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# Racial-ethnic Identity in Context: Examining Mediation of Neighborhood Factors on Children's Academic Adjustment

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## Abstract

Research consistently shows that neighborhood socio-demographic characteristics and residents' neighborhood perceptions matter for youth well-being, including a positive sense of racial-ethnic identity. Although elementary-school children are likely in the earlier phases of identity formation, the authors examined whether objective and subjective neighborhood characteristics are related to their racial-ethnic identity and, in turn, their academic adjustment. A diverse sample (30.4% AA, 35.2% White, 12.3% Latino, & 22.0% Other) of 227 children in Grades 2 through 5 were surveyed in afterschool programs. Bivariate correlations showed that youth living in disadvantaged neighborhoods reported more barriers due to their race-ethnicity, but these barriers were not related to their sense of academic efficacy. Residing in a disadvantaged neighborhood was unrelated to youth's academic self-efficacy. However, path analyses showed that positive neighborhood perceptions were associated with a stronger sense of race-ethnicity (i.e., affirmation and belonging), which was in turn related to greater academic efficacy. These results suggest that neighborhood connection provides a source of affirmation and value for young children, helping them to understand who they are as part of a racial-ethnic group and helping to foster a sense of future achievement opportunities. This study provides additional evidence that along with other important proximal contexts (e.g., family, school), young children's neighborhood context is important for development. Results are discussed to highlight environmental influences on young children's awareness of race-ethnicity and the implications of the combined impact of neighborhood and racial-ethnic identity on psychosocial adjustment.

### Keywords

neighborhood; racial-ethnic identity; academic efficacy; children

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There has been a growing interest in understanding the multiple contexts in which youth, particularly youth of color (Garcia Coll et al., 1996), are embedded and how these contexts singularly and interactively influence development (Burton, Price-Spratlen, & Beale-Spencer, 1997; Furstenberg, Cook, Eccles, & Elder, 1999; Witherspoon & Hughes, 2014). Among these important contexts are youths' residential neighborhoods. Historically, researchers have primarily focused on impoverished neighborhoods (operationalized using dataq from the U.S. Census) and examined how socio-demographic characteristics are related to youth outcomes. Studies have consistently found that living in "disadvantaged" neighborhoods is associated with an increased likelihood of school or educational problems among youth (Leventhal & Brooks-Gunn, 2000; Murry, Berkel, Gaylord-Harden, Copeland-Linder, & Nation, 2011). These conceptualizations emphasize how neighborhood *disadvantage* may lead to *maladaptive behavior*. Fewer studies have simultaneously focused on youths' perceptions of positive and negative neighborhood characteristics along with neighborhood composition variables (i.e., structural disadvantage). Additionally, there is a dearth of information on how young children perceive their neighborhoods (Herrenkohl, Hawkins, Abott, & Guo, 2002; Visser, Bolt, & van Kempen, 2015) and whether these perceptions might be associated with their well-being. Further, Spencer, Harpalani, and Dell'Angelo (2002; PVEST) suggest that ecological exposure may shape one's racial-ethnic identity (Murray & Mandura, 2002). Therefore, in the current study we explore how both neighborhood disadvantage and school-aged children's perceptions of their neighborhood are associated with their racial-ethnic identity and academic self-efficacy.

Neighborhood characteristics, both actual and perceived, may affect the self-system. Racial-ethnic identity is one psychological process that comprises the self-system. Research shows that racial-ethnic identity is linked to positive social and developmental outcomes and specifically to positive self-esteem for diverse adolescents (Rivas-Drake, Seaton, et al., 2014; Rivas-Drake, Syed, et al., 2014; Supple, Ghazarian, Frabutt, Plunkett, & Sands, 2006). This positive influence on self-esteem may, in turn, enhance self-concept in the academic domain. Although younger children may not have a fully formed racial-ethnic identity, they do develop racial awareness throughout childhood (Brown, 2008; Dulin-Keita, Hannon, Fernandez, & Cockerman, 2011; C. Smith, Levine, Smith, Prinz, & Dumas, 2009), which may impact their views of themselves and their abilities. However, an individual's racial-ethnic identity does not develop in a vacuum. Many contextual factors are associated with racial-ethnic identity (Quintana, 2008). Although the family context is widely studied (Bennett, 2006a; Supple et al., 2006), other contexts, namely the neighborhood, are influential in shaping one's racial-ethnic identity (Bennett, 2006; Byrd & Chavous, 2009; Shin, Morgan, Buhin, Truitt, & Vera, 2010; Supple et al., 2006; Winkler, 2012). A few studies show that neighborhood characteristics (i.e., both socio-demographic characteristics and perceptions of risk) are negatively associated with components of racial-ethnic identity (Bennett, 2006b; Oyserman & Yoon, 2009; Rivas-Drake &Witherspoon, 2013; Supple et al., 2006). Youth living in impoverished, segregated neighborhoods may feel less empowered and interpret cues in the neighborhood that may influence their understanding, importance, and meaning of race. However, we know less about the potentially opposite impact of positive aspects of the neighborhood on racial-ethnic identity, which may consequently affect academic outcomes. The current study explores the degree to which the association

between neighborhood characteristics and young children's adjustment is explained by their racial-ethnic identity. Below, we clarify what we mean by racial-ethnic identity, provide the theoretical frameworks that guide this investigation, and review relevant empirical research that demonstrates the importance of neighborhoods and racial-ethnic identity on youth adjustment.

