finally, other group orientation refers to attitudes toward interactions with other ethnic groups (Phinney, 1992) and is associated with self-expectations of academic and career achievement for Black students (Fife et al., 2011). Although ethnic identity is beneficial for multiple ethnic groups (Verkuyten, 1994), it may be particularly important for Black adolescents, who typically have stronger ethnic identities (Phinney, 1992) and more adverse childhood experiences compared to Latina/o, White, and Asian American adolescents (Sacks & Murphey, 2018).

Black youth are more likely to live in low socioeconomic settings than other youth, and these racial disparities have intensified in recent decades (Paschall et al., 2018). For ethnic minority adolescents in high-poverty settings, ethnic identity achievement buffers the influence of family-level stressors such as financial hardship and lack of parental availability on displays of aggression and criminal offenses (Williams et al., 2014). Ethnic identity is a central developmental process for many youth of color and may protect adolescents from stress by offering avenues of social support and opportunities to develop positive coping skills (Williams et al., 2014). Ethnic identity protects against the influence of negative school climate on self-esteem for Black middle school students (Fisher et al., 2020). In addition, ethnic identity as a whole protects against the negative consequences of discrimination, a prevalent experience for Black adolescents that can have deleterious effects on self-esteem (Neblett et al., 2012). In general, ethnic identity and self-perception serve as strengths for Black adolescents (Phinney, 1992). Strengths-based approaches are needed, as they are especially lacking in research with Black youth and youth living in high-poverty neighborhoods (McCamey Jr. & Payne, 2015). Further investigation is necessary to understand how ethnic identity and its components are associated with stressors and self-perception among Black adolescents.

Fig. 1 Model of proposed hypotheses of relationships between stressful life events, ethnic identity, and self-perception for urban black youth



Current Study

Stressful life events have strong influences on adolescent development and functioning, including negative impacts on self-perception. Strengths-based approaches are necessary to examine assets that can protect adolescents from poor outcomes. Ethnic identity is a crucial developmental process and aspect of identity for adolescents, but its connection with stressful life events has not been thoroughly studied. Thus, this study examines the role of ethnic identity and self-perception, two important potential strengths for Black adolescents living in high-poverty settings in the context of various ecological stressors. This study proposes a positive main effect of ethnic identity and each of its components on each type of self-perception, taking into account self-perception at time one (Hypothesis 1; see Fig. 1). In addition, it is expected that ethnic identity and its components will moderate the relationships between stressful life events and each of the self-perception outcomes, taking into account self-perception at time one, such that ethnic identity and its components will protect against the negative effects of stressful life events (Hypothesis 2; see Fig. 1).

Method

Participants

The sample includes participants who completed self-report surveys as part of a violence prevention research project. The schools were selected based on principal requests for violence prevention interventions from the DePaul Community Mental Health Center. At the time of survey

completion, the schools attended by participants were located in a public housing development community in Chicago where approximately 7% of residents were employed, violent crime rates were higher compared to surrounding districts, 43% of the population had an annual income below \$4,000, and over 94% of participants were eligible for free or reduced lunch (McMahon & Watts, 2002). Surveys were collected at two timepoints (i.e., during the fall and spring of one academic year) to assess for changes over time. At time one, 209 participants completed at least part of a survey that included assessments of stressful life events, self-perception, and ethnic identity. At time two, 148 participants completed at least part of a survey that included a self-perception measurement. The longitudinal sample included 140 adolescents (130 Black, 10 multiracial; 91 females, 49 males) in grades 6–8 (ages 11–14; SD = 0.85; M = 12.55) from two public schools who responded to the surveys administered at both timepoints.

Measures

Stressful life events

This 13-item scale measures whether respondents have experienced certain individual, family, and peer-level life transitions and stressful life events within the past year. The scale is a compilation of items taken from other scales that have been used to measure stressful life events for urban adolescents with ethnic minority status (i.e., Attar et al., 1994; Sandler & Block, 1979; Work et al., 1990). Sample items include “In the past year, has your family had a new baby come in the family?” and “In the past year, has a close

family member been arrested or in jail?”. Participants responded *yes* or *no* to each question for a total possible score of 13. Because this scale assesses discrete stressful events that are not theoretically related to each other, measuring internal consistency statistically is not useful.

Multi-group Ethnic Identity

The Multi-Group Ethnic Identity Measurement is a 20-item assessment of ethnic identity that includes four subscales: ethnic behaviors and practices, ethnic identity achievement, affirmation and belonging, and attitudes towards other groups (Phinney, 1992). For adolescents, overall reliability for this scale is good (Cronbach’s $\alpha = 0.81$; Phinney, 1992). Five items were used to measure affirmation/belonging, including “I feel a strong attachment towards my own racial group” ($\alpha = 0.74$). The subscale for ethnic identity behaviors/practices was measured using two items, including “I participate in cultural practices of my own group, such as special food, music, or customs” ($r(68) = 0.13, p = 0.15$). Reliability was measured using a Spearman correlation statistic rather than Cronbach’s α due to the two-item nature of this scale (Eisinga et al., 2013). Ethnic identity achievement was measured using five items, including “I have a clear sense of my racial background and what it means for me” ($\alpha = 0.64$). Finally, four items were used to measure other group orientation, including “I enjoy being around people from racial groups other than my own” ($\alpha = 0.65$). The original subscales by Phinney (1992) included seven items for ethnic identity achievement and six items for other group orientation. Reliability analyses were conducted using SPSS Version 26 (IBM Corporation, 2019), and items with low reliability were examined further. Item-level analyses revealed optimal reliability for these subscales when two of the items from each of these scales were removed.¹ Participants responded to each item using a four-point scale ranging from strongly disagree to strongly agree. A mean total score was produced for each participant as well as mean scores for each of the four subscales, accounting for reverse-scored items. The total score was derived from the average of the 12 items measuring ethnic behaviors, ethnic identity achievement, and affirmation and belonging ($\alpha = 0.74$). Based on previous factor analyses, other group orientation is a distinct factor of ethnic identity and was thus not included in the total score (Phinney, 1992).

