

Neighborhood Characteristics and African American Adolescents' Academic  
Engagement: The  
Role of Adolescents' Academic Beliefs

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## Dedication

The author wishes to dedicate this dissertation to her father, Arthur Lee Busby, for being intentional about the messages he delivered to her regarding education, race, and opportunity; and always reminding her of the power of her beliefs and hard work - despite her circumstances. She is forever grateful for his continuous love, support, and encouragement.

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## Abstract of Dissertation

### Neighborhood Characteristics and Academic Engagement in African American Adolescents: The Role of Adolescents' Academic Beliefs

Disparities in educational performance and attainment between African American and White students are pervasive and longstanding. Statistics indicate that African American students underperform across academic domains; they have lower attainment across several domains. Most attempts to identify predictors of, and interventions for, academic outcomes in African American youth have focused on individual, family, and school factors to the relative neglect of the neighborhood context, despite evidence of variation in academic outcomes according to neighborhood characteristics. This study examines associations between neighborhood characteristics (social characteristics and violence characteristics) and academic engagement, and tests whether adolescents' academic beliefs mediate this association. Participants included a community sample of 100 African American adolescents ages 13-17 years. Study constructs were assessed using adolescent self-report measures of neighborhood violence exposure, violence related youth risk behaviors, perceptions of neighborhood, academic beliefs, and academic engagement. Multiple regressions were conducted to examine adolescents' academic beliefs as mechanisms linking violence neighborhood characteristics and social neighborhood characteristics and academic engagement. Results indicated that adolescents' academic beliefs did not mediate associations. Findings inform neighborhood- and school-level interventions and policies to promote academic engagement and achievement in African American youth.

*Keywords:* academic engagement, neighborhood violence exposure, academic beliefs

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## Neighborhood Characteristics and Academic Engagement in African American Adolescents: The Role of Adolescents' Academic Beliefs

Research consistently indicates that compared to their White counterparts, African American students underperform in vocabulary, reading, math, and on tests of scholastic aptitude and intelligence (National Center of Education Statistics, 2009; 2011; 2015), limiting their lifetime earnings and occupational attainment (Baum & Ma, 2007). The academic disparities between African American and White students leads to less skilled workers, higher rates of unemployment, and less diversity across career fields (Ladson-Billings, 2006) and long-term outcomes, which negatively affect all youth and society as a whole (Baum & Ma, 2007; Snyder et al., 2009). These disparities are especially disturbing given the numerous and adverse consequences of low academic performance for African American youth, including substance abuse (Burlew, Feaster, Brecht, & Hubbard 2009), delinquency (Henry, Knight, & Thornberry, 2012), aggressive behaviors (Breslau et al., 2009), and higher rates of incarceration (Henry et al., 2012), as well as poor health outcomes such as obesity, poor dietary choices, and inadequate physical activity (Center for Disease Control, 2010).

Academic engagement, the quality of students' interactions with learning activities and academic tasks (Ryan & Deci, 2000; Eccles, 2004; Fine, 1991), and academic beliefs, the value or utility one places on doing well in school and on performing well academically (Mickelson, 1990; Rowley, 2000), have been identified as contributors to the academic achievement disparities between African American and White students (Bingham & Okagaji, 2012; Fordham & Ogbu, 1986). Scholars theorize that the disproportionately high rate of low academic performance among African

American youth is due to an adaptive coping response to adolescents' perceptions of limited social and economic opportunities available to African Americans in adult life (Fordham & Ogbu, 1986). Research suggests positive beliefs about future opportunities are in turn, linked to high academic engagement for middle-class African American youth (Sirin & Rogers-Sirin, 2004; Walker, 1987). Although research suggests low academic engagement and negative beliefs about academics may be linked to the neighborhood environment (e.g., Ainsworth, 2002; Leventhal, Dupéré, & Brooks-Gunn 2009), the majority of research on predictors of academic engagement for African American adolescents primarily has focused on individual (e.g., racial identity; Chavous et al., 2003), family (e.g., parental involvement; Stewart, 2008), and school factors (e.g., teacher-student relationships; De Laet et al., 2016), to the relative neglect of the neighborhood context. This dissertation addressed this limitation by using an ecological framework to examine the link between neighborhood characteristics specific to the experiences of some African American youth and academic engagement, and whether individual factors deemed important for achievement and engagement, such as academic beliefs, account for this association (see Figure 1).

### **Academic Performance of African American Adolescents**

The academic achievement gap between African American and White students is a significant problem in the United States. Since the 1960's, there has been a clear academic achievement gap between African American and White students (e.g., Barton & Coley, 2009; Ford & Moore, 2013). The academic achievement gap between African American and White students exists well before students begin school (Clotfelter, Ladd, & Vigdor, 2009) and persists throughout adolescents' elementary and secondary

education (Duncan et al., 2007). While the percentage of African Americans graduating high school and attending four-year colleges has increased over the past twenty years, national data indicate that only 32% of African American 18 to 24-year-olds were enrolled in colleges or universities compared to 44% of their White peers (National Assessment of Educational Statistics, 2009). In 2007, the National Assessment of Educational Progress (NAEP) found that African American students scored significantly lower than their White peers in all assessments of reading and math in grade 4 and grade 8 (Vanneman, Hamilton, Baldwin, Anderson, & Rahman, 2009). Furthermore, research shows dropout rates for African American high school students are 9.3 percent compared to 5.2 percent of White students (Chapman, Laird, Ifill, & KewalRamani, 2011). The education disparities between African American and White students have been partially attributed to poor academic engagement of African American students (Bingham & Okagaji, 2012).

### **Academic Engagement**

Academic engagement refers to the quality of students' interactions with learning activities and academic tasks (Ryan & Deci, 2000; Eccles, 2004; Fine, 1991), and the effort, both in time and energy, that students commit to academically purposeful activities (Kuh, 2001). Academic engagement is a significant predictor of students' academic achievement (Astin, 1993; Chickering & Gamson, 1987; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarella, Terenzini & Feldman, 2005), even after controlling for students' sex, grade level, cognitive function, and mothers' education (Sirin & Rogers-Sirin, 2005). In contrast, students who are disengaged from school and learning are more likely to perform poorly and drop out of school (Finn & Rock, 1997). The current literature on

academic and school engagement is moving toward developing a definition of academic engagement as a multidimensional construct composed of three dimensions: behavioral, emotional, and cognitive (Fredricks, Blumenfeld, & Paris, 2004; Lawson & Lawson, 2013; Suarez-Orozco, Rhodes & Milburn, 2009). These three dimensions of academic engagement indicate how students act, feel, and think, respectively, within their academic environments (Wang & Peck, 2013), and each dimension of school engagement has been linked with academic performance outcomes (see Jimerson, Campos, & Greif, 2003 for a review; Lawson & Lawson, 2013; Suarez-Orozco et al., 2009).

Behavioral engagement refers to the actions and practices that students direct toward school and learning, including school attendance, the absence of disruptive behavior, and their participation and involvement in learning and academic tasks (Connell, 1990; Finn, 1989). Behavioral engagement is positively associated with academic performance (Caraway, Tucker, Reinke, & Hall, 2003). Students who attend school regularly, adhere to school rules, and avoid disruptive behaviors generally get better grades and perform better on standardized tests (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Caraway et al., 2003). For example, Finn and Rock (1997) examined behavioral engagement among low-income minority adolescents they classified as resilient (academically successful and completed high school), nonresilient completers (not academically successful, but completed high school), and nonresilient (dropouts). The resilient students worked harder, had fewer absences, engaged in more learning activities, and did more homework than non-resilient students. Likewise, several studies indicate that participation in school extracurricular activities, a form of behavioral engagement, consistently is linked with better educational outcomes (Feldman &

Matjasko, 2005; Gilman, Meyers, & Perez, 2004; Mahoney, Larson, Eccles, & Lord, 2005). Participation in school activities may be especially important for urban youth as other means to maintain involvement and interest in school (e.g., small class sizes, resources for academic field trips) may be limited (Perkins et al., 2007). For example, prior qualitative research has found that urban youth reported that participation in school activities helped them stay off the streets and provided opportunities for engaging in enjoyable activities (Perkins et al., 2007).