## Defining Racial-Ethnic Identity

Categorization of race is one of many steps in defining and developing one's identity. Swanson, Cunningham, Youngblood, and Spencer (2009) posit that for children, racial-ethnic identity "is conceptualized, and generally assessed, as racial awareness, attitudes, preferences, and socialization" (p. 269). Swanson and colleagues (2009) also purport that the foundations of identity development (i.e., cognitive and social competence) often emerge during middle childhood, thus leading to positive identity formation during adolescence. Further, Umaña-Taylor and colleagues (2014) noted that during early to middle childhood, racial-ethnic labeling, knowledge, and constancy emerge (i.e., ethnic identification; Aboud, 1988; Clark & Clark, 1939; Clark & Clark, 1950). Engaging in these developmental tasks facilitate awareness of bias, greater understanding of group-based hierarchies, and racial-ethnic affect, salience and importance. Other authors contend that identity development for children of color is based on developing a sense of themselves individually (i.e., personal identity) and as a member of a racial-ethnic group (i.e., reference group orientation; Spencer & Markstrom-Adams, 1990). C. Smith and colleagues (2009) utilized the term of *racial-ethnic identity* to encompass central aspects of *racial identity* and *ethnic identity*. The researchers assert that with racial-ethnic identity, "one's sense of belonging to a group of people may be based on race—that is, perceived shared physiology (although wide within group variation exists)—as well as one's ethnicity—that is, common values, beliefs, and practices" (C. Smith et al., 2009, p. 146). Further, following the recommendation by the Ethnic and Racial Identity in the 21st Century Study Group (Umaña-Taylor et al., 2014), we use the "metaconstruct" to convey that we do not make nominal distinctions between racial and ethnic identity, given the similar and related processes of development. Although there are many models of racial-ethnic identity, all emphasize the multidimensionality of the construct that includes both process (e.g., exploration) and content (e.g., importance, knowledge, one's regard for group, and evaluation by others) (Rivas-Drake, Syed, et al., 2014). Therefore, for the current study, we review the growing body of empirical work that focuses on the correlates of racial-ethnic identity (i.e., content) as measured by one's regard for his/her racial-ethnic group (i.e., affirmation, pride, and belonging as well as perceived barriers due to group membership), primarily during adolescence, given the current dearth of information on this topic during earlier developmental periods.

## Neighborhoods and Adjustment

Our conceptualization of the neighborhood and its influences on development are guided by social disorganization (Shaw & McKay, 1942) and pluralistic neighborhood theories (Aber & Nieto, 2000). Social disorganization theory asserts that neighborhood structural factors (e.g., residential instability, poverty, ethnic heterogeneity, and single parent households) thwart the likelihood that individuals will develop strong community ties and that common

norms within the community will develop (Shaw & McKay, 1942). Conversely, pluralistic neighborhood theory (Aber & Nieto, 2000) aims to shift the focus of neighborhood research by focusing on individual perceptions of neighborhoods and well-being.

Neighborhood characteristics, most notably, structural, socio-demographic attributes of the neighborhood are related to youth academic outcomes. Most literature to date has focused on academic achievement based on self-reported grades and intelligence tests, which are positively related to academic self-efficacy (Liew, McTigue, Barrios, & Hughes; Shin, 2011; Wigfield & Eccles; 2000). Relatively less scholarship has focused on children's perceived ability to achieve an academic goal (academic efficacy; Shin, 2011). Yet, Dupéré, Leventhal, and Vitaro (2012) suggest that living in violent and dangerous neighborhoods may diminish self-efficacy beliefs, whereas the availability of institutional resources and collective efficacy (i.e., control of youth behavior and cohesiveness among neighbors) may enhance these beliefs. Leventhal, Dupéré, and Brooks-Gunn (2009) illustrated that neighborhood SES (e.g., educational level, income) and advantage is related to youth's academic outcomes in expected directions. Similarly, neighborhood socioeconomic advantage (e.g., percentage of residents with a bachelor's degree and residents in managerial/professional jobs) is positively associated with academic achievement (Anderson, Leventhal, & Dupéré, 2014; Dupéré, Leventhal, Crosnoe, & Dion, 2010). Residing in neighborhoods with higher proportions of more educated residents is associated with greater academic achievement (Ainsworth, 2002) and higher academic aspirations (Plunkett, Abarca-Mortensen, Behnke, & Sands, 2007). Also, youth who live in high resourced neighborhoods report higher grades than their counterparts (Byrd & Chavous, 2009) and youth who report greater neighborhood disadvantage and problems report lower grades than their counterparts (Witherspoon & Hughes, 2014).

With experimental (or quasi-) designs, researchers have found mixed results of the effect of neighborhood SES/advantage/disadvantage on youth academic outcomes. Fauth, Leventhal, and Brooks-Gunn (2007) showed that middle to late adolescents who moved from disadvantaged to more advantaged neighborhoods reported *lower* math and reading performance than their peers who remained in the disadvantaged neighborhoods. On the other hand, using the Moving to Opportunity Study (New York only) three-year follow-up, Leventhal and Brooks-Gunn (2004) showed that among youth (mean age approximately 12 years), adolescent boys who moved performed *better* on Woodcock-Johnson achievement tests than boys in the control group. However, two years later (5-year follow-up), both males and females reported lower school grades and engagement than the youth in the control group, suggesting that the beneficial effects of moving to a more advantaged neighborhood dissipated. Thus, the enduring positive impact of lower neighborhood poverty upon academic achievement is still not demonstrably clear. These relations may be further explained by youth's differential social experiences in impoverished and less impoverished neighborhoods and how these might affect their interpretation of their academic abilities. Also, we acknowledge that these associations might be different in non-experimental, convenience studies.

In one of the few studies examining neighborhood associations with academic self-efficacy, Shin (2011) found with African American school-aged children 7 to 10 years old that

neighborhood satisfaction was positively associated with academic self-efficacy, such that youth who reported being more satisfied with their neighborhood also reported greater academic self-efficacy. Similarly, youth who reported more Africentric beliefs also reported higher academic self-efficacy. The authors offer that African American children who are aware of their culture and connected with their neighborhood receive positive benefits for their academic orientation, suggesting that racial-ethnic identity may promote academic adjustment.

## Racial-ethnic Identity and Adjustment

Children's awareness of race and ethnicity begins early in development (Dulin-Keita et al., 2011; Swanson et al., 2009; Umaña-Taylor et al., 2014). Historically, there was substantial research on the formation of identity (Byrd, 2012; Clark & Clark, 1939; Spencer, 1985) in young African American children. However, the extant empirical research on racial-ethnic identity among young children is scant; most of the literature focuses on adolescence (Rivas-Drake, Seaton, et al., 2014; Rivas-Drake, Syed, et al., 2014) as scholars propose that these earlier experiences in childhood are the foundation for racial-ethnic identity formation, which focuses on the internalized meaning of race-ethnicity. Yet, several scholars have begun to delineate the process of racial-ethnic awareness and categorization to identity formation (e.g., Bigler & Liben, 2007; Byrd, 2012; Quintana, 2008). Quintana (2008) suggests a four-level developmental model of racial perspective taking ability (RPTA) that explains how children come to understand how race impacts their worlds. Children begin with a very basic and literal understanding of race (Levels 0 and 1; childhood) and progress to more socially conscious (Levels 2 and 3; adolescence) conceptualizations of race. This perspective focuses on children's social cognitions and proposes that children may progress through the hierarchically defined levels when personal experiences or encounters challenge currently held notions of race. Further, Byrd (2012) created the Developmental Sequence of Awareness, Self-identification, and Constancy to chronicle children's milestones in developing their racial and ethnic identity from ages 3 (when children are developing awareness of physical differences and general idiosyncratic classification) to 12 (when racial constancy develops in children and they have racial awareness based on physical, biological, and social characteristics). These frameworks suggest that young children have varying awareness of race-ethnicity that may be related to their adjustment outcomes.