¹ Items removed from the other group orientation subscale include: “I sometimes feel it would be better if different racial groups didn’t try to mix together” and “I don’t try to become friends with people from other racial groups.” Items removed from the achievement subscale include: “I am not very clear about the role of my race in my life” and “I really have not spent much time trying to learn more about the culture and history of my racial group.”

Self-perception

The 18-item self-perception scale used for this study is based on the original 36-item Self Perception Scale for Children (Harter, 1985), which measures six domains of adolescent self-perception. This abbreviated version focuses on three domains: social competence, behavioral conduct, and global self-worth, each of which were assessed using the original six-item subscales. Participants indicated which of two statements they most related to, and then chose whether the statement was ‘sort of’ or ‘really’ true for them. A score of one (‘sort of’) or two (‘really’) was assigned to the participant’s response if they selected the response associated with lower self-perception. A score of three (‘sort of’) or four (‘really’) was assigned if the participant selected the sentence indicating higher self-esteem. An example item from the social competence subscale is “some kids would like to have a lot more friends BUT other kids have as many friends as they want.” From the behavioral conduct subscale, an example is “some kids behave themselves very well BUT other kids find it hard to behave themselves.” Finally, an example item from the global self-worth subscale is “some kids like the kind of person they are BUT other kids often wish they were someone else”. Each question had a maximum score of four, with higher scores indicating more positive self-judgment. Average scores for each subscale were calculated. Reliabilities for these subscales are good ($\alpha = 0.71$ – 0.87 ; Harter, 2012). For this study, Cronbach’s α coefficients for the social competence, behavioral conduct, and global self-worth scales are 0.74, 0.71, and 0.78, respectively.

Procedure

Following DePaul University IRB approval, parents of students were provided information and a chance to decline participation on behalf of their students through newsletters, permission forms sent home with students, and report card pickup. Following student assent, students from four classes in each school completed surveys during school hours. Students were notified that they were free to decline participation, skip items, or withdraw participation at any point. Data collection occurred under the supervision of trained graduate students on two days during fall and two days during spring of one academic year. Surveys were administered aloud to account for differences in student reading abilities.

Results

Preliminary Analyses

An a priori power analysis using G*Power3 indicated a minimum sample of 136 participants is required to detect a

Table 1 Pooled means, standard deviations, and correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Stressful life events _{T1}	6.14	2.13												
2. Ethnic identity _{T1}	2.23	0.46	−0.07											
3. Affirmation/belonging _{T1}	3.08	0.67	−0.08	0.79 ⁺										
4. Behaviors _{T1}	2.76	0.64	0.02	0.68 ⁺	0.40 ⁺									
5. Achievement _{T1}	2.38	0.66	0.05	0.77 ⁺	0.45 ⁺	0.65 ⁺								
6. Other group orientation _{T1}	2.51	0.83	0.02	0.43 ⁺	0.37 ^{**}	0.58 ⁺	0.54 ⁺							
7. Social competence _{T1}	2.10	0.64	0.08	−0.02	0.03	−0.01	−0.04	−0.05						
8. Behavioral conduct _{T1}	2.66	0.59	−0.13	0.12	0.14	0.13	0.05	0.07	0.16					
9. Self-worth _{T1}	3.14	0.62	−0.12	0.17	0.23 [*]	0.06	0.08	0.11	0.34 ⁺	0.28 ^{**}				
10. Social competence _{T2}	2.04	0.68	−0.05	0.10	0.05	0.11	0.09	−0.01	0.48 ⁺	0.09	0.38 ⁺			
11. Behavioral conduct _{T2}	2.76	0.64	−0.08	0.14	0.09	0.32 ⁺	0.14	0.26 ^{**}	0.03	0.27 ^{**}	0.22 [*]	0.14		
12. Self-worth _{T2}	3.16	0.67	−0.11	0.26 ^{**}	0.22 [*]	0.31 ⁺	0.14	0.24 ^{**}	0.23 ^{**}	0.17	0.48 ⁺	0.33 ⁺	0.43 ⁺	

Subscripts of T1 = time one and T2 = time two data collection

^aFor this table only, values are derived from original, non-reverse coded variables to support interpretability

* $p < 0.05$; ** $p < 0.01$; + $p < 0.001$

medium effect size of $f^2 = 0.15$ using an alpha level of 0.05 to reach a power of 0.80 in a model that includes two independent variables, five control variables, and one moderator variable (Faul et al., 2007; Funder & Ozer, 2019). All analyses were conducted using RStudio statistical software (RStudio Team, 2021). Means, standard deviations, and bivariate correlations among all variables are presented in Table 1. Descriptive statistics and histograms revealed that the distributions of social competence, behavioral conduct, and global self-worth at time two were negatively skewed. All variables were reverse-coded to address non-normality and create positively skewed variables that are consistent with gamma distributions (Wicklin, 2016). Regression diagnostics indicated all other assumptions for linear regressions were met (Osborne & Waters, 2002). Plots of models and residuals indicated normal distribution of residuals and a linear relationship between each independent variable and each of the self-perception variables. Analysis of variance ratios confirmed assumptions of homoscedasticity (Cohen et al., 2003). Preliminary regression analyses indicated neither gender nor age were associated with social competence self-perception ($\beta = -0.03$, $p = 0.55$; $\beta = -0.01$, $p = 0.79$), behavioral conduct self-perception ($\beta = -0.02$, $p = 0.67$; $\beta = 0.01$, $p = 0.82$), or global self-worth ($\beta = 0.01$, $p = 0.98$; $\beta = 0.01$, $p = 0.70$). These demographic variables were thus excluded from further analyses, and no other control variables were examined.

