EXAMINING THE INFLUENCE OF PARENTS, TEACHERS, AND NEIGHBORHOOD SAFETY ON AFRICAN AMERICAN ADOLESCENTS’ MOTIVATION AND ACHIEVEMENT

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EXAMINING THE INFLUENCE OF PARENTS, TEACHERS, AND NEIGHBORHOOD SAFETY ON AFRICAN AMERICAN ADOLESCENTS’ MOTIVATION AND ACHIEVEMENT

___________________________________________________

DISSERTATION

____________________________________________

A dissertation submitted in partial fulfillment of the requirements for the degree of a Doctor of Philosophy in the College of Education at the University of Kentucky

By

Clarissa Roan-Belle

Lexington, Kentucky

Co-Directors: Dr. Lynda Brown Wright, Professor of Educational Psychology and Dr. Tom Prout, Professor of School Psychology

Lexington, Kentucky

2013

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ABSTRACT OF DISSERTATION

EXAMINING THE INFLUENCE OF PARENTS, TEACHERS, AND NEIGHBORHOOD SAFETY ON AFRICAN AMERICAN ADOLESCENTS’ MOTIVATION AND ACHIEVEMENT

Guided by the theoretical frameworks of Baumrind’s parenting style theory, interpersonal expectations, Self Determination Theory, and self-efficacy, this study examines factors that influence African American students’ GPA and motivation, specifically associations between parents’ and teachers’ control, warmth, and educational expectations and African American adolescents’ GPA, self-efficacy, and intrinsic motivation were examined. The moderating effects of neighborhood safety on the aforementioned associations were also assessed. Using data from the Educational Longitudinal Study of 2002, this study found that parents’ warmth and expectations were positive predictors of all educational variables, while parents control was a negative predictor of GPA and intrinsic motivation. Teachers’ warmth was a positive predictor of GPA and intrinsic motivation, and teachers’ expectations were positive predictor of self-efficacy. Lastly, teachers’ control was a positive predictor of self-efficacy. Neighborhood safety did not moderate associations. Findings suggest that African American students’ academic development can be enhanced by interventions that target relational interactions.

KEYWORDS: Parenting Style, Teaching Style, African American, Motivation, Neighborhood Safety

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EXAMINING THE INFLUENCE OF PARENTS, TEACHERS, AND NEIGHBORHOOD SAFETY ON AFRICAN AMERICAN ADOLESCENTS’ MOTIVATION AND ACHIEVEMENT

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Dedication page

“It feels so good to make it this far and I didn't think I could take it so long. There were days I wanted to quit. I said surely this is it but I held on. Lord, I watched you take my family from there to here. And when times were a lil’ rough, God, I know You were near. And the moments I thought I’d fail, I was reminded of your nails. So I held on.

For my life, Lord, I thank You. For every victory in You I've seen. And all the moments I know it was You who kept me. So, I thank You for my life.”

--- Smokie Norful

First, I would like to give honor to my Lord and Savior Jesus Christ. This Journey would not have been possible without His help. I would also like to dedicate this dissertation to my family. A special feeling of gratitude to my husband, Mory Belle, who demonstrates the true essence of love and commitment. Thank you for supporting my dreams and loving me selflessly. I am proud to call you my husband and blessed to have you by my side. To my son M.J., you are truly a gift from God. Along this journey, you were my little ray of sunshine always lifting and rejuvenating my spirit. To my mother, Lucenda Roan, thank you for your sacrifices and encouragement. You taught me that “only the strong will survive”, and to my father, Ricky Roan, thank you for stimulating and cultivating my mind with new ideas. Lastly, to my grandparents and spiritual parents, Louise & JB Holland, Hattie & Tommy Farrell, J.W. & Dorthy Walden, Marie & Chris Spencer, and Arlester Washington, thank you for building a firm foundation for me to stand. You made many sacrifices so that your children and grandchildren can have something better. Your labor was not in vain.

I also dedicate this dissertation to my many friends and church family, specifically Ebenezer Christian Center and Now Faith Worship Center, who have supported me during this process. I am grateful for all that you have done, especially Gordonyale Tulloch and Rachel Thomas for always having my back and being there for me and my family, Octavia Fulk for being my cheerleader and providing last minute editing advice, and Felice Rogers for all the laughs.
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Chapter I: Introduction

Examining the Influence of Parents, Teachers, and Neighborhood Safety on African American Adolescents’ Motivation and Achievement.

This study explores the influence of parenting and teaching style patterns, as well as the influence of parents’ and teachers’ educational expectations on African American adolescents’ academic achievement and motivation. The moderating influence of neighborhood safety on aforementioned associations will also be examined. This chapter of the study is outlined in the following manner: (a) statement of the problem, (b) study rationale, (c) purpose of the study, (d) research questions, and (e) significance of the study.

Statement of the Problem

Unfortunately, disproportionate numbers of African American students are struggling academically. In 2009, the National Center for Educational Statistics reported that only 14% of African American eighth graders were proficient in reading and math. As African American students progress through the educational system, the number of these students struggling academically increases. For example, only 10% of African American twelfth graders were proficient in reading and math in 2009 (NAEP, n.d.). Poor academic achievement leads to low graduation rates and college attendance rates. Approximately 65% percent of African American adolescents graduate from high school (Heckman & LaFontaine, 2010), and on average, only 22% of African American adolescents’ scores on ACT reading, math, and English exams indicate they are likely to obtain passing grades in college level courses (Lewis, Simon, Uzzell, Horwitz, & Casserly, 2010).

The educational plight of African American students has not gone unnoticed by the research community. For decades, researchers have forwarded explanations