Over the past decade, work exploring the relationship between racial-ethnic identity and youth outcomes has increased substantially (Rivas-Drake, Seaton, et al., 2014). Research that explored the development of children's early racial preferences (measured using pictures of African American, Latino, and White girls and boys) found that for children between kindergarten and second grade, their racial-ethnic identity was not related to their academic and behavioral outcomes (Smith et al., 2009). On the other hand by third grade, racial-ethnic identity, particularly a positive sense of group affirmation and belonging, was found to be related to higher levels of cognitive performance (Smith et al., 2009; cf. Rivas-Drake, Syed, et al., 2014). Further, for African American fourth-graders, Africentric values and racial-ethnic identity was positively associated with self-esteem (academic included) and school interest (Thomas, Townsend, & Belgrave, 2003). Among diverse fourth to sixth graders, racial-ethnic identity was positively associated with academic self-efficacy (Hughes,

Witherspoon, Rivas-Drake, & West-Bey, 2009). These findings may suggest that the association between racial-ethnic identity and academic adjustment is positive and developed over time. This association may be shaped by one's broader, geographical context —neighborhood—as youth become more aware of their surroundings.

Neighborhood contexts may impact the degree to which youth come to develop a positive sense of self, their group, and their ability to achieve. It is widely recognized that racial-ethnic minority youth are disproportionately represented among both the poor and those living in impoverished neighborhoods (Maccartney, 2011). Following the integrative model (Garcia Coll et al., 1996), it is theorized that these patterns of residential segregation play a role in social processes related to the developmental competencies (e.g., racial-ethnic identity) of racial-ethnic minority youth. In segregated areas, there may be social isolation and concentrated disadvantage (Wilson, 1987) that creates an environment that relegates persons of color to an "underclass" marked by high unemployment and limited societal investment. This structural disadvantage may weaken social ties, which enhance collective socialization (i.e., cohesive and positive neighboring), and limit the availability of role models (Jencks & Mayer, 1990). Further, environments segregated by race-ethnicity may convey implicit and/or explicit messages about the worth and importance of particular cultural groups as well as the life chances for certain groups. However, individuals may interpret these messages in different ways (pluralistic neighborhood theory; Aber & Nieto, 2000). This idea is further explicated in the Phenomenological Variant of Ecological Systems Theory (PVEST; (Spencer et al., 2002), which suggests that ecological contexts beyond the family may shape youth's identity and their subsequent coping strategies. Therefore, school-aged children's exposure to neighborhood settings may affect how they reason about the implications of race-ethnicity for themselves and others. The socio-demographic characteristics of neighborhoods as well as the social dynamics within these settings may not only impact racial-ethnic identity, but youth adjustment in general.

Mixed findings suggest that neighborhoods may be related to racial attitudes and identity depending on the characteristics of the context. Smith, Atkins, and Connell (2003) found that for mostly poor fourth-grade African American elementary students, those living in neighborhoods with higher proportions of college-educated residents of their own race were less likely to perceive racial barriers to their opportunities and perceptions of racial barriers were negatively related to academic achievement. Having a sense of racial-ethnic pride was positively related to academic achievement. With adults, Cohen-Marks and Faught (2010) showed that individuals with a positive view of the neighborhood also reported positive racial attitudes. However, when only examining segregation, Oyserman and Yoon (2009) found that in segregated neighborhoods youth reported lower feelings of racial belonging, awareness of bias, and push for academic advancement. Although segregated neighborhoods seem to matter for racial-ethnic identity, Rivas-Drake and Witherspoon (2013) found that among economically diverse African American adolescents, neighborhood structural characteristics, such as racial composition, median family income, and proportion of high school graduates, were unrelated to racial centrality and public or private regard—racial-ethnic identity indicators. Yet, the social dynamics of the neighborhood were associated with racial-ethnic identity.

Clearly, the current research indicates that a more nuanced approach to the study of racial-ethnic identity and youth outcomes is necessary, giving attention to varying developmental periods, the racial-ethnic and socioeconomic background of the neighborhood as well as the perceived social dynamics of the neighborhood. Taken together, these findings suggest that neighborhoods are important contexts for youth development. The extant literature suggests that both neighborhood structural characteristics (SES) and perceived neighborhood social dynamics are associated with academic outcomes in complex ways. It is clear that disadvantaged neighborhoods may negatively impact academic outcomes. Yet, to this point, it is unclear how neighborhood characteristics (both perceived and objective) inform racial-ethnic identity. As social disorganization theory would suggest, neighborhood segregation and disadvantage would decrease racial pride; but pluralistic neighborhood theory would suggest that individuals' personal experiences and social interactions within the neighborhood may affect racial-ethnic identity differentially. Much of extant research has focused on adolescents and currently fewer studies examine these associations among school-aged children, leaving more questions about development and identity. The current study will extend and replicate previous findings with school-aged children using both objective neighborhood structural characteristics and subjective neighborhood social dynamics to understand their indirect association with academic efficacy through racial-ethnic identity.

## The Current Study

The present study intended to expand existing knowledge on neighborhood effects on academic adjustment by examining how the neighborhood context was related to school-aged children's academic self-efficacy, with particular attention to youth's racial-ethnic identity as mediators of this association. First, based on social disorganization and pluralistic neighborhood theory, we determined if objective structural characteristics of neighborhoods and youth's perceptions of the neighborhood were related to their racial attitudes. Second, we explored the association between neighborhood characteristics, youth's racial-ethnic identity, and academic efficacy. Last, we assessed whether school-aged children's racial-ethnic identity explained the relation between neighborhood characteristics and youth adjustment.