Missing Data

An initial review of the data revealed that more than 10% of data were missing for each study variable. When this threshold is exceeded, multiple imputation using auxiliary

variables is recommended (Newman, 2014). Multiple imputation is suggested as an alternative to listwise deletion and single imputation methods due to its ability to reduce bias and maximize the validity of statistical estimates (Fichman & Cummings, 2003; Sinharay et al., 2001). The MICE package in R was utilized to perform multiple imputation (van Buuren & Groothuis-Oudshoorn, 2011). MICE implements multiple imputation by chained equations using type one predictive mean matching (also known as fully conditional specification), which involves specifying the imputation model based on each individual variable (van Buuren & Groothuis-Oudshoorn, 2011). Prior to imputation, a predictor matrix in conjunction with passive imputation was specified (Van Buuren & Groothuis-Oudshoorn, 2011). The predictor matrix was designed so that each variable was predicted only by other variables of the same time and scale and passive imputation codes were included to ensure scales were properly calculated. Compared to complete case analysis and single imputation methods, this strategy can achieve smaller mean square error and thus improved precision because each imputation is generated based on the most recently imputed values (Eekhout et al., 2018). To optimize statistical power, 40 imputations were performed with 10 iterations each (Graham et al., 2007; Raghunathan et al., 2001). All analyses were performed on each of these 40 datasets, and the results reflect the average findings across all imputed datasets.

Multiple Linear Regressions

Six generalized linear models (GLMs) were performed to assess the influence of ethnic identity on stressful life events at time one with each type of self-perception (i.e., social competence, behavioral conduct, and global self-worth) at

Table 2 Pooled main effect estimates for multiple regressions

Variable	Social Competence _{T2}			Behavioral Conduct _{T2}			Global Self-Worth _{T2}		
	β	<i>SE B</i>	<i>t</i>	β	<i>SE B</i>	<i>t</i>	β	<i>SE B</i>	<i>t</i>
Stressful life events _{T1}	-0.02	0.01	-1.03	-0.01	0.01	-0.59	-0.01	0.01	-0.82
Self-competence _{T1}	0.26 ⁺	0.05	5.61	0.14**	0.05	3.10	0.27 ⁺	0.05	5.74
Ethnic identity _{T1}	0.08	0.06	1.31	0.08	0.06	1.39	0.16*	0.07	2.40
Self-competence _{T1}	0.26 ⁺	0.05	5.57	0.14**	0.05	3.08	0.26 ⁺	0.05	5.50
Affirmation/belonging _{T1}	0.01	0.04	0.28	0.02	0.05	0.55	0.06	0.05	1.21
Self-competence _{T1}	0.26 ⁺	0.05	5.50	0.14**	0.04	3.08	0.26 ⁺	0.05	5.37
Behaviors _{T1}	0.06	0.04	1.54	0.12 ⁺	0.03	3.56	0.13 ⁺	0.04	3.65
Self-competence _{T1}	0.26 ⁺	0.05	5.60	0.13**	0.04	2.97	0.26	0.05	5.80
Achievement _{T1}	0.06	0.04	1.41	0.06	0.04	1.48	0.06	0.04	1.37
Self-competence _{T1}	0.26 ⁺	0.05	5.66	0.15**	0.05	3.24	0.27 ⁺	0.05	5.78
Other group orientation _{T1}	0.01	0.04	0.31	0.10**	0.03	2.90	0.08*	0.04	2.32
Self-competence _{T1}	0.26 ⁺	0.05	5.51	0.14**	0.04	3.23	0.26 ⁺	0.05	5.60

Subscripts of T1 = time one and T2 = time two data collection

^aFor each model, only the specific type of self-competence being assessed was controlled for as a covariate
* $p < 0.05$; ** $p < 0.01$; ⁺ $p < 0.001$

time two (see Table 2). Time one ethnic identity was positively associated with time two global self-worth ($\beta = 0.16$, $p = 0.02$) but not social competence or behavioral conduct self-perception. In main effect models, stressful life events was not a significant predictor of any of the three types of self-perception. Twelve multiple linear regressions were conducted to examine the four components (i.e., affirmation, behaviors, achievement, and other group orientation) of ethnic identity at time one as predictors of the three types of self-perception. Other group orientation and ethnic identity behavior were each significant predictors of behavioral conduct self-perception ($\beta = 0.10$, $p = 0.004$; $\beta = 0.12$, $p < 0.001$) and global self-worth ($\beta = 0.08$, $p = 0.02$; $\beta = 0.13$, $p < 0.001$). The significant relationships found in the main effect models are depicted in Fig. 2.