Cognitive engagement refers to students' cognitive investment in learning, including mental efforts directed toward learning, use of self-regulated strategies to learn and master concepts, and mental efforts for comprehension of complex ideas (Corno & Mansinach, 1983; Zimmerman, 1990). Little empirical work has focused on cognitive engagement. Schunk (1991) argued that students who possess and engage in meaningful cognitive strategies for problem solving enhance their current perceptions of their ability and are more likely to utilize the same meaningful cognitive strategies in the future. The available research indicates that students' use of self-regulatory strategies improves their learning and achievement (Zimmerman, 2002). For example, students who use meta cognitive strategies, such as regulating their attention and effort, connecting new information to existing knowledge, and monitoring and evaluating their progress, have better performance on academic outcomes, such as grade point average and standardized tests (Boekaerts, Pintrich, & Zeidner, 2005). Nystrand and Gamoran (1991) found comparable results in their research on a conceptually similar construct, substantive engagement, defined as sustained attention and interest to the content of academic study. They found that substantive engagement in the classroom was positively associated with

scores on an achievement test developed to measure students' in depth understanding and synthesis. Research also has shown that cognitive engagement leads to enhanced performance on achievement measures (e.g., Graham & Golan, 1991; Greene & Miller, 1996; Kardash & Amlund, 1991; Meece, Blumenfeld, & Hoyle, 1988; Nolen, 1988; Pintrich & Garcia, 1991).

Emotional engagement describes students' positive affective reactions to, interest in, and valuing of school activities (Voelkl, 1997). The few empirical studies examining the link between emotional engagement and academic achievement have identified positive associations between adolescents' emotional engagement and their academic performance. Specifically, studies conducted with students in middle school and high school from various racial and ethnic groups have found that students who are emotionally engaged in school and develop a sense of belonging in school are more likely to achieve academically than those who emotionally disconnect with school (e.g., Goodenow, 1993; Osterman, 2000). For example, Connell and colleagues (1994) found that positive emotional engagement was associated with students' academic success, indicated by grades and high scores on standardized achievement tests in reading and mathematics. Likewise, Fine's (1991) research on predominantly African American and Latino high school students who dropped out of school provided qualitative support for the importance of identification and connectedness with school. Her work showed that one of the primary reasons for dropping out of school was that some adolescents did not emotionally engage with school.

Taken together, the literature on behavioral engagement, cognitive engagement, and emotional engagement indicates that these three dimensions of academic engagement



are linked with increased academic achievement (Fredricks, Blumenfeld, & Paris, 2004; Lawson & Lawson, 2013; Suarez-Orozco et al., 2009). However, there are two primary problems with the research on academic engagement that limit conceptual clarity and research aimed at improving academic outcomes (e.g., decrease dropout rates, increase academic achievement). First, much of the research to date has focused on a single component of academic engagement. Defining and examining the dimensions of engagement individually separates students' behavior, cognition, and emotion; however, these factors are interrelated and are not isolated processes (Akey, 2006; Fredericks, Blumenfeld, & Paris, 2004). Examining behavioral, emotional, and cognitive engagement is valuable because it provides a more holistic characterization of students' academic engagement than research on a single component of engagement is able to do. A second concern regarding the available literature on academic engagement is that some studies fail to differentiate between the types of engagement measured by using composite measures in which the types of academic engagement are not distinguished (e.g., Connell, Spencer, & Aber, 1994; Shernoff & Schmidt, 2008). However, the use of combined (i.e., composite) measures makes it difficult to disentangle the independent contribution of each type of engagement to achievement outcomes (Fredricks, Blumenfeld, & Paris, 2004). Understanding the contribution of each type of engagement to achievement outcomes is important for the design and implementation of interventions to improve academic performance by promoting engagement (Lawson & Lawson, 2013; Suarez-Orozco et al., 2009). Thus, this research tested behavioral, cognitive, and emotional engagement as separate predictors, in order to disentangle the independent contributions of each type of academic engagement. An additional problem with the current academic

engagement literature is that much of the work has examined individual and family characteristics as predictors of adolescents' academic engagement, with limited attention to the role of neighborhood characteristics. Prior research has identified associations between neighborhood factors and adolescents' academic performance (Busby, Lambert, Ialongo, 2013; Schwartz & Gorman, 2003; Voisin, Bird, Hardestry, & Shiu, 2010), and similar associations may exist for adolescents' academic engagement.

### **Significance of the Neighborhood Context for African American Adolescents**

#### **Theories of Neighborhood Influence**

According to Bronfenbrenner's ecological systems theory (1979), multiple levels of an adolescent's ecology, including the neighborhood, interact to influence youth development (Delaney-Black et al., 2002; Hurt, Malmud, Brodsky, & Gianetta, 2001). Guided by Bronfenbrenner's (1979) ecological model and grounded in sociology, theories of neighborhood influence describe how neighborhoods affect adolescents' developmental outcomes and why the neighborhood is a significant factor for youth development. These theories have attempted to explain how and why neighborhood quality, socioeconomic status, crime, and neighborhood characteristics (e.g., violence, disorder) affect an array of developmental outcomes, including adolescents' academic engagement (Leventhal & Brooks-Gunn, 2000). Collective socialization theory (Maanen & Schein, 1979), social contagion theory (Crane, 1991), and neighborhood resource theory (Jencks & Myers, 1990; Wilson, 1987) provide the most relevant and cogent frameworks for understanding the association between neighborhood characteristics and academic outcomes, such as engagement.

According to collective socialization theory, adults can operate as positive role models and exert social control on neighborhood youth by monitoring behavior, and by being aware of and dealing with potential trouble (Jencks & Mayer, 1989). Similarly, social contagion theory, one of multiple contagion theories, emphasizes modeling with a focus on the influence of individuals with whom adolescents socialize, affiliate, or accept as role models in shaping their behavior (Jenks & Mayer, 1989; Wilson, 1987). One distinction between collective socialization and social contagion theories is that social contagion theory tends to focus on the modeling or contagion of negative social models in the neighborhood. Both theories are related to Bandura's social learning theory (1977), which posits that people learn from one another via observation, imitation, and modeling. Social contagion theory suggests that many adults living in urban low income neighborhoods may eschew conventional emphasis on school achievement, work skills, and future orientation (Scherer & Cho, 2003). When adolescents are exposed to individuals in their neighborhoods who engage in crime, gang activities, drop out of school, and therefore exhibit low academic engagement, the youth exposed to these behaviors may model and engage in the same negative behaviors (Connor & Brink, 1999). In contrast, collective socialization theory posits that if positive behavior such as graduating from college is modeled, the chances that other youth in the neighborhood will value education and strive for academic success will increase. Frequent exposure to these types of role models encourages these youths to emulate the lifestyles and behaviors they witness.

Neighborhood resource theory highlights the link between the quality and quantity of services available to residents and suggests that available neighborhood

services are associated with increased opportunities for positive development among neighborhood youth (Jenks & Mayer, 1989; Wilson, 1987). For example, low-income African American neighborhoods may have a limited supply of good quality child-serving institutions and facilities (e.g., parks, schools, libraries), given that they are typically underfunded and poorly staffed and maintained (Anderson, 2013; Jarrett, 1997). Therefore, youth living in these neighborhoods often have limited access to positive educational, social, and cultural experiences (Anderson, 2013). The limited nature of these institutions and facilities may contribute to adolescents' beliefs about academics and their academic futures, and ultimately their ability to engage academically. For example, adolescents who are seeking information about college or future occupations may believe they are restricted to certain opportunities given the limited access to the neighborhood resources that may provide the information they seek. Taken together, collective socialization theory, social contagion theory, and neighborhood resource theory suggest that urban youth have more positive developmental outcomes, including high levels of academic engagement, when they have access to academically and occupationally successful adult role models and abundant resources in their neighborhoods (Furstenberg & Hughes, 1997; Kohen, Hertzman, & Brooks-Gunn, 1998). The presence or absence of neighborhood factors that may limit access to positive peers, successful adult role models, or resources could be problematic for developmental outcomes, such as academic engagement. Four such factors include neighborhood disorder, low social control, neighborhood violence, and youth engagement in risk behaviors related to violence.