Based on social disorganization theory, we hypothesized that neighborhood disadvantage would be negatively associated with perceived racial pride, but positively associated with perceived racial barriers. Further, based on social disorganization theory and PVEST, we hypothesized that youth's neighborhood perceptions would be related to their racial-ethnic identity, such that youth who perceived more neighborhood problems might be more aware of racial barriers, due to limited resources, role models, and positive social interaction among neighbors which may reiterate implicit, negative race-based messages. Conversely, those youth who had positive views about the neighborhood might report greater racial pride due to their perception of the neighborhood's culture as supportive and promoting a constructive, positive sense of self. Using contagion and cultural-ecological frameworks and considering that social isolation may ensue from concentrated disadvantage (Crane, 1991; Ogbu, 1981; Wilson, 1987), we also expected that youth who lived in more disadvantaged neighborhoods and/or perceived more racial barriers would report lower academic self-

efficacy. Together, we hypothesized that as racial-ethnic identity is shaped within certain environmental settings, youth's perceptions of racial pride and barriers would partially explain the relation between neighborhood factors and youth adjustment.

## Method

### Participants

Participants in this study were 227 children (55% males) in Grades 2 through 5 who attended one of 24 community-based afterschool programs in three school districts of a mid-Atlantic state. Participating school districts were both urban and suburban. All participants came from one of two cities with differing demographic makeups. The first was the state capital, which had a median annual household income of $26,920. Its residents were 28.6% White, 53.7% African American, 11.7% Hispanic, and 6.0% some other race. The second city had a median annual household income of $29,770. Its residents were 51.8% White, 12.5% African American, 30.8% Hispanic, and 4.9% some other race. Demographic information about the participants' geographic areas at the census tract level was obtained from Summary Files 1 and 3 of the 2000 U.S. Census because data was collected from participants in 2009. The average annual median household income of the census tracts in which participants resided was $36,748 (range = $15,829 – $80,236). On average, participants lived in census tracts that were 61.9% White (range = 7.6 – 96.9), 17.2% African American (range = 0 – 80.7), 16.2% Hispanic (range = 0 – 72.7), and 4.8% some other race (range = 1.5 – 14.5).

Children ranged in age from 7 to 11 years old ($M = 8.59$, $SD = 1.16$). Youth were evenly distributed in $2^{nd}$ – $5^{th}$ grades (29%, 28%, 22%, and 21%, respectively). Youth provided self-reports of their racial-ethnic backgrounds; 30.4% of the participants were African American, 35.2% were White, 12.3% were Hispanic, and 22.0% were some other race (i.e., Asian, Native American, Biracial, or reported their race as Other).

### Procedure

Data used in this study were collected as part of the LEGACY Together Afterschool research project. This project was a multi-site randomized control trial examining the impact of a cooperative game intervention, the Good Behavior Game (Barrish, Saunders, & Wolf, 1969; Hynes, Smith, & Perkins, 2009; Kellam et al., 2008), on the outcomes of children in three successive cohorts. Afterschool programs were asked to participate in the LEGACY project; all agreed. Together, these programs served a diverse (i.e., socio-economic and race-ethnicity) population of children. [For a detailed description, see Smith, Osgood, Caldwell, Hynes, and Perkins (2013)]. Program lists for the afterschool programs identified 308 $2^{nd}$ – $5^{th}$ grade enrollees. Consent forms were mailed to all caregivers of the $2^{nd}$ – $5^{th}$ grade students on the afterschool program enrollment lists. Caregivers could decline permission for their child to participate by mailing the consent forms to the research team in a postage-paid envelope. This made the process more accessible for busy families and, thereby, potentially enhanced the generalizability of the study to afterschool program participants. Surveys were conducted on scheduled and make-up days in the afterschool programs for the

227 children who were previously consented. This included 74% of the available enrollment lists (N = 308) and 96% of the consented children who were present (N = 236).

The data used for this study were collected during the pretest phase (fall of the year; October – December 2009) prior to the implementation of the afterschool intervention. Surveys were administered to children as a group using small electronic Personal Digital Assistant (PDA) devices in the fall of the academic year in second through fifth grade afterschool programs. Generally, children completed the survey within 45 to 60 minutes. The PDAs were programmed to read the directions for each section aloud to the children. As such, after a child listened to the directions, he/she completed each section at his/her own pace. In some cases, however, children struggled to read the survey. When this occurred, the data collectors brought those children together in a small group, read the questions aloud to the group, and led the children through the survey together. Children provided demographic information and completed various surveys. Measures of interest for this study are described below.

## Measures

**Neighborhood Disadvantage—**Children's addresses were used to obtain data from the 2000 U.S. census to create a neighborhood disadvantage score for participants. Participants lived in 41 census tracts (90 census block groups), with an average of 5.3 participants in each census tract (range = 1 – 20). At the census tract level, five variables were obtained to create the neighborhood disadvantage score based on procedures used in previous studies (Leventhal & Brooks-Gunn, 2000; Seidman et al., 1998; Witherspoon & Ennett, 2011); neighborhood disadvantage indices were also calculated at the census block group level and patterns were similar to those obtained using census tract-level data so for subsequent analyses only census tract-level data are presented. *Unemployment* was the percent of unemployed residents in the Labor Force (group average = 6.6%). *Educational attainment* was the percentage of individuals 25 years old or older who had not obtained a high school diploma or GED (24.6%). *Poverty level* was the percent of residents whose income fell below the poverty level (17.1%). *Residential mobility* was the percentage of residents who had changed households within the last 5 years (47.3%). *Female-headed households* was the percentage of female headed households in the tract (22.0%). These indicators were standardized and averaged to create a neighborhood disadvantage score (range = −1.28 – 1.63, $\alpha$ = .92).

**Neighborhood Perceptions—**Youths' perceptions of their neighborhood were assessed using an 11-item scale originally created to capture parents' neighborhood perceptions and further adapted for use with young school-aged children (Smith et al., 1997). The measure assessed children's perceptions of their neighborhood in terms of the friendliness, safety, and neighbors' interest in education. Specifically, participants responded to statements such as, "People in your neighborhood are nice to you" or "Your home is in a rough neighborhood" using a 3-point Likert-type scale ranging from "Not true" to "Very true."