Moderated GLMs were conducted to analyze the hypothesized moderation effects of ethnic identity and the four components of ethnic identity at time one in the relationship between stressful life events and the three components of self-perception at time two (see Table 3). In accordance with multiple imputation guidelines, interaction terms were created for each hypothesized moderation (van Buuren & Groothuis-Oudshoorn, 2011). Ethnic identity was a significant moderator in the relationship between stressful life events at time one and behavioral conduct self-perception at time two ($\beta = 0.06$, $p = 0.045$; see Fig. 3). For low levels of ethnic identity, behavioral conduct self-perception at time two decreased as time one stressful life events increased. However, for higher levels of ethnic identity, time one behavioral conduct self-perception remained more stable for all levels of stressful life events. In this model, stressful life events was a significant predictor of behavioral conduct

self-perception, such that higher levels of stressful life events predicted lower levels of behavioral conduct self-perception ($\beta = -0.14$, $p = 0.04$).

In addition, ethnic identity behavior was a significant moderator in the relationship between stressful life events and behavioral conduct self-perception ($\beta = 0.04$, $p = 0.008$; see Fig. 4). For low levels of ethnic identity behavior, behavioral conduct self-perception at time two decreased as time one stressful life events increased. However, for high levels of ethnic identity behavior, behavioral conduct self-perception at time two increased as time one stressful life events decreased. In this model, stressful life events were significant predictors of behavioral conduct self-perception, such that higher levels of stressful life events predicted lower levels of behavioral conduct self-perception ($\beta = -0.12$, $p = 0.003$). Neither ethnic identity affirmation and belonging nor ethnic identity achievement were associated with self-perception.

Discussion

Adolescents experience a range of stressors in their daily lives, which can have far-reaching effects on their mental and physical well-being. Specifically, stress during adolescence is associated with poorer self-perception, which subsequently diminishes health, academic, and professional outcomes (Orth & Robins, 2014). As adolescents undergo the complex and critical process of ethnic identity development, they can establish many strengths associated with sense of belonging, ethnic group activities, achievement, and orientation to other ethnic groups. Ethnic identity needs to be examined in relation to stress and psychosocial

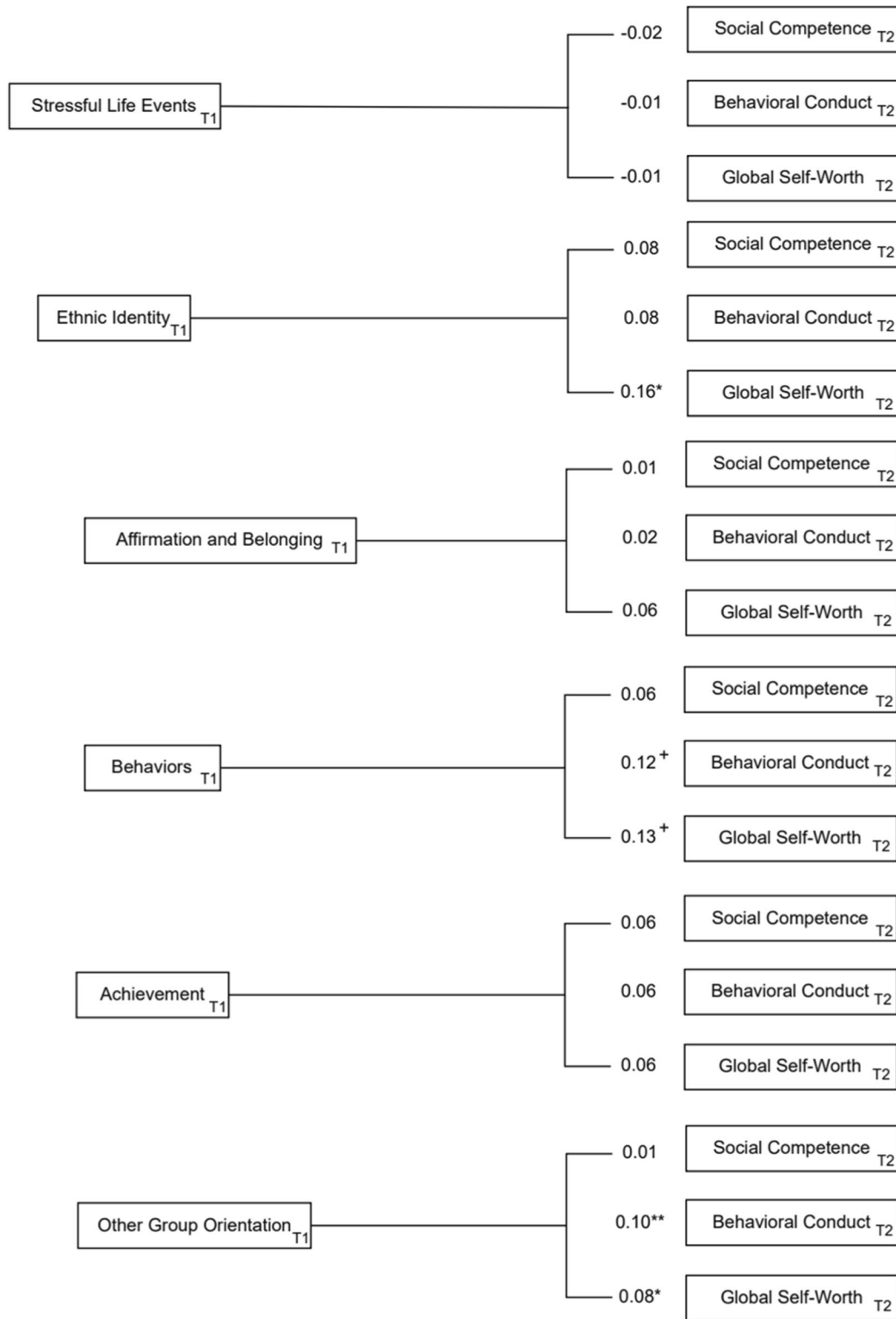


Fig. 2 Results of main effects between stressful life events, ethnic identity, and self-competence. * $p < .005$; ** $p < 0.01$; ⁺ $p < 0.001$

outcomes in order to inform intervention development and promote optimal adolescent outcomes across diverse environments. Specifically, the goal was to understand the relationship between stressful life events, self-perception,

and ethnic identity for adolescents. Ethnic identity predicted global self-worth for Black adolescents at the end of the academic year. In addition, individual components of ethnic identity predicted aspects of self-competence, highlighting