### **Neighborhood Characteristics Relevant for Academic Outcomes**

**Neighborhood violence characteristics.** Neighborhood violence is often a primary feature of the neighborhood in many urban communities, and impacts a significant number of youth living in these communities (Cauce, Cruz, Corona, & Conger, 2011; Krivo, Peterson, & Kuhl, 2009). Residents' experience of neighborhood violence is typically characterized in terms of victimization by violence, witnessing violence, and hearing about or vicarious exposure to violence (Buka, Stichick, Birdthistle, & Earls, 2001). Studies of community violence exposure have demonstrated high exposure among urban youth. For example, a national survey indicated that over 60% of youth are exposed to violence (Finkelhor, Turner, Ormrod, Hamby, & Kracke, 2014), and homicide is the third leading cause of death among youth ages 10 to 24 (Centers for Disease Control and Prevention, 2015). Neighborhood violence affects all racial and ethnic groups, but African Americans living in low-income urban neighborhoods experience higher rates of neighborhood violence and crime than urban White youth (Crouch, Hanson, Saunders, Kilpatrick, & Resnick, 2000).

Participation in neighborhood violence increases during adolescent years (Eaton et al., 2010), and African American adolescents disproportionately suffer the consequences of neighborhood violence, including imprisonment, serious injury, and death (Eaton et al., 2010). Engagement in violent risk behaviors, i.e., those behaviors that increase likelihood of death (Eaton et al., 2013), is associated with maladaptive outcomes (Eaton et al., 2013), including greater likelihood of violent victimization (Stewart, Schreck, & Simons, 2006) and poor academic performance (Herrenkohl et al., 2000). Examples of violent risk behaviors include carrying a weapon to and from school and engaging in a physical fight (Eaton, 2013). A national surveillance study indicated

28.1% of African American males and 7.9% of African American females reported carrying a weapon in the last 30 days. Relatedly, in the last 12 months, 30.2% of African American males and 19.2 % of African American females reported engaging in a physical fight (Centers for Disease Control and Prevention, 2015 ). Given the significant negative effects of neighborhood violence exposure and adolescents' engagement in violent risk-behaviors (Fowler et al., 2009), the current project will test the effect these specific neighborhood violence characteristics have on African American adolescents residing in urban neighborhoods.

**Neighborhood social characteristics.** Neighborhood disorder refers to a lack of order and social control in the community (Skogan, 1990). Order is defined as a state of peace, safety, and observance of the law; control refers to acts of maintaining this order (Skogan, 1990). Order and control are evident by visible cues, social and physical, that residents perceive (Skogan, 1990; Skogan & Maxfield, 1981; Taylor & Hale, 1986; Taylor & Shumaker, 1990). Social disorder refers to people, and visible signs of social disorder include the presence of people loitering on the streets, drinking, using drugs, panhandling, and creating a sense of danger. Physical disorder refers to the physical appearance of a neighborhood. Places with high levels of physical disorder often have buildings in disrepair, abandoned, or are marked by vandalism and graffiti. On the other hand, visible signs of physical and social order include drug-free neighborhoods, buildings in good repair, and residents taking good care of their homes. Neighborhood disorder can lead to a range of poor adolescent outcomes (Delaney-Black et al., 2002; Hurt et al., 2001), including poor academic outcomes (Schwartz & Gorman, 2003; Voisin, Neilands, & Hunnicutt, 2011). Adolescents living in the context of high

neighborhood disorder may become involved in social disorder; as a result of modeling the behaviors they see in their neighborhoods, they may devote less time and attention to thinking about their academic futures and engaging in their academics.

Informal social control is defined as the ability of a group, or residents of a neighborhood, to regulate its members according to desired principles and to realize collective, as opposed to forced, goals (Sampson, Raudenbush, & Earls, 1997). Living in safe and orderly environment free from predatory crime, especially interpersonal violence (Sampson et al., 1997) is important for the well being of neighborhood residents.

Examples of informal social control include the monitoring of spontaneous playgroups among children, a willingness to intervene to prevent acts such as truancy and street-corner “hanging” by teenage peer groups, and the confrontation of persons who are exploiting or disturbing public space. Like social disorder, informal social control is about social aspects of the neighborhoods. A distinguishing feature is that informal social control is about the capacity in which social behavior has influence, while social disorder is about the presence of social behaviors in a neighborhood. For instance, a neighborhood with high social disorder may have low informal social control, meaning that social behaviors of people in the neighborhood have low influence on the high social disorder present in the neighborhoods.

### **Neighborhood Effects on Academic Engagement**

There is evidence that neighborhood characteristics are associated with poorer academic performance for children and adolescents (Delaney-Black et al., 2002; Hurt et al., 2001). Multiple studies also have documented that youth who live in affluent communities report better school outcomes than their peers from more disadvantaged

settings (Boyle, Georgiades, Racine, & Mustard, 2007; Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993; Duncan et al., 2007; Ensminger, Lamkin, & Jacobson, 1996; Sampson & Raudenbush, 1999). Regarding neighborhood quality, neighborhood disorder has been associated with lower intentions to complete school and a greater number of school suspensions among high school students (Williams, Davis, Saunders, & Williams, 2002), indicating fewer opportunities for these students to be academically engaged. In addition, researchers have documented negative associations between witnessing neighborhood violence and grade point average (Bowen & Bowen, 1999; Hurt et al., 2001; Schwartz & Gorman, 2003; Overstreet & Braun, 1999), standardized test scores in reading and math (Schwartz & Gorman, 2003). and school attendance (Bowen & Bowen, 1999). While the available evidence has shown associations between aspects of the neighborhood environment and academic achievement, less is known about reasons for the association.

### **Mechanisms Linking Neighborhoods and Academic Engagement**

African American youth's experiences in their neighborhoods can influence their beliefs about education and employment opportunities in their neighborhood (Leventhal et al., 2009), and these, in turn, can influence their academic engagement (Fredricks, Blumenfeld, & Paris, 2004). For example, the presence of employed role models is theorized to influence youth's beliefs about the opportunities available to them (Mickelson, 1990), and these beliefs can shape the degree to which adolescents are academically engaged (Jarrett, 1997; Mickelson, 1990). Neighborhood disorder, exposure to neighborhood violence, and low informal social control may similarly influence adolescents' academic beliefs. For example, if adolescents spend significant time in neighborhoods high in disorder and are exposed to adults in their neighborhoods who are



involved in crime and successful without completing school, they may believe academics have little importance and have low expectations for their academic futures. Similarly, neighborhoods with low levels of informal social control are more vulnerable to disorder and violence, increasing adolescents' exposure to both (Anderson, 2013). Youth residing in neighborhoods such as these may constantly think about their safety and place more importance on navigating their neighborhood context than on thoughts about academics, possibly limiting their academic beliefs (Anderson, 2013). Given links between academic beliefs and students' academic performance (e.g., Akey, 2006; Mickelson, 1990; Rowley, 2000), these associations between the neighborhood context and academic beliefs suggest that adolescents' academic beliefs may be an important link between aspects of the neighborhood and adolescents' academic engagement.

### **Academic beliefs**

Adolescents' academic beliefs have been described with an array of terms and related constructs such as academic self-concept, future goal orientation, academic importance, academic attitudes, achievement motivation, and future expectations (Ceballo, McLoyd, & Toyokawa, 2004; Dweck, 2006; Mickelson, 1990; Nurmi & Aunola, 2005; Schunk, 1991; Wigfield & Eccles, 1992; Wigfield & Karpathian, 1991). Understanding adolescents' academic beliefs is important, as numerous studies have found an association between adolescents' beliefs about academics and education and their academic performance (Akey, 2006; Mickelson, 1990; Rowley, 2000). Thus, the current study tests whether adolescents' academic beliefs mediate the effect of neighborhood characteristics on academic engagement.