To ensure that the Neighborhood Perception scale was appropriate for use with school-aged children from diverse backgrounds living in urban and suburban school settings, an exploratory factor analysis (EFA) was conducted on the 11-item measure. A principal axis

factor extraction with orthogonal rotation was conducted; the EFA suggested two factors based on parallel analysis and standard error of scree (Horn, 1965; Zoski & Jurs, 1996). A full summary of the EFA findings are available upon request from the author. Six items loaded on Factor 1 (Positive Neighborhood Perceptions), accounting for 29% of the variance in the factor matrix. Five items loaded on Factor 2 (Negative Neighborhood Perceptions), accounting for 12% of the variance in the factor matrix. The positive ($\alpha$ = .83) and negative ($\alpha$ = .62) neighborhood scales demonstrated acceptable reliability. On average, participants agreed with statements describing their neighborhood as positive ($M$ = 2.56, $SD$ = .53) and tended to disagree with statements describing their neighborhood negatively ($M$ = 1.70, $SD$ = .55).

**Racial-ethnic Identity—**Children's racial-ethnic identity was assessed using a measure adapted for young, school-aged children from previous measures used to investigate aspects of racial-ethnic identity in adolescents and young children (Smith et al., 2003). Racial-ethnic pride (e.g., "People should be proud of their color"), affirmation and belonging (e.g., "You feel good about your culture and history" or "You like being the color you are"), and perceived racial barriers (e.g., "No matter how hard a person tries, they might not make it in life because of color") were assessed. Participants responded to statements using a 3-point scale ranging from "Not true" to "Very true." Internal consistency was acceptable for the 2-item Barriers ($\alpha$ = .60) and 4-item Pride, Affirmation, and Belonging scales ($\alpha$ = .61). On average, youth perceived some barriers related to their race-ethnicity ($M$ = 1.68, $SD$ = .74), and felt a high level of pride, affirmation and belonging with others of their racial-ethnic group ($M$ = 2.69, $SD$ = .43).

**Academic Self-Efficacy—**Participants' academic self-efficacy was measured using a 9-item scale adapted for a younger school-aged population from a scale created by one of this study's authors for a previous study. The scale measured youths' expectations of their ability to perform well on tests, exhibit good study skills, and participate actively in class. Participants responded to statements such as, "I believe I will complete high school" using a 3-point scale ranging from "Not true" to "Very true." The scale was originally validated with an adolescent sample (Smith et al., 1999) but showed good internal consistency with the present sample of younger children ($\alpha$ = .81). On average, children reported a high degree of academic self-efficacy ($M$ = 2.83, $SD$ = .37).

## Results

### Analytic Plan

The analysis plan follows the strategies necessary to address each research question in the present study. First, we explored the descriptive statistics for all variables used in the study. Next, we examined the intraclass correlation coefficients (ICCs), ratios of between group variability to the total variability, to determine the degree of homogeneity in perceptions within census tracts. To examine whether racial-ethnic identity explained the association between objective and subject neighborhood characteristics and academic efficacy, we estimated a traditional one-level mediational model due to the negligible degree of nesting at the neighborhood level in youth's academic efficacy, our outcome of interest. Full

information maximum likelihood (FIML) was used to estimate all path models in Mplus v7 (Muthén & Muthén, 1998–2012). Following previous research showing a relation between contextual racial-ethnic composition and adolescent outcomes, preliminary analyses included a measure of neighborhood diversity, which takes into account the number of racial-ethnic groups and their relative proportions in the neighborhood (Juvonen, Nishina, & Graham, 2006). In this sample, there was a strong, positive correlation between neighborhood diversity and neighborhood disadvantage ($r = .78$, $p < .01$), creating a conflict of multicollinearity when both predictors were tested. Subsequently, only neighborhood disadvantage was included in final analyses.

## Preliminary Analyses

Descriptive statistics for each of the study variables are presented in Table 1 by participant gender, ethnicity, and grade level. Analyses (i.e., *t*-tests and Analysis of Variance [ANOVA]) were conducted to determine whether any individual differences emerged based on participant demographics so that these could be included as covariates in subsequent analyses. Group differences were found for gender, race/ethnicity, and grade level.

**Gender—**No gender differences were found in participants' ratings of their positive and negative neighborhood perceptions and racial-ethnic identity or in objective level of neighborhood disadvantaged. However, girls reported higher levels of academic self-efficacy than did boys ($t = -2.72$, $p < .05$).

**Race-Ethnicity—**No race-ethnicity differences were found for racial-ethnic identity or ratings of academic self-efficacy. Racial/ethnic differences were found in perceptions of racial barriers ($F = 4.55$, $p < .01$). Post-hoc analyses indicated that participants who identified as "other" reported higher levels of racial barriers than did White ($p < .05$) and Latino ($p < .01$) participants. In addition, there were racial-ethnic differences in neighborhood disadvantage ($F = 11.67$, $p < .01$), such that White participants lived in more advantaged neighborhoods than African American ($p < .01$) and Latino ($p < .01$) participants.

**Grade Level—**No differences were found based on grade level in participants' neighborhood perceptions or perceptions of racial barriers. Analyses indicated that younger participants differed by grade level in their reports of racial pride, affirmation, and belonging ($F = 3.87$, $p < .05$), such that 2$^{nd}$ graders endorsed lower levels of these feelings than did 5$^{th}$ graders ($p < .05$). Further, academic self-efficacy varied by grade level ($F = 3.07$, $p < .05$), such that 5$^{th}$ graders reported greater academic self-efficacy than did 2$^{nd}$ graders ($p < .05$).

Bivariate correlations among study variables are presented in table 2. As expected, children's positive and negative perceptions of their neighborhood were related to objective measures of neighborhood disadvantage obtained from census data. Contrary to expectations, participants' reports of racial barriers were not significantly associated with their reports of racial pride, affirmation, and belonging. However, these ratings of racial-ethnic identity were associated with objective and perceived neighborhood risk indices in the

expected directions. Finally, only positive feelings about one's racial-ethnic identity and neighborhood were significantly related to academic efficacy in the expected directions.