Table 3 Pooled moderation effect estimates with ethnic identity and components as moderators

Variable	Social competence _{T2}			Behavioral conduct _{T2}			Global self-worth _{T2}		
	β	SE	<i>B t</i>	β	SE	<i>B t</i>	β	SE	<i>B t</i>
Stressful life events _{T1}	-0.02	0.07	-0.33	-0.14*	0.07	-2.12	-0.06	0.07	-0.76
Ethnic identity _{T1}	0.05	0.21	0.25	-0.29	0.20	-1.47	0.02	0.22	0.10
Stressful life events _{T1} x Ethnic identity _{T1}	0.01	0.03	0.13	0.06*	0.03	2.02	0.02	0.03	0.63
Self-competence _{T1}	0.26 ⁺	0.05	5.59	0.14**	0.05	3.02	0.26 ⁺	0.05	5.39
Stressful life events _{T1}	-0.06	0.05	-1.26	-0.12**	0.04	-3.01	-0.05	0.05	-1.14
Behaviors _{T1}	-0.05	0.12	-0.40	-0.15	0.11	-1.41	0.04	0.12	0.33
Stressful life events _{T1} x Behaviors _{T1}	0.02	0.02	0.91	0.04**	0.02	2.70	0.02	0.02	0.85
Self-competence _{T1}	0.27 ⁺	0.05	5.79	0.12**	0.04	2.78	0.26 ⁺	0.05	5.62

Subscripts of T1 = time one and T2 = time two data collection

³For each model, only the specific type of self-competence being assessed was controlled for as a covariate