Academic beliefs have been defined as the value or utility one places on doing well in school and on getting a good education (Mickelson, 1990; Rowley, 2000). Previous research has described positive and negative academic beliefs (Abu-Hilal, 2000; Ceballo et al., 2004; Wentzel, 1996), with positive academic beliefs referring to attitudes reflecting the idealistic attitudes about education. More limited in nature is research that has distinguished between idealistic beliefs and attitudes towards education that reflect the actual experience of different groups in the U.S.; these beliefs have been distinguished as abstract and concrete beliefs (Mickelson, 1990; Rowley, 1996; Rowley, 2000). Abstract academic beliefs are based on beliefs about education and opportunity, and reflect the dominant social ideology of U.S. society. These abstract beliefs about education embody the U.S. society's ideology that schooling is a vehicle for success and upward mobility (Mickelson, 1990). Concrete academic beliefs are beliefs students hold about education that are based on the actual life experiences of students with respect to returns on education from the opportunity structure presented to them or people like them (Mickelson, 1990). For example, an African American adolescent who is aware of the opportunity structure of the U.S. as it relates to race may state, "People in my family have not been treated fairly at work no matter how much education they have" (Mickelson, 1990, p. 51).

Prior research focused on beliefs about the utility of education largely has examined adolescents' abstract beliefs. Similar to adolescents' abstract academic beliefs, literature on possible selves (representations of the self in the future) asserts that the way that youth think of themselves in the future can guide and regulate current behavior (Oyserman, Bybee, Terry, & Hart-Johnson, 2004). Therefore, when adolescents utilize

abstract academic beliefs they think of themselves in a desirable future state that motivates them to pursue their goals, and then engage in behaviors that facilitate their goals or avoid behaviors that reduce the likelihood of their goals. However, unlike abstract academic beliefs and possible selves, the examination of adolescents' concrete beliefs has been neglected, despite the apparent racial and class disparities that largely influences how adolescents from particular neighborhoods think about the value of academics (Mickelson, 1990). Prior research documents an "attitude achievement paradox," for African American youth, suggesting that their academic attitudes do not "match" their academic performance. For example, research indicates that African American adolescents report high abstract academic beliefs, but perform low academically. The reason for this mismatch between beliefs and academic performance is that prior research generally has not considered concrete beliefs. Prior research indicates that concrete but not abstract attitudes predict African American adolescents' academic performance; this is particularly true for students whose abstract and concrete attitudes are disparate (e.g., education is the key to success [abstract belief] but not for people like me [concrete belief]). Therefore, examining adolescents' concrete beliefs is essential for understanding the academic beliefs that actually are at the core of student behavior, such as academic engagement. Prior research suggests that neighborhood factors may have less influence on adolescents' abstract academic beliefs, but are relevant for youth's concrete academic beliefs. Thus, the current study examined how neighborhood characteristics influence both abstract and concrete academic beliefs, and how these beliefs influence adolescents' academic engagement.

Some research has identified associations between adolescents' neighborhoods and their abstract academic beliefs (Ceballo et al., 2004; O'Connor, 1997), but limited research has given attention to concrete academic beliefs. For example, in a study examining the association between neighborhood quality and adolescents' abstract academic attitudes researchers found that students with a high percentage of middle class neighbors endorsed more abstract academic attitudes, and adolescents living in low-SES neighborhoods reported less abstract academic attitudes than their counterparts living in high-SES neighborhoods (Ceballo et al., 2004). Thus, adolescents' abstract and concrete academic beliefs may be associated with their academic engagement in different ways, and ultimately influence their academic performance. Students' attitudes about education and academic tasks have been linked to their levels of engagement, as well as to emotional states that promote or interfere with their ability to be academically successful (Akey, 2006). Students who think positively about academics and students who believe that education is important for their later success are more engaged in school and receive better grades (Farrell, 1994; Finn & Rock, 1997; Rowley, 1998).

Taken together, the available research suggests that aspects of low-income urban adolescents' neighborhoods can influence their academic beliefs, which can either enhance or detract from learning and how students' academically engage. Youth living amongst high neighborhood disorder, crime, and violence may report negative academic beliefs (e.g., Hope, 1995; O'Connor, 1997), and negative academic beliefs predict low academic engagement (Covington, Spratt, & Omelich, 1980; National Research Council, 2004). Thus, it is possible that negative neighborhood characteristics are associated with

low academic engagement because such neighborhoods undermine adolescents' academic beliefs, which make it difficult for youth to engage well academically.

### **The Present Study**

While previous research shows that negative neighborhood factors are linked to academic difficulties such as low grades, reduced school engagement, and achievement problems (Bowen & Bowen, 1999; Delaney-Black et al., 2002; Schwartz & Gorman, 2003), little is known about the mechanisms linking neighborhood characteristics and academic engagement. The research that has examined mechanisms in the association between neighborhood factors and academic outcomes focuses on symptoms and behaviors (e.g., Busby, Lambert, & Ialongo, 2013; Schwartz & Gorman, 2003; Voisin, Neilands, & Hunnicutt, 2011). Examination of adolescents' academic beliefs as mechanisms linking neighborhood characteristics and academic engagement is important to inform future prevention and intervention efforts aimed at improving academic engagement for adolescents' exposed to negative neighborhood factors. Thus, the current study tested adolescents' academic beliefs, abstract and concrete, as mediators of the effect of neighborhood factors on academic engagement.

This dissertation examined the following research questions:

#### **1. How are neighborhood violence characteristics associated with adolescents' academic beliefs?**

**Hypothesis:** Given prior research documenting negative associations between neighborhood violence and adolescents' academic beliefs and research documenting the limited utility of abstract academic beliefs for academic outcomes with African American youth, it is expected that: neighborhood

violence exposure and engagement in violent risk-behaviors will be will be more strongly associated with concrete academic beliefs, than with abstract academic beliefs.

**2. How are social neighborhood social characteristics associated with adolescents' academic beliefs?**

**Hypothesis:** Given prior research documenting the inverse associations between negative neighborhood factors and adolescents' academic outcomes and prior research documenting the importance of beliefs about social and economic opportunities available in adulthood it is expected that: neighborhood disorder and low informal social control will be will be more strongly associated with concrete academic beliefs, than with abstract academic beliefs.

**3. Do adolescents' academic beliefs, abstract and concrete, mediate the association between neighborhood violence characteristics and each domain of academic engagement?**

**Hypothesis:** Previous research has documented inverse associations between negative neighborhood characteristics and adolescents' academic beliefs and a positive association between adolescents' positive academic beliefs and high academic engagement. Therefore, it is hypothesized that adolescents' concrete academic attitudes will mediate the association between neighborhood violence characteristics and each domain of adolescents' academic engagement. It is expected that high abstract academic beliefs will be associated with high academic engagement, but abstract academic beliefs will not mediate the

association between neighborhood violence characteristics and each domain of academic engagement.

**4. Do adolescents' academic beliefs, abstract and concrete mediate the association between neighborhood social characteristics and each domain of academic engagement?**

**Hypothesis:** It is hypothesized that adolescents' concrete academic attitudes will mediate the association between neighborhood social characteristics and each domain of adolescents' academic engagement. However, it is expected that while high abstract academic beliefs will be associated with high academic engagement, abstract academic beliefs will not mediate the association between neighborhood social characteristics and each domain of academic engagement.

### **Method**

#### **Procedure**

The current study was part of a larger project examining adolescents' experiences with neighborhood and race-related stressors (e.g., neighborhood violence; experiences with racism). Potential participants were recruited from two different predominately African American schools in an urban metropolitan district and one predominately African American summer academic program. Potential participants learned about the study from the research team through meetings facilitated by designated school and program liaisons. The liaison served as the primary contact person between the selected sites and research team. Given differences in each school and program structure and daily schedules, procedures for each data collection site were conducted differently based on the preferences of each site. School and program specific procedures are outlined below.

**Ballou Senior High School.** Research assistants recruited participants in health, art, and music classes; these were the courses that all ninth grade students were required to take. Institutional review board (IRB) procedures were conducted through primary research institution (i.e., George Washington University) and through the District of Columbia's Public Schools research board. Informed consent documents were sent to parents of students meeting inclusion criteria. Students, whose parents signed informed consent forms, received an introduction to the study and received an assent form. The consented students who also assented were provided directions to complete research protocols on the study website and assigned an ID number. The survey measures were completed using Qualtrics, an online-based Audio Computer-Assisted Self-Interview (ACASI) software that allows secure, encrypted web-based questionnaires to be administered with accompanying audio to control for differences in reading ability. Adolescents reported about demographics; neighborhood characteristics (disorder, violence, informal social control); academic beliefs (abstract academic beliefs, concrete academic beliefs,); academic engagement (behavioral, cognitive, emotional). Participants were provided time during their physical education, art, and music courses to complete the survey. The survey took about 60 minutes to complete and each student was given \$10 for his or her participation.