## Homogeneity of Perceptions within Census Tracts

We calculated the intraclass correlation coefficients (ICCs), ratios of between group variability to the total variability, for neighborhood perceptions, racial-ethnic identity, and academic self-efficacy. This analysis allowed us to determine the degree of homogeneity in perceptions within Census tracts. We used one-way random effects ANOVA to decompose the variance components using PROC Mixed in SAS v.9.2. The ICCs for racial-ethnic identity attitudes were .01 for pride, affirmation and belonging, and .06 for racial barriers. For academic self-efficacy, the ICCs were ≤ .001. These estimates suggest that a small to negligible proportion of observed variability is due to the clustering of school-aged children in census tracts. Therefore, instead of using hierarchical linear modeling to estimate our path analysis, we used a one-level mediation model.

## Substantive analyses

To examine our conceptual model, which suggests that racial-ethnic identity mediates the relation between objective neighborhood disadvantage and subjective neighborhood perceptions and school-aged children's academic self-efficacy, we used Mplus v.7. Based on preliminary analyses, demographic correlates were also included as follows: Gender and grade level were included as predictors of academic self-efficacy and racial-ethnic pride, affirmation, and belonging, and race-ethnicity was included as a predictor of racial barriers using dummy codes for African-American, Latino, and Other-identified youth with White youth as the reference group. Overall model fit was assessed using indices suggested by Hu and Bentler (1995). For good fit, the Comparative Fit Index (CFI) should be greater than 0.90. The Root Mean Square Error of Approximation (RMSEA) values should be less than 0.05 for "good" fit and less than 0.08 for "acceptable" fit. Bootstrapping, a non-parametric resampling replacement method (Shrout & Bolger, 2002), was used to test indirect effects.

The academic efficacy mediational model was a good fit to the data; $\chi^2_{(36)} = 35.84$, $p = .50$; CFI = 1.00, RMSEA = .00 (CI = 0, .05) (See Figure 1). When examining structural indicators, neighborhood disadvantage was unrelated ($b = .04$, $p = .15$, $B = .09$) to academic self-efficacy and marginally related to racial-ethnic pride ($b = .06$, $p = .07$, $B = .13$) and racial-ethnic barriers ($b = .13$, $p = .05$, $B = .15$). Children's negative neighborhood perceptions were unrelated to academic self-efficacy ($b = .02$, $p = .54$, $B = .04$) and racial-ethnic pride ($b = .01$, $p = .44$, $B = .04$), but positively associated with racial-ethnic barriers ($b = .30$, $p = .01$, $B = .22$) such that youth who had a more negative view of their neighborhood reported more racial-ethnic barriers. Positive neighborhood perceptions were associated ($b = .16$, $p. = .02$ $B = .23$) with higher levels of academic self-efficacy and racial-ethnic pride ($b = .48$, $p = .001$, $B = .58$) such that youth who reported more positive perceptions of their neighborhoods also reported being more efficacious and endorsed higher racial-ethnic affirmation. Racial-ethnic pride, affirmation, and belonging was positively associated ($b = .38$, $p = .001$, $B = .44$) with academic self-efficacy. Racial-ethnic barriers was unrelated to academic self-efficacy. No significant indirect effects of neighborhood disadvantage or negative neighborhood perceptions through racial-ethnic barriers were

found. However, significant indirect effects of positive neighborhood perceptions on academic self-efficacy through racial pride ($b = .18$, $p = .001$, $B = .26$) was found, which suggests partial mediation. Thus, having a multi-dimensional model of children's racial-ethnic identity demonstrates aspects of children's emerging racial-ethnic identity that may and may not be related to other aspects of their development.

## Discussion

The purpose of the present study was to explore how the neighborhood context was indirectly related to school-aged children's academic efficacy via racial-ethnic identity. Research has explored relations between the neighborhood context and youth academic outcomes and separately examined the relations among racial-ethnic identity and similar outcomes, but rarely has work simultaneously explored the influence of these aspects on youth developmental outcomes. To date, the neighborhood literature has focused almost exclusively on how neighborhood structure and composition (e.g., SES) is associated with youth's maladaptive outcomes and to a lesser extent academic performance. The current study focused on extending this literature by examining whether or not the neighborhood context exerted its influence on youth adjustment through one's racial-ethnic identity. The current study sought to integrate these two vast literatures to provide a more holistic understanding of youth's experiences. Youth do not develop in isolation; they are shaped by their contexts. Similarly, youth's awareness of race and ethnicity and the development of racial-ethnic identity do not occur in a vacuum; they may be impacted by the neighborhood context. Taken together, we explored how neighborhoods were associated with youth's racial-ethnic identity, which in turn, has consistently been shown to be related to youth adjustment.

Similar to previous studies, we found that neighborhood characteristics were associated with school-aged children's academic self-efficacy (Leventhal et al., 2009; Murry et al., 2011). However, interestingly, objective neighborhood characteristics, though related to youth's perceptions of their neighborhood, were unrelated to young children's academic self-efficacy after adjusting for demographic differences, neighborhood perceptions, and racial-ethnic identity. On the other hand, school-aged children's perceptions of their neighborhood were differently associated with academic efficacy. Children knew and understood their neighborhood's quality. As expected, youth who perceived their neighborhood as positive reported higher levels of academic self-efficacy (Dupéré et al., 2012; Shin, 2011). Positive neighborhood characteristics such as cohesion, trust, and/or connection offer a sense of social capital to residents (Leventhal & Brooks-Gunn, 2000; Witherspoon & Ennett, 2011), which may offer additional benefits to youth who live in disadvantaged neighborhoods. Having these additional contextual supports may enhance youth's appraisal of self in the academic domain as well as one's racial-ethnic identity.

As expected, fifth graders endorsed more racial-ethnic affirmation and pride than their younger counterparts. This findings follows what theory would suggest – racial-ethnic identity emerges and become more constant and salient as children get older (Umaña-Taylor et al., 2014; Byrd, 2012; Quintana, 2008). Consistent with previous research, diverse school-aged children who perceived their neighborhood as positive reported more racial affirmation,

belonging and pride. Positive feelings about one's neighborhood may engender more pride in oneself and a sense of belonging. These findings are consistent with those of Rivas-Drake and Witherspoon (2013) who found with adolescents that positive neighborhood social dynamics were associated with greater positive racial-ethnic affect. Interestingly, awareness of neighborhood problems did not result in more perceived racial barriers or discrimination. It may be that youth who perceive more contextual problems are more likely to attribute unfair treatment, obstacles to success, and discrimination to external factors (i.e., neighborhoods) rather than demographic characteristics such as race-ethnicity. Together, these findings suggest that the subjective experience of one's neighborhood can impact one's race-ethnicity identity.