* $p < 0.05$; ** $p < 0.01$; ⁺ $p < 0.001$

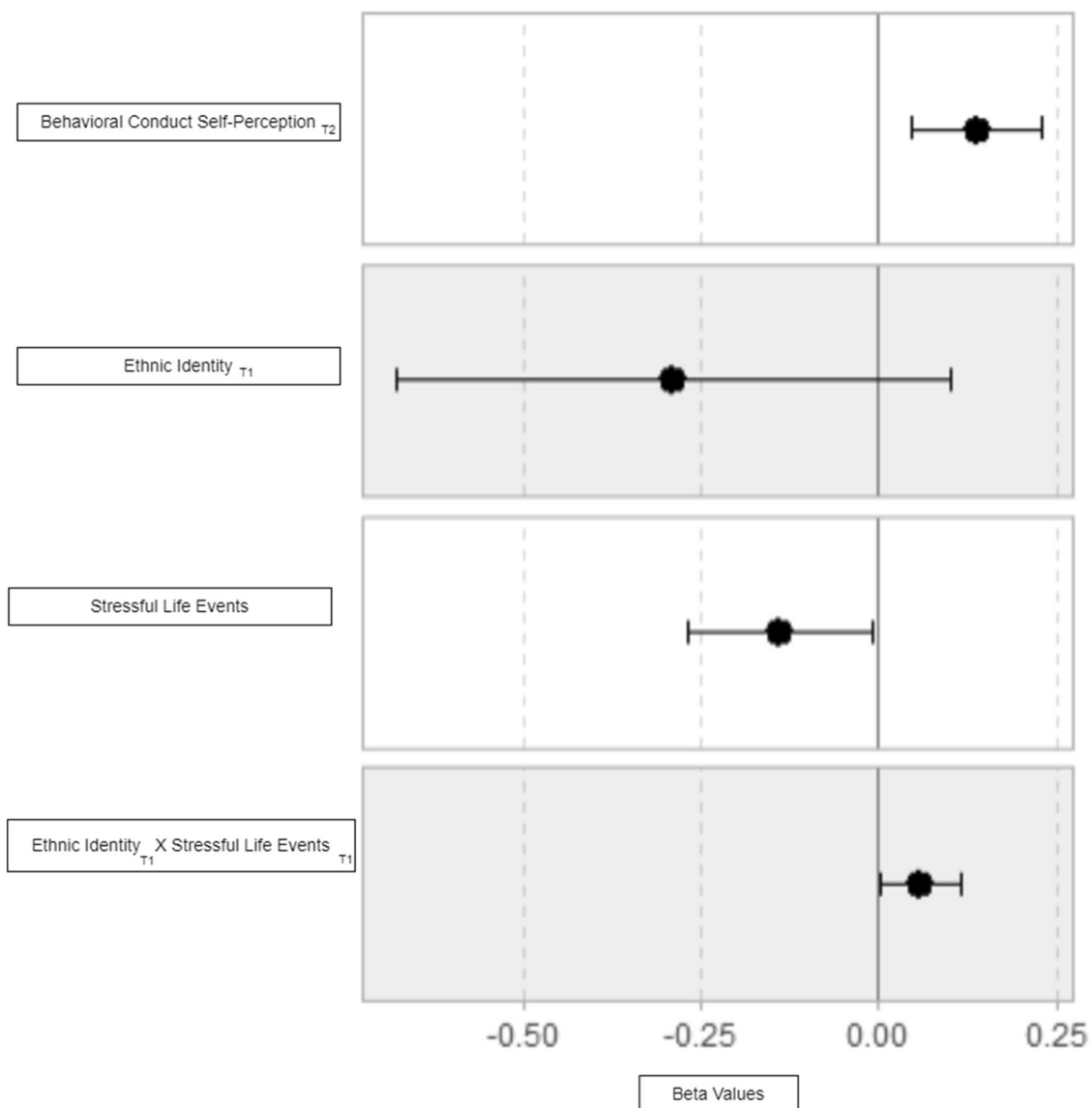


Fig. 3 Effects of interaction of stressful life events and ethnic identity on behavioral conduct self-perception

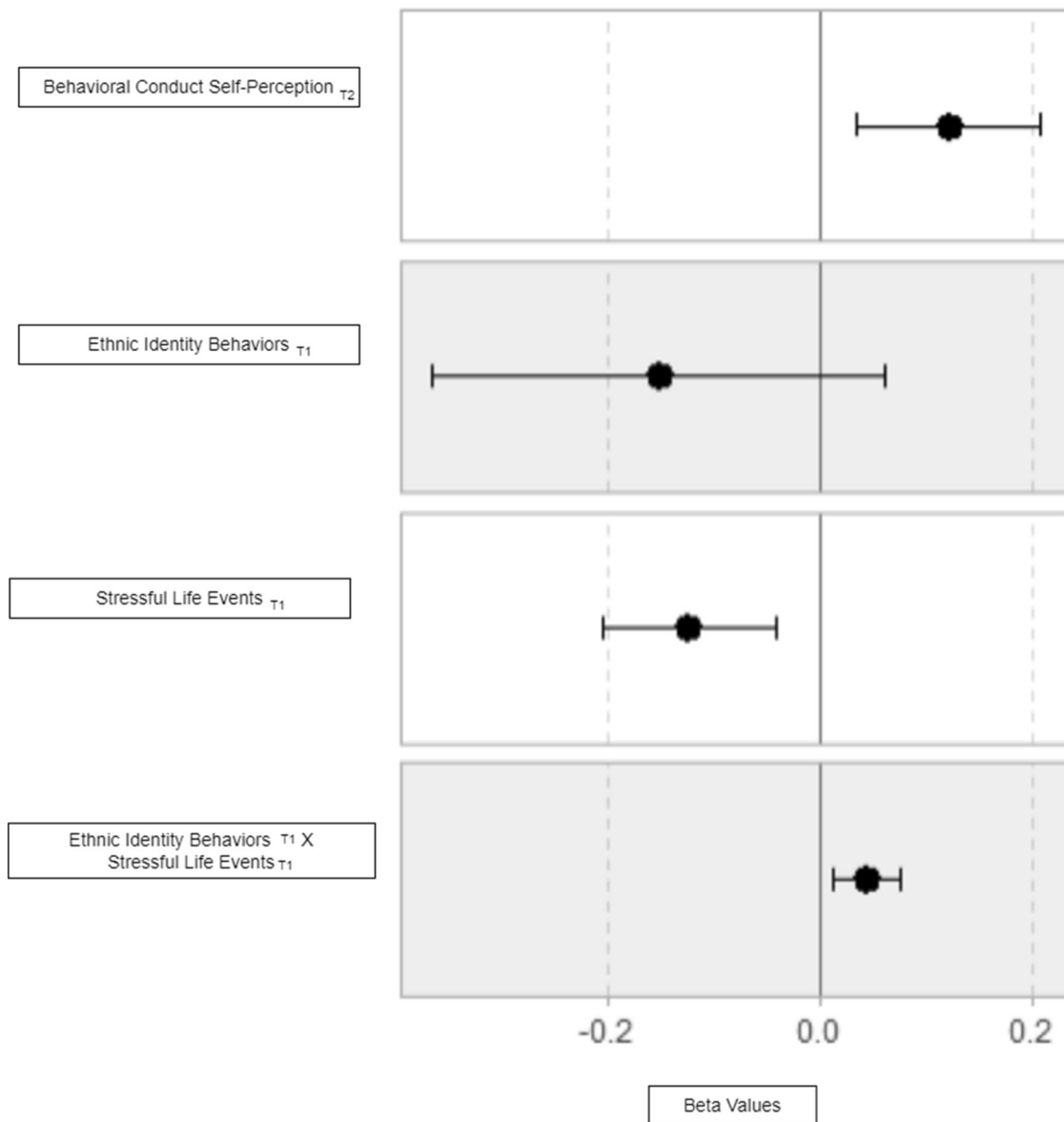


Fig. 4 Effects of interaction of stressful life events and ethnic identity behaviors on behavioral conduct self-perception

the utility of measuring these facets individually. Ethnic identity as a whole and ethnic identity behaviors emerged as significant moderators in the relation between stressful life events and behavioral conduct self-perception.