**Center City Preparatory Charter School.** All potential participants participated in a 3-week learning series focused on the development of leadership skills. During this learning series, research assistants recruited participants. Students were provided information about the study from research assistants and the school liaison. The consented students who assented to participate were provided directions to complete



research protocols on the study website and assigned an ID number. Students completed the Qualtrics survey during their school day, but if a student was absent during designated time they were provided time to complete survey after school.

**Institute for College Preparation Program.** Research assistants recruited participants during their summer college preparation program. Informed consent documents were given to students to give to their parents for students meeting inclusion criteria. Students, whose parents signed informed consent forms at the beginning of summer program, received an introduction to the study and received an assent form. The consented students who assented to participate were provided directions to complete research protocols on the study website and assigned an ID number. Participants were provided time during their summer psychology course to complete the survey.

### **Participants**

The sample consisted of 100 African American adolescent in an urban metropolitan district. The sample was 56.4 percent female with a mean age of 14.93 (age range = 13-17). Participating adolescents were in grades 8 to 12 ( $M = 9.51$ ,  $SD = 1.32$ ).

### **Measures**

**Neighborhood violence exposure.** Exposure to neighborhood violence was assessed using the Children's Report of Violence Exposure (CREV; Cooley, Turner, & Beidel, 1995), a self-report instrument developed for children and adolescents to assess the frequency of three different modes of violence exposure: hearsay, witnessing, victimization (Cooley et al., 1995). The violent events included whether or not the participant had ever been shot, stabbed, beat, robbed, threatened, and chased, or ever had

heard about or witnessed any of these events or a killing. Violence exposure was rated with Likert scaled response categories of “*never*” (coded zero) to “*everyday*” (coded four). The number of events experienced, witnessed, or heard were summed to create a neighborhood violence exposure score. Higher scores indicate greater exposure to neighborhood violence.

**Violence-related youth risk behaviors.** The Youth Risk Behavior Survey (CDC, 2013) was used to assess adolescents’ violence related risk behaviors. A subset of questions pertaining to violence related risk behaviors were used. The Youth Risk Behavior Surveillance System (YRBSS) includes a national school-based survey conducted by the Center for Disease Control (CDC) and state and local school-based surveys conducted by state and local education and health agencies. The YRBSS monitors six categories of priority health-risk behaviors among youth and young adults, but only the subscale measuring violence related behaviors was used. One set of violence related risk behaviors were assessed in regards to frequency of engagement over the past 30 days. . Responses were based on a five-point scale, ranging from one (zero days) to five (six or more days). A second set of violence related risk behaviors were assessed in regards to frequency of engagement over 12 months. Response categories were based on an eight-point Likert scale ranging from zero (zero times) to eight (12 or more times). Items were summed to create YRBS summary variable. The YRBS has been shown to be reliable with a diverse sample of adolescents ( $\alpha = .72$ ). Cronbach’s alpha in this sample was .83.

**Neighborhood disorder.** The ambient hazard subscale of the Subjective Neighborhood Scale (Aneshensel & Sucoff, 1996) was used to assess participants’

subjective appraisal of neighborhood disorder in their neighborhoods. Appraisal of neighborhood disorder was rated with Likert scaled response categories of “*strongly agree*” (coded one) to “*strongly disagree*” (coded four). Positively worded items were reversed scored so that high scores indicate greater neighborhood risk factors and participants reported about 11 potential neighborhood disorder factors that influence safety and overall neighborhood structure (e.g., violent crimes happen here, there are gangs here; a lot of graffiti here; police harass people for no reason; this is an ugly place to live, and most kids expect to go to college). A summary score was created by summing adolescents’ reports of neighborhood disorder. Higher scores indicate greater neighborhood disorder. The ambient hazards subscale has good reliability ( $\alpha = .90$ ) and has shown to be reliable in samples of urban minority youth (Nebbit & Lombe, 2007; Upchurch, Aneshensel, Sucoff, & Levy-Storms, 2007). For this sample, internal consistency for reports of neighborhood disorder was .60.

**Informal social control.** The Informal Social Control scale (Sampson et al., 1997) was used to assess adolescents’ perceptions of the degree to which their neighbors could be counted on to intervene in various ways in the neighborhood. Items asked if neighborhood could be counted on to intervene if: children were skipping school and hanging out on a street corner, children were spray-painting graffiti on a local building, children were showing disrespect to an adult, a fight broke out in front of their house, and the fire station close to their home was threatened with budget cuts. Informal social control was measured using a five-item Likert-type scale of “*very likely*” (coded one) to “*very unlikely*” (coded five). To create a summary score, the measure was reverse coded and items were summed; therefore, higher scores indicated less informal social control.

The Informal Social Control scale has good reliability ( $\alpha = .80$ ) and has shown to be reliable in samples of urban minority youth (Sampson et al., 1997). In this sample, internal consistency for reports of informal social control was .73.

**Abstract academic beliefs.** Abstract academic beliefs were measured using the Abstract Academic Attitudes subscale of the Educational Attitudes Scale (Mickelson, 1990). The 8-item Abstract Attitudes subscale includes beliefs based on the core ideology of the American Dream, i.e., that opportunity through education exists for everyone, that education is the solution to most individual and social problems, and that one's educational credentials are evaluated by the larger society according to merit (e.g., "Education is the key to success in the future"). The abstract attitudes subscale has acceptable reliability ( $\alpha = .71$ ) in samples of African American adolescents (Mickelson, 1990). The abstract academic attitudes were measured by a series of Likert scaled belief statements scored from strongly agree (coded as five) to strongly disagree (coded as one). To create a summary score, items were summed. The higher the score, the more positive are the adolescents' abstract academic beliefs. Coefficient alpha in this sample was .84.

**Concrete academic beliefs.** Concrete academic beliefs were measured using the Concrete Academic Attitudes subscale of the Educational Attitudes Scale (Mickelson, 1990). The Concrete Attitudes subscale is a seven-item scale that measures adolescents' beliefs about education that are grounded in adolescents' personal experiences (e.g., People in my family haven't been treated fairly at work no matter how much education they have.). The concrete attitudes subscale has acceptable reliability in samples of African American adolescents ( $\alpha = .67$ ). Concrete academic beliefs were measured by a series of Likert scaled belief statements scored from *strongly agree* (coded as five) to

*strongly disagree* (coded as one). To create a summary score, items were summed; the higher the score, the more positive are the student's concrete academic attitudes. In this sample, internal consistency was .70.

**Academic engagement.** Participants' academic engagement was measured using the Academic Engagement Scale (adapted by Wang & Eccles, 2013 from Finn & Voelkl, 1993; Boekaerts et al., 2005; Skinner & Wellborn, 1994), which is comprised of three subscales: Behavioral Engagement, Emotional Engagement, and Cognitive Engagement. The seven-item Behavioral Engagement scale included items that measure the extent to which students follow the school rules and participate in learning activities in school. Sample items are "How often do you get schoolwork done on time?" Responses were based on a five-point scale, ranging from one (*almost never*) to five (*almost always*). The behavioral academic engagement scale has shown acceptable reliability ( $\alpha = .72$ ). The Emotional Engagement scale included eight items assessing students' feelings of acceptance, interest, and enjoyment with school. Sample items are "I feel happy and safe in this school" and "In general, I feel like a real part in this school." The item responses for the scale range from one (*strongly disagree*) to five (*strongly agree*). The emotional academic engagement scale has shown acceptable reliability ( $\alpha = .77$ ). The Cognitive Engagement scale includes eight items that measure the extent to which students use self-regulated learning strategies such as self-monitoring and evaluation to help understand learning materials. Sample items are "How often do you try to figure out problems and planning how to solve them?" and "How often do you try to relate what you are studying to other things you know?" Item responses of the scale range from one (*almost never*) to five (*almost always*). The cognitive academic engagement scale has shown acceptable

reliability ( $\alpha = .81$ ). For each type of engagement, items were summed to create a summary variable. Higher scores indicated greater academic engagement for each domain. Internal consistency for behavioral engagement ( $\alpha = .70$ ), emotional engagement ( $\alpha = .71$ ), and cognitive engagement ( $\alpha = .86$ ) was acceptable.