Given that children's developmental outcomes are affected by the neighborhoods they live in as well as their own racial-ethnic identity, it was important to determine if one's racial-ethnic identity could explain the relation between the neighborhood context and youth outcomes. We found evidence of these partial indirect effects for academic self-efficacy, contingent upon the dimension of racial-ethnic identity under examination. Racial affirmation, belonging and pride was positively associated with academic self-efficacy and contributed significantly to the relation between positive neighborhood characteristics and children's efficacy beliefs in the academic domain. This finding suggests and is consistent with the extant literature that shows that positive neighborhood relationships (McCoy & Bowen, 2015) and an affirmative social climate (Guillaume, Jagers, & Rivas-Drake, 2015) confer benefits to children. These benefits are not only for the behavioral outcomes (Leventhal & Brooks-Gunn, 2000), but also for the self-system (racial-ethnic and identity and academic efficacy), which has repeatedly been shown to enhance positive youth development (Byrd & Chavous, 2009; Dupéré et al., 2010; Hughes, Witherspoon, Rivas-Drake, & West-Bey, 2009). Social capital in a disadvantaged neighborhood potentially conveys to children that adults are invested in them and will shepherd the development of their identity and assist them in reaching their goals. As McCoy and Bowen (2015) demonstrated, perceived neighborhood safety increased youth's hopes for the future, which in turn positively affected school self-efficacy, suggesting that a positive neighborhood environment shapes the way youth making meaning of their neighborhoods and interpret any implicit messages about one's self, life chances, and social position. Conversely, the lack of social capital in a disadvantaged neighborhood does not significantly erode children's racial-ethnic identity. These findings suggest a need for more nuanced investigations of the ways in which low-SES and high-SES as well as low- and high-social capital neighborhood settings impact younger children's adjustment.

## Strengths, Limitations, and Future Directions

The present study sought to determine if neighborhood characteristics were associated with ethnically diverse school-children's academic efficacy, indirectly through their racial-ethnic identity. Although the neighborhood and youth outcomes literature is fairly large, most studies do not explicitly examine objective neighborhood characteristics as well as young children's perceptions of their neighborhoods. With cross-sectional data from school-aged children in afterschool programs, the present study confirmed that the association between the neighborhood context and youth's academic efficacy was partially mediated through

racial-ethnic identity. However, this was only true for positive neighborhood perceptions, which were related to children's positive sense of pride, affirmation and belonging. These findings highlight that one's racial-ethnic identity is associated with school-aged children's beliefs in their academic abilities, which suggests that one's racial beliefs are important for cognitions in other domains. What is even more interesting is that these findings are exhibited among a sample that is diverse both in terms of race-ethnicity and socio-economic status.

Although this study extended the literature base for development within the neighborhood context by incorporating a comprehensive view of neighborhoods and focusing on racial-ethnic identity, there were inherent limitations. A primary limitation of the present study is the use of cross-sectional data. Longitudinal data would allow systematic explorations of how children's perceptions of their neighborhoods may change as they age and how these changes in their perceptions are related to their well-being. Further, longitudinal data would also offer the opportunity to examine the development of racial-ethnic identity in changing neighborhood settings. We conjecture that as children age, they gain independence and may experience more aspects of their neighborhoods. Further, as children mature, their cognitions may become more complex, which will allow for a more nuanced understanding of race and ethnicity as well as socioeconomic status. In addition, with the use of cross-sectional data, we cannot determine the direction of effects. For example, do youth who are more academically efficacious have a view of the world that heightens awareness of opportunity and reduces perceptions of barriers (e.g., race-related obstacles)?

A second methodological limitation of the current study is the low reliability of the racial-ethnic identity measure. Our internal consistency reliabilities for school-aged children's perceived racial barriers ($\alpha = .60$) and affirmation/pride ($\alpha = .61$) suggest that approximately 40% of the variance in the scales is attributable to error. Methodologically, these low reliabilities may be the result of too few items, low inter-item correlations, or orthogonal constructs (Tavakol & Dennick, 2011). Substantively, these less than desirable reliabilities may be attributable to the developmental stage of the youth. Racial-ethnic identity measurement with youth may be fraught with error due to the cognitive capacity of children and the development trajectory of racial-identity from awareness that is basic and literal to constancy that encapsulates a social consciousness and internalization of culture (Byrd, 2012; Quintana, 2008). Although our racial-ethnic identity measure reliabilities are somewhat consistent with existing scholarship among young children (C. Smith et al., 2009; Smith et al., 2003), future work should focus on developing reliable, valid, and developmentally appropriate measures of racial-ethnic identity that can be used at various developmental stages (i.e., from childhood to adolescence).

A third limitation to the study is the lack of inclusion of potential third variables that may further explain the developmental process. One potential omitted variable is racial socialization and the messages that may be communicated to these youth by the adults in other settings. Research has consistently shown that the messages that parents communicate to their children are associated with youth's racial-ethnic identity (Hughes et al., 2006; Hughes et al., 2009). Further, these messages are shaped by the geographical and neighborhood context (Caughy, Nettles, O'Campo, & Lohrfink, 2006; Thornton, Chatters,

Taylor, & Allen, 1990). Thornton and colleagues (1990) found that parents of African American children in the Northeastern region of the United States were more likely to communicate messages about race to their children. Further, Caughy and colleagues (2006) showed that among African American children in urban neighborhoods, promotion of mistrust and preparation for bias (e.g., discrimination) messages increased in neighborhoods with a negative social climate while racial pride messages increased in neighborhoods with greater social capital. Although the inclusion of racial-ethnic socialization variables was beyond the scope and available data for this study, the extant literature suggests that it is important for future studies to consider the messages that parents communicate to their children about race and ethnicity in specific neighborhood contexts, which in turn may both directly and indirectly (through children's own racial-ethnic identity) impact youth adjustment.