Ethnic identity was associated with greater adolescent global self-worth, providing support for the consensus in the literature that higher levels of ethnic identity are associated with more positive self-esteem (e.g., Umaña-Taylor et al., 2018). However, ethnic identity was not associated with social competence nor behavioral conduct self-perception, challenging the assumption that ethnic identity has a uniform promotive impact on all types of self-perception. This is consistent with research that has found a relationship between ethnic identity and overall self-worth but not scholastic or social competence for undergraduate students

who identify as ethnic minorities (Gummadam et al., 2016). On the other hand, longitudinal research with Black children in elementary school found that ethnic identity is associated with nearly all domains of self-perception (Smith et al., 2009), indicating the effects of ethnic identity on self-perception for adolescents may be more narrow compared to younger children. These nuanced findings provide credence to recommendations that specificity (testing multiple predictors against multiple outcomes) should be incorporated in adolescent stress research methodology (Grant et al., 2003). In addition, findings indicate Harter's (1985) approach to measuring self-competence as a multi-dimensional construct is well-suited for research on its relation to ethnic identity, which primarily continues to assess self-esteem unidimensionally (e.g., Wantchekon & Umaña-

Taylor, 2021). Research that examines complex concepts such as ethnic identity and self-perception at a broad level may overlook important differences in these relationships.

Differential findings associated with various components of ethnic identity suggest distinguishing between aspects of ethnic identity is essential for understanding its relationship with self-perception. Other group orientation was a predictor of behavioral conduct self-perception but not social competence self-perception nor global self-worth. Based on these results, it seems that stronger other group orientation, which can mean more positive attitudes about the mainstream ethnic group, facilitates greater behavioral conduct self-perception across settings. It may be that adolescents derive stronger perceptions of their behavioral conduct by associating positively with dominant group norms or expectations in schools or other community settings. Black adolescents report struggling with navigating various norms associated with their own culture and that of the dominant group, which can create pressure to associate with one set of norms and reject the other (Lakin Gullan et al., 2011). However, an integrated identity that incorporates coexisting group norms rather than a dichotomous approach is adaptive for adolescents (Lakin Gullan et al., 2011). Indeed, bicultural competence, or the ability to effectively navigate multicultural settings protects Black adolescents from problem behaviors resulting from stress (Bennett Jr., 2007). Other group orientation can be considered a “behavioral coping strategy” for adapting in a diverse society (Lee, 2003).

Results indicate ethnic identity behaviors significantly and positively predicted behavioral conduct self-perception and global self-worth. Black adolescents who are more involved in cultural practices, customs, and organizations report stronger behavioral conduct and overall self-perception. As one example of cultural involvement, church participation predicts higher self-esteem for low-income Black adolescents (McMahon et al., 2004). Involvement in organized activities can also reduce problem behavior for adolescents, due in part to the availability of positive role models and facilitation of prosocial behavioral norms (Mahoney et al., 2005). The current study contributes to a limited body of research into non-religious cultural activities that are beneficial for Black adolescents. In addition, the results suggest the benefits adolescents acquire from cultural involvement are specifically associated with their perceptions of their behavior and their general self-worth. To support adolescent connection with ethnic identity-related behaviors, schools and communities should facilitate opportunities for participation in diverse activities (e.g., ethnicity-related learning and support groups, flexibility with assignments to support community engagement).

Original ethnic identity studies identified ethnic identity as a predictor of self-esteem across ethnic groups, although

it typically accounted for only a small proportion of variance in self-esteem (Phinney et al., 1997). Other research indicates ethnic identity predicts self-worth for some adolescents but not for Black adolescents (Holmes & Lochman, 2009). For Black adolescents, ethnic identity may have other important benefits besides self-worth, such as active coping strategies and prosocial beliefs and behaviors (McMahon & Watts, 2002).

The current findings indicate that the impact of stressful life events on self-perception for Black adolescents is also best understood in the context of specific aspects of ethnic identity. On the surface, the finding that stressful life events does not predict any of the self-perception outcomes seems surprising. After all, researchers have consistently found that more stressful life events are associated with lower self-esteem (e.g., Baldwin & Hoffmann, 2002). However, past research on this topic is often cross-sectional, and stressful life events may not contribute to self-worth across time. In fact, other longitudinal studies have found the opposite relationship; for young adults, self-esteem contributes to stressful life events, which subsequently decreases self-esteem (Orth & Luciano, 2015).

Both ethnic identity as a whole and ethnic identity behaviors were significant moderators of the relation between stressful life events and behavioral conduct self-perception. Lower levels of ethnic identity predicted a stronger negative relationship between stressful life events and behavioral conduct self-perception. In addition, lower levels of ethnic identity behaviors were associated with a negative relationship between stressful life events and behavioral conduct self-perception while a positive relationship emerged for higher levels of ethnic identity behaviors. According to these results, general ethnic identity, and especially ethnic identity behaviors mitigate the negative impact of stressful life events on adolescent perceptions of their behavioral conduct. For adolescents with strong endorsement of ethnic identity behaviors, more stressful life events were actually associated with higher behavioral conduct self-perception. Among other benefits, it is likely that the social support derived from engaging in ethnic-related behaviors provides adolescents avenues of protection from poor self-competence outcomes. For example, support from parents and peers protects adolescents from the effects of neighborhood stressors on their self-worth (McMahon et al., 2011). Findings from the current study indicate ethnic identity behaviors serve a similar function, and that the protective effects can extend to many types of stressors.

Stressful life events were predictors of behavioral conduct self-perception when ethnic identity was included as a moderator. This study is among the first to identify a connection between stressful life events and adolescent perceptions of their behavioral conduct. It is understandable that adolescents would struggle with their perceptions of

their behavior given previous research has found a positive relationship between stressful life events and externalizing behaviors (McKnight et al., 2002). It may be that adolescent perceptions of their behavioral conduct are sometimes a reflection of externalizing psychological symptomatology.