### **Data Analytic Plan**

Regression analyses were used to test whether academic beliefs (i.e., abstract and concrete) mediated the relationship between neighborhood characteristics (i.e., violence and social) and academic engagement (i.e., behavioral, emotional, cognitive). To test whether adolescents' abstract and concrete beliefs mediate the association between neighborhood characteristics and academic engagement, Hayes' (2012) criteria for parallel multiple mediator models was followed. First, the independent variable must be associated with mediators. Second, mediators must be associated with continuous outcome variables. Third, there must be an association between mediators and the dependent variable when controlling for the independent variable. If the indirect effect of the independent variable on the dependent variable is statistically different from zero, as evidenced by 95% bias-corrected bootstrap confidence interval that does not contain zero, then it can be concluded that mediation occurred.

## **Results**

### **Descriptive, Correlations, and Regression Analyses**

Means, standard deviations, and bivariate associations for study variables are presented in Table 1. Participants' reports of exposure to neighborhood violence ranged from one to five violent events ( $M = 2.08$ ), out of five possible events. Approximately 99% of the sample reported exposure to neighborhood violence through witnessing,

victimization, or hearsay in the past year. Of note, a former student and current student of a primary recruitment site (Ballou High School) were killed due to gun violence during the course of recruitment and data collection procedures. Participants' reports of engagement in youth risk behaviors ranged from one to five risk behaviors ( $M = 1.40$ ), out of eight possible risk behaviors. Approximately 99% of the sample reported engaging in at least one youth risk behavior in their neighborhood or school. Approximately 42% of the sample reported being in a physical fight and approximately 20% of the sample reported carrying a weapon such as a gun, knife, or club.

There was a significant positive correlation between measures of neighborhood violence characteristics, indicating that greater neighborhood violence exposure was correlated with greater engagement in violence related youth risk behaviors ( $r = .26, p < .05$ ). There was a significant positive correlation between the measures of neighborhood social characteristics, indicating that greater neighborhood disorder was correlated with low informal social control ( $r = .45, p < .05$ ). Given the magnitude of the correlations and conceptually related subscales for neighborhood violence characteristics and neighborhood social characteristics, composite variables were created. To create the composite variable for neighborhood violence characteristics, standardized scores were computed using sums of neighborhood violence exposure and violence related youth risk behavior measures. To create the composite variable for neighborhood social characteristics, standardized scores were computed using sums of neighborhood disorder and informal social control measures.

The neighborhood violence composite variable was significantly and negatively correlated with adolescents' reports of behavioral academic engagement ( $r = -.36, p <$

.05), indicating that more neighborhood violence was associated with lower behavioral academic engagement. In contrast, there were no statistically significant correlations between neighborhood violence and cognitive ( $r = -.09, p > .05$ ) and emotional engagement ( $r = -.07, p > .05$ ). There were no statistically significant correlations between neighborhood violence characteristics and adolescents' gender ( $r = -.10, p > .05$ ) or age ( $r = .01, p > .05$ ). There were no statistically significant correlations between neighborhood social characteristics and behavioral ( $r = .13, p > .05$ ), cognitive ( $r = .16, p > .05$ ), or emotional ( $r = .12, p > .05$ ) academic engagement. There were no statistically significant correlations between neighborhood social characteristics and adolescents' gender ( $r = .13, p > .05$ ) or age ( $r = .09, p > .05$ ).

The neighborhood violence composite was marginally correlated with adolescents' abstract academic beliefs ( $r = -.19, p = .07$ ), such that greater neighborhood violence characteristics were associated with lower abstract academic beliefs. The neighborhood composite was marginally correlated with adolescents' concrete academic beliefs ( $r = .17, p = .09$ ), such that greater neighborhood violence characteristics were associated with more concrete academic beliefs. There were no statistically significant correlations between abstract academic beliefs and adolescents' gender ( $r = .06, p > .05$ ) or age ( $r = -.08, p > .05$ ). There were no statistically significant correlations between concrete academic beliefs and adolescents' gender ( $r = .01, p > .05$ ) or age ( $r = .04, p > .05$ ). Neighborhood social characteristics were not significantly correlated with adolescents' abstract ( $r = .13, p > .05$ ) or concrete academic beliefs ( $r = .05, p > .05$ ). There were no statistically significant correlations between neighborhood social characteristics and adolescents' gender ( $r = .13, p > .05$ ) or age ( $r = .09, p > .05$ ).



Abstract academic beliefs were significantly and positively correlated with behavioral ( $r = .29, p < .01$ ), cognitive ( $r = .53, p < .01$ ), and emotional academic engagement ( $r = .42, p < .01$ ). Concrete academic beliefs were significantly and positively correlated with cognitive ( $r = .37, p < .01$ ) and emotional academic engagement ( $r = .29, p < .01$ ), but not behavioral academic engagement ( $r = -.11, p > .05$ ). Given no significant correlations between neighborhood violence characteristics and abstract or concrete beliefs, mediation analyses were not completed. Given no significant associations between neighborhood social characteristics and abstract or concrete beliefs, mediation analyses were not conducted. There were no statistically significant correlations between adolescents' gender and their behavioral ( $r = -.16, p > .05$ ), cognitive ( $r = -.01, p > .05$ ), or emotional ( $r = -.06, p > .05$ ) academic engagement. There were no statistically significant correlations between adolescents' age and their behavioral ( $r = -.05, p > .05$ ), cognitive ( $r = .01, p > .05$ ), or emotional ( $r = .08, p > .05$ ) academic engagement.

### **Discussion**

Prior research has shown that characteristics of the neighborhoods youth reside in directly influence how they engage in their academic and school environment, but mechanisms responsible for the association between neighborhood characteristics and academic engagement are not well understood. The present study investigated whether adolescents' abstract and concrete academic beliefs mediated the association between violence and social neighborhood characteristics and behavioral, emotional, and cognitive academic engagement in a community sample of urban African American adolescents. Neither abstract nor concrete academic beliefs mediated the association between reports of neighborhood violence and social characteristics and behavioral,

emotional, and cognitive academic engagement, but adolescents' reports of the neighborhood violence characteristics were negatively associated with adolescents' behavioral academic engagement. In addition, adolescents' reports of abstract academic beliefs were positively associated with behavioral, emotional, and cognitive academic engagement. Adolescents' concrete academic beliefs were negatively associated with behavioral engagement, but were not associated with emotional and cognitive engagement. The results of this research have implications for prevention and intervention efforts to increase academic engagement among urban African American adolescents and provide information on how experiences related to neighborhood violence and neighborhood social characteristics influence adolescents' behavioral academic engagement and possibly their academic beliefs.

### **Role of Academic Beliefs in Link between Neighborhood Characteristics and Academic Engagement**

**Neighborhood violence and abstract beliefs.** As hypothesized, the more adolescents reported neighborhoods characterized by violence the lower their abstract academic beliefs. Although a finding approaching significance should be interpreted with caution, this finding may suggest that adolescents who reside in neighborhoods characterized by violence have fewer abstract academic beliefs. Youth who reside in neighborhoods with high rates of violence and who engage in violence related risk behaviors may expect to live shorter lives, and thus, have few achievement-related beliefs or expectations due to a sense of foreshortened future (Cauce et al., 2011; Sampson & Raudenbush, 1999). Similarly, adolescents who reside in neighborhoods characterized by violence might experience a sense of hopelessness and depression given concerns related

to safety (Thomas, Caldwell, Jagers, & Flay, 2016). Depressed youth often lack energy and have reduced interest or motivation, likely making it difficult for them to focus on beliefs about the future utility of their education (Wood et al., 2012). However, it is important to note that not all urban African American adolescents are exposed to high neighborhood violence or engage in violence related risk behaviors. African American adolescents who experience low violence exposure or do not engage in violence related risk behaviors, may be more likely to believe that education is a vehicle for future success due to parents delivering socialization messages about education and academic performance that are consistent with beliefs that high academic performance will guarantee upward mobility in the United States.

**Neighborhood violence and concrete academic beliefs.** Consistent with study hypotheses, results showed a positive association between neighborhood violence characteristics and adolescents' concrete academic beliefs that was approaching statistical significance ( $p = .09$ ). Although a finding approaching significance should be interpreted with caution, this finding may suggest that neighborhoods characterized by violence are often limited in access and opportunity (Anderson, 2013), and this is reflected by youth's beliefs that the benefits of education are only based on the opportunities available to African Americans in the United States. In contrast, African American adolescents who do not engage in violent behaviors and reside in neighborhoods with low rates of violence may have access to neighborhood resources (Jenks & Mayer, 1989; Wilson, 1987), may experience less inequality in opportunities, and thus may be less likely to endorse academic beliefs related to limited returns on education. An alternate explanation for why neighborhood violence characteristics are linked to more concrete academic beliefs may

be due to adolescents' use of coping mechanisms specific to violence exposure. For example, "getting through coping" is a coping mechanism specific to neighborhood violence exposure and is characterized by acceptance of neighborhood conditions and an attempt to engage in positive behaviors to get out of the neighborhood (Voisin, Bird, Hardestry, & Shiu, 2010). Beliefs about education that are based on actual life experiences presented to them may motivate urban adolescents to engage in school, to ultimately decrease the likelihood of residing in a neighborhood characterized by violence in adulthood.

**Neighborhood social characteristics and abstract academic beliefs.** Contrary to expectation, neighborhood social characteristics were not significantly associated with adolescents' abstract beliefs about education. Several reasons may explain this finding. Youth residing in neighborhoods with disorder and low informal social control may be involved in organized mentoring programs, as many mentoring programs target youth residing in neighborhoods with limited social control and cohesiveness (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). Participation in mentoring programs may provide a protective effect against negative social neighborhood characteristics on adolescents' academic beliefs by providing youth with more educational opportunities consistent with the establishment of beliefs that education will lead to upward mobility.

**Neighborhood social characteristics and concrete academic beliefs.** Adolescents' reports of neighborhood social characteristics were not associated with concrete academic beliefs. No association between neighborhood social characteristics and academic beliefs consistent with adolescents' perception of the current opportunity structure may be due to nearly half (46.6 %) of the adolescents in the present study

indicating that they lived in a 4-block radius of a racial/ethnic group that differed from their own; this may indicate that adolescents' neighborhood role models could be of a different racial background than adolescents. While adolescents reported modeling of social behaviors (e.g., drug dealing, intervening in a fight) in their neighborhoods, adolescents did not report who conducted these social behaviors. Differences in the race of neighborhood social models and adolescents may weaken the impact of social behaviors modeled by neighborhood adults on adolescents' concrete beliefs about education. Given African American adolescents' concrete academic beliefs are based on returns of education for African Americans in the U.S., the race of social role models may be particularly relevant. Additionally, scholars suggest that adolescents' academic curriculum more frequently promotes messages consistent with abstract academic beliefs than concrete academic beliefs (Coates, 2015; Mickelson, 1990), and thus, adolescents may buy into abstract belief messages without considering the relevance of their own lived experiences and the experiences of their family members as it relates to returns on education. Alternatively, there may not be a significant association between neighborhood social characteristics and adolescents' concrete academic beliefs because although parents may experience inequality in the work environment, they desire to shield youth from information related to poor returns on education (e.g., low salary, unfair treatment) and instead deliver messages of succeeding in their jobs. Parents residing in neighborhoods with disorder and low informal social control seek to protect youth from effects of negative neighborhood social characteristics (Tendulkar, Koenen, Dunn, Buka, & Subramanian, 2012). Alternatively, families residing in neighborhoods low in disorder and high in informal social control may have high returns on education

consistent with abstract academic beliefs; thus, these families may not deliver messages consistent with the establishment of concrete academic beliefs.

**Abstract academic beliefs and academic engagement.** It was hypothesized that adolescents' abstract academic beliefs are directly linked to their behavioral, emotional, and cognitive academic engagement given research stating positive beliefs about academic future are positively associated with grades, class choices (e.g., AP courses), and occupational aspirations (Eccles, Vida, & Barber, 2004; Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002; Nauta & Epperson, 2003). Consistent with prior literature, the present study found adolescents' reports of abstract academic beliefs were positively linked with behavioral, emotional, and cognitive academic engagement, suggesting that adolescents who believe that the more education they receive the more successful they will be have higher academic engagement, across all three types of academic engagement. However, some scholars argue that the "American Dream," the ideology abstract academic beliefs are based in, is an illusion that limits African American youth's capacity to engage in meaningful learning and critical consciousness (Coates, 2015). Coates (2015) argues adolescents' abstract beliefs about academics may enhance engagement in the school the context, but may limit a more complex understanding of the structural systems (e.g., negative neighborhood characteristics, low-SES, institutional racism) that may impact their academic functioning, and constitute as necessary knowledge to successfully navigate higher education and future employment domains. Therefore, it is important to examine adolescents' belief systems that endorse a more accurate assessment of the returns that their education is likely to bring them as African American men and women, also known as concrete academic beliefs.

**Concrete academic beliefs and academic engagement.** That adolescents' report of concrete academic beliefs was positively associated with cognitive and emotional engagement is consistent with prior literature (Mickelson, 1990). Ethnographic research (Crichlow, 1986; Ogbu, 1978; Sleeter & Grant, 1987) also suggests that concrete academic beliefs predict African American adolescents' academic performance. Mickelson (1990) argues that adolescents' concrete academic beliefs reflect the ways in which class, race, and gender differences in the opportunity structure of the United States shape students' efforts, or engagement in school. The current study findings suggest adolescents who endorse knowledge of the unequal opportunity structure in the United States, are able to cognitively and emotionally engage in the school environment, but do not behaviorally engage. Knowledge of the unequal opportunity structure may increase adolescents' motivation to engage in meaningful learning experiences (e.g., When you are doing homework or school work, how often do you try to decide what you are supposed to learn, rather than just read the material?) when they are in school, possibly due to the perceived need to be "twice as good" to succeed academically and gain meaningful employment. With regard to emotional engagement, adolescents may elicit emotional support (e.g., In general, I feel like a real part in this school) from teachers and peers through emotional academic engagement to effectively cope with the reality of an institutional structure that does not favor their success. However, urban African American adolescents' reports of concrete academic beliefs may not be associated with behavioral academic engagement because knowledge of a system of unequal opportunities for African American people likely decreases adolescents' motivation to complete schoolwork and attend class.

**Neighborhood violence characteristics and academic engagement.** The present study found adolescents' reports of neighborhood violence exposure and engagement in violent risk-behaviors were negatively associated with behavioral academic engagement, but were not associated with emotional and cognitive academic engagement. These findings are consistent with prior cross-sectional and longitudinal research examining the effects of neighborhood factors related to violence on academic outcomes and performance (Borofsky, Kellerman, Baucom, Oliver, & Margolin, 2013; Matthews, Dempsey & Overstreet, 2009; Milam, Furr-Holden, & Leaf, 2010). Adolescents who are exposed to neighborhood violence and who engage in violence related risk behaviors may model and normalize violent responses, which may lead to an increase in problem behaviors in school. Youth with significant behavior problems likely have fewer positive interactions with teachers and peers, less time for classroom instruction, and reduced opportunities to participate in school activities; each has been linked to lower academic performance and academic engagement (Sugai & Horner, 2008). This explanation may be plausible because low behavioral engagement (e.g., high absenteeism) provides less opportunity to cognitively and emotionally engage in the school environment (Fredricks & Blumenfeld, 2004).

**Neighborhood social characteristics and academic engagement.** Neighborhood social characteristics were not significantly associated with behavioral, emotional, and cognitive academic engagement. This finding is contrary to prior research indicating a positive association between neighborhood social characteristics, such as neighborhood disorder and informal social control, and academic engagement (Boyle et al., 2007; Brooks-Gunn et al., 1993; Duncan et al., 2007; Ensminger et al., 1996; Williams, Davis,



Cribbs, Saunders, & Williams, 2002). Neighborhood disorder and informal social control may have not influenced adolescents' behavioral, emotional, and cognitive academic engagement in the present study because in this sample of urban youth 51% of the adolescents reported living at their current address for less than five years. It may be that neighborhood disorder and informal social control only influence how adolescents engage academically after youth have lived in a particular social context for several years (e.g., more than 5 years). Prior research states the time it takes adolescents to develop comfort and feel safe in new social contexts (Bastable & Dart, 2007), like neighborhoods, varies significantly. Once adolescents have learned the social nuances of their neighborhood context over time and feel safe where they reside, there may be greater likelihood that youth can give more effort and cognitive energy to engaging in the academic context. Alternatively, given research stating the increase of social networks via the Internet (Lenhart et al., 2011), adolescents' academic engagement may not be influenced by their neighborhood social characteristics and instead may experience significant influence from peers on social media sites, such as Facebook, Instagram, and Snapchat (Herring & Kapidzic, 2015; Lenhart et al., 2011). This explanation is consistent with prior research indicating adolescents spend an average of 3 hours on social media networks per day (Lenhart, 2012).

### **Strengths and Limitations**

It is important to understand factors that may account for low academic engagement, a predictor of academic achievement (Bingham & Okagaji, 2012), among African American adolescents in order to eradicate the longstanding academic achievement disparities experienced by low income and urban African American

adolescents (Vanneman et al., 2009). A focus on the abstract and concrete academic beliefs of adolescents as the mechanisms through which neighborhood characteristics influence academic engagement, can provides insight into processes that may explain, at least in part, research indicating low levels of academic engagement (Finn & Zimmer, 2012; Vanneman et al., 2009) for African American adolescents. In doing so, this research suggests potential targets for intervention with adolescents who endorse abstract and/or concrete academic beliefs. In regards to the current study's data analytic approach, the use of Hayes' (2012) regression-based path analytic framework and use of bootstrapping to test mediation is an identified strength for the current study given the multiple mediator model and small sample size. However, these study strengths should be considered in the context of some limitations.

Regarding measurement, neighborhood violence characteristics required adolescents to indicate whether or not they engaged in a violence related risk behavior during a specified time (i.e., past 12 months, past 30 days) frame and if adolescents had been exposed to a specific violent event in the past year. In contrast, reports of neighborhood social characteristics exclude reports of specific time frames or experiences. These differences in measurement may explain differences in findings between neighborhood violence characteristics and neighborhood social characteristics. Adolescents may have been able to provide more accurate and consistent reports about neighborhood violence characteristics as compared to reports about their perceptions of neighborhood social characteristics.

Peer and teacher variables relevant for academic engagement were not assessed in the present study. It is generally accepted that adolescents are well equipped to report

individual experiences and behaviors (Grant, Compas, Thurm, McMahon, & Gipson, 2004); however, prior research suggests teachers provide essential information regarding how youth engage academically in comparison to their same-age peers (Bastable & Dart, 2007). For instance, adolescents may experience difficulty determining their level of academic engagement in ways that teachers and parents may be able to report. Relatedly, adolescence is a time of decreased parent monitoring, and increased peer influence (Bastable & Dart, 2007); thus adolescents' peers may also play a significant role in the development of academic beliefs and how adolescents academically engage. Finally, these results likely generalize only to African American youth from similar socioeconomic and geographic backgrounds.

### **Implications for Prevention and Intervention**

Findings that neighborhood violence characteristics are negatively associated with behavioral academic engagement highlight the importance of targeting adolescents' exposure to neighborhood violence and youth engagement in violence related risk behaviors because a significant proportion of urban youth reside in neighborhoods characterized by violence, which can result in a range of maladaptive outcomes, including low behavioral academic engagement. Interventions such as Academic Mindset Interventions (Snipes, Fancsali, & Stoker, 2012) may be particularly useful for youth who are exposed to neighborhood violence and engage in violence related risk behaviors because these youth expect to live short lives (e.g., age 21; Cashmore & Troyna, 2013), and thus may have few beliefs related to future opportunities regarding their education. Academic Mindset Interventions target students' core beliefs about school and learning, such as "Can I learn and grow my intelligence?" (growth-mind-set beliefs) and "Why

should I learn?” (sense-of-purpose beliefs; Snipes, Fancsali, & Stoker, 2012). In so doing, adolescents can change how they interpret and respond to challenges in their school and neighborhood, increase resilience, and establish positive recursive cycles that increase success over time (Cook, Purdie-Vaughns, Garcia & Cohen, 2012; Yeager & Walton, 2011). Furthermore, the use of Academic Mindset Interventions school-based model of service delivery (Snipes, Fancsali, & Stoker, 2012) helps overcome barriers to service access that many urban youth may experience.

The positive association between abstract academic beliefs and behavioral, cognitive, and emotional engagement, and concrete academic beliefs link to cognitive and emotional engagement suggest that policies should include interventions and academic curriculums aimed at the development of adolescents’ academic beliefs. Low endorsement of beliefs about education being a way to achieve higher social mobility may lead to limited academic engagement across each domain (behavioral, cognitive, and emotional), and likely low academic achievement. However, working to increase beliefs consistent with the “American Dream” ideology may be difficult given the consistent messages that refute abstract academic beliefs in many urban schools and neighborhoods (Mickelson, 1990; Oyserman et al., 2004). Thus, interventions aimed at the healthy development of *both* abstract and concrete beliefs should be considered.

Study findings also emphasize the significance of examining multiple domains of academic engagement because each domain is distinct and important for academic achievement (Fredricks, Blumenfeld, & Paris, 2004). Additionally, when working with urban youth from diverse backgrounds it is beneficial to understand which neighborhood characteristics and types of academic beliefs influence each type of academic

engagement to aid in the development of the most optimal academic interventions when needed. Interventions aimed at shaping African American adolescents' academic related outcomes, including academic engagement, often highlight the importance of the positive development of racial identity. Racial identity development is critical to the academic identity of African American youth (e.g., Ginwright, 2004), and may also be essential to the development of their academic belief systems. Afrocentric academic curriculums often focuses on developing high racial identity, but also including information about additional stressors related to urban adolescents' neighborhood characteristics might be beneficial for future prevention and intervention programs for urban African American youth. For example, youth who are exposed to violence or engage in violence related risky behaviors in their schools and neighborhoods may also experience additional stressors related to race (e.g., discrimination) and class (e.g., poverty) that may directly impact their ability to engage academically.

### **Future Directions**

Finding that the relationship between neighborhood violence characteristics and behavioral academic engagement is negative provides some direction for future research. Future research should identify what stage of adolescence (e.g., early vs. late) is the most relevant for understanding the association between neighborhood violence characteristics and behavioral academic engagement so that future interventions can be aimed at the most relevant stage of adolescence. Researchers should also consider investigating the effects of neighborhood violence exposure and violence related youth risk behaviors on other measures of academic performance, such as teacher ratings of performance and academic grades (Sabol & Pianta, 2012). Additionally, given the violent nature of

reported violence exposure and risk behaviors, future research should also examine adolescents' psychological outcomes associated with these experiences. It is important to note that not all adolescents who are exposed to violence or who have engaged in violence related risk behaviors have low behavioral academic engagement outcomes. Future research should examine factors that promote resilience within these youth. Prior research highlights racial identity and racial socialization as protective factors against low academic achievement for African American adolescents (Byrd & Chavous, 2009; Evans et al., 2012). Identifying relevant protective factors for African American youth will allow researchers to develop and implement optimal interventions for youth exposed to neighborhood violence and who engage in violence related risk behaviors. .

The findings that abstract academic beliefs were positively associated with behavioral, emotional, and cognitive engagement, and that concrete academic beliefs were positively associated with emotional and cognitive engagement provide evidence of the significance of beliefs consistent with the idea of the “American Dream” for African American adolescents' academic engagement. Given endorsement of both abstract and concrete beliefs is associated with increased academic engagement, further investigation of the circumstances in which abstract beliefs or concrete beliefs are most beneficial is needed. Additionally, long-term effects of abstract and concrete academic beliefs on adolescents' education attainment and adjustment to higher education would be beneficial to explore in future research. Finally, adolescents' abstract and concrete beliefs about education do not happen in isolation of one another. Therefore, future research examining how abstract and concrete academic beliefs interact will be helpful for the development

of future prevention intervention programs and curriculums aimed at increasing adolescents behavioral, emotional, and cognitive academic engagement.

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Figure 1. Conceptual model