Other potential omitted variables that may further explicate identity in context as well as its subsequent impact on youth adjustment include consideration of racial-ethnic discrimination experiences and the school context. Theory (García Coll et al., 1996) and the limited extant research suggests that the neighborhood context may shape youth's racial-ethnic discrimination experiences (Benner & Graham, 2013; Cooper, Brown, Metzger, Clinton, & Guthrie, 2013; Witherspoon, Seaton, Rivas-Drake et al., in press) and these discrimination experiences may be associated with racial-ethnic identity (Pahl & Way, 2006; Seaton, Yip, Morgan-Lopez, & Sellers, 2012) and youth outcomes (Benner & Graham, 2013; Mroczkowski,& Sánchez, 2015; Priest, Paradies, Trenerry, Truong, Karlsen, & Kelly, Paradies, Trenerry, Truong, Karlsen, & Kelly, 2013). Generally, this body of work suggests that racial-ethnic identity may directly impact youth well-being, explain the association between environmental characteristics and youth adjustment, or modify the effect of contextual (i.e., neighborhood) or cultural (i.e., racial discrimination) processes on youth outcomes. Similarly, Byrd and Chavous (2011) assert that a "racial identity-context congruence approach" (pg. 850) may expand our understanding of the linkages between racial identity and academic attitudes by focusing on the fit between the individual and the context. These scholars demonstrate that school climate, racial identity, and academic intrinsic motivation are positively associated (Bryd & Chavous, 2011). Related, Guillaume and colleagues showed school climate may impact youth's academic beliefs (Guillaume et al., 2015). Together, these two studies suggest that racial-ethnic identity and academic beliefs of adolescents may be inextricably linked based on the context, consistent with our current findings on the neighborhood context among school-aged children. Taken together, to fully understand the potential promotive and/or protective nature of racial-ethnic identity from childhood to adolescence on youth's adaptation, we must consider neighborhood and school climate as well as individuals' personal experiences in these contexts.

## Conclusion

Despite these caveats, this study offers an initial step to understanding how the neighborhood context, particularly neighborhood as perception (Burton & Jarrett, 2000; Burton et al., 1997), may affect children's outcomes through its impact on racial-ethnic identity. Neighborhoods have cultural meanings (Small, 2002) and implicitly convey messages to their residents about race, ethnicity, and other social factors. With this

investigation, we focused on both neighborhood strengths (i.e., positive neighborhood characteristics) and deficits (i.e., disadvantage) and showed that young children's racial-ethnic identity impacts their perceived academic abilities. We found that the neighborhood was a source of self-efficacy for these children through its effect on racial-ethnic identity. Again, more research about the specific processes that help to promote these positive perceptions of neighborhoods and self might enhance our ability to identify intervention targets. In sum, neighborhoods are not as simplistic as we might expect with an overly positive or negative impact upon children's self-appraisal.

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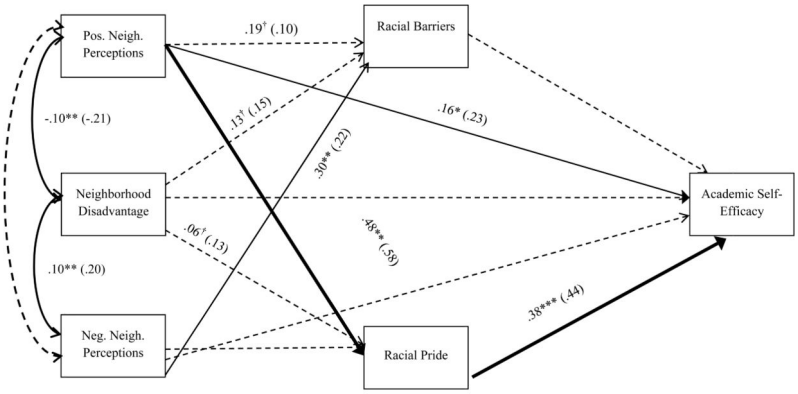


**Figure 1.**

Model for academic self-efficacy. Pos. = Positive. Neg. = Negative. Neigh. = Neighborhood. Estimates for demographic variables are not presented in the figure. Unstandardized and standardized (in parentheses) coefficients are shown. Bolded arrows signify a significant indirect path, and dashed lines indicate non-significant paths. Adjusted for gender, grade, and race-ethnicity. Correlations among other exogenous variables not shown for ease of presentation. * $p < .05$. ** $p < .01$. *** $p < .001$. † = $p < .10$

**Table 1**

Study Variables' Means and Standard Deviations by Sample Characteristics

| | Gender | | Ethnicity | | | | Grade | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Male** | **Female** | **White** | **Af. Am.** | **Hispanic** | **Other** | **2nd** | **3rd** | **4th** | **5th** |
| **Outcomes** | | | | | | | | | | |
| Academic Efficacy | 2.79(.42) | 2.88(.30) | 2.81(.31) | 2.78(.42) | 2.94(.35) | 2.86(.39) | 2.70(.47) | 2.85(.40) | 2.86(.21) | 2.94(.24) |
| **Racial Attitudes** | | | | | | | | | | |
| Pride, Aff, Belong. | 2.66(.47) | 2.74(.39) | 2.73(35) | 2.64(.54) | 2.74(.33) | 2.69(.45) | 2.54(.54) | 2.70(.42) | 2.77(.37) | 2.81(.32) |
| Barriers | 1.74(.77) | 1.60(.71) | 1.59(.66) | 1.66(.76) | 1.36(.54) | 2.00(.84) | 1.86(.77) | 1.71(.75) | 1.75(.71) | 1.51(.69) |
| **Neighborhood Perceptions** | | | | | | | | | | |
| Positive | 2.51(.55) | 2.63(.49) | 2.67(.38) | 2.42(.59) | 2.54(.51) | 2.59(.60) | 2.51(.60) | 2.62(.54) | 2.60(.46) | 2.52(.47) |
| Negative | 1.75(.57) | 1.63(.52) | 1.62(.53) | 1.75(.48) | 1.53(.48) | 1.83(.68) | 1.70(.56) | 1.78(.66) | 1.67(.55) | 1.62(.37) |

*Note*. Af.Am. = African American

**Table 2**

Zero-Order Correlations Among Variables

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Academic Self-Efficacy | - | | | | | |
| 2. Racial Pride, Affirmation & Belonging | .57** | - | | | | |
| 3. Racial Barriers | −.03 | .09 | - | | | |
| 4. Positive Neighborhood Perceptions | .43** | .53** | .08 | - | | |
| 5. Negative Neighborhood Perceptions | −.02 | −.01 | .27** | −.12† | - | |
| 6. Neighborhood Disadvantage | .04 | .02 | .16* | .−.22** | .20** | - |

*Note.*

* = $p < .05$;

** = $p < .01$;

† = $p < .10$