Limitations

These findings should be understood within the context of a few important limitations. First, although compiled from previously established surveys, our assessment of stressful life events was restricted to the specific types of events identified within the measurement tool (Nurius et al., 2015). The 13 types of stressful life events in this measure do not encompass the entire range of stressful life events experienced by adolescents, nor does the assessment take into account the potential unique impacts of each type of stressful event (McMahon et al., 2003). Second, this study focuses on individual-level strengths that may be protective for adolescents; school, family, community, and other multi-level factors should be explored as strengths in future research. Third, despite the strengths associated with the longitudinal nature of the study design and the advanced statistical approach, analyses and interpretations could have been strengthened by measuring across more than two timepoints. Finally, although this study focuses on an underrepresented group of low-income Black adolescents, the sample size is small, limiting the statistical power of the results.

Implications

Research

Findings reveal important connections between adolescent stress, ethnic identity, and self-perception that highlight fruitful research directions for improving our understanding of adolescent experiences. Stressful life events and ethnic identity differentially impact various components of self-perception, providing support for Harter's (1985) well-established recommendation that self-perception is most appropriately researched as a multidimensional construct. These findings also provide compelling evidence for similarly studying components of ethnic identity individually as well as a composite construct. Although researchers have found evidence to support the internal consistency and moderate goodness of fit for ethnic identity (e.g., Ponterotto et al., 2003), these nuanced results suggest true relationships between variables can be obscured if aspects of ethnic identity are solely measured as an average score. Although it is not always followed, the recommendation to measure these components individually is well-founded because although they can function symbiotically, they often predict different outcomes (Rivas-Drake et al., 2014). In addition to

these measurement considerations, the field would benefit from a deeper investigation into the mechanisms that explain how stressful life events impact adolescent behavioral perceptions, including potential mediators such as externalizing psychological symptoms. Research should consistently reflect societal shifts related to race, ethnicity, and culture, and mixed methods, longitudinal research is necessary to capture the nuances with these complex relationships among Black adolescents.

Policy

These findings have implications for local, state, and federal policies. Adolescents who participate in ethnic behaviors experience tangible benefits to their self-perception. Educational policies that foster a diverse curriculum and recognize and celebrate important ethnic and religious holidays will likely promote adolescent community involvement and self-perception. In addition, school expectations should be developed with input from students and leaders of diverse backgrounds (Bonner et al., 2018). Comprehensive discipline policies that can distinguish problem behavior from varying presentations of externalizing symptomatology across groups can ensure adolescents receive individualized support and reduce negative internalized beliefs about behavior (Vincent et al., 2011).

Practice

These results can be used to design evidence-based school and community programs to support Black adolescents through stressful life experiences. Given the role of ethnic identity as a contributor to self-worth, classrooms and programs should support ethnic identity development starting at a young age. Innovative programs such as the *Identity Project*, which incorporates learning and hands-on activities, have been effective in promoting ethnic identity exploration, resulting in higher self-esteem, less depression, and improved academic outcomes after one year (Umaña-Taylor et al., 2018). Programs aimed at improving Black adolescent self-perception should not rely solely on bolstering ethnic identity, as there may be other salient factors that protect against stressors. However, these programs would benefit from fostering ethnic identity behaviors, celebrating traditions, holidays, events, and foods, and teaching students about diverse ethnic histories.

Conclusion

Ethnic identity is a powerful source of resilience for adolescents that warrants attention. Future research on the

impact of stress on youth should consider applications of resilience theory in addition to stressor models of development. The combination of these theoretical approaches provides a foundation for building upon natural adolescent strengths to withstand adversity. In addition, there remains an underdeveloped understanding of the extent of protective potential ethnic identity may have for Black adolescents. This study uncovers important connections between ethnic identity and self-worth for Black adolescents. Specifically, ethnic identity, ethnic identity behaviors, and other group orientation were positively associated with global self-worth, while ethnic identity behaviors and other group orientation were positively related to behavioral conduct self-perception. Ethnic identity and ethnic identity behaviors were protective against the negative impacts of stressful life events on behavioral conduct self-perception. In addition to providing insight about the multifaceted nature of ethnic identity and self-perception as adolescent strengths, this study highlights the influence of ethnic activity engagement and relations to other ethnic groups on behavioral conduct self-perception and overall self-worth. Further, this research emphasizes the connection between engaging in ethnic activities and adolescent behavioral self-esteem. Overall, the results demonstrate powerful sources of adolescent resilience in the face of environmental stressors. This study contributes to a limited but imperative body of research that uses strengths-based approaches to understand adolescent development.

Authors' Contributions K.B. designed the research study, conducted statistical analyses, and drafted the manuscript; S.D.M. designed the research study, including leading its conceptualization, IRB process, overseeing data collection, and helped draft the manuscript; K.G. supported statistical analyses and helped draft the manuscript. All authors read and approved the final manuscript.

Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

Ethical Approval The survey and methodology for this study was approved by the Human Research Institutional Review Board at DePaul University.

Informed Consent Based upon approved IRB procedures, a waiver of parental permission was obtained for student participation in this study. Letters explaining the study, intervention, and assessment were sent home with youth in participating classrooms. In addition, researchers attended report card pick-up, parent meetings, and school events to distribute and discuss information about the study. Parents were instructed to sign and return the permission forms if they did not want their children to participate in the surveys; a few parents contacted the research team with questions but no parents declined permission. Students were informed that participation was optional; research assistants reviewed the assent process verbally, and students signed assent forms if they chose to participate.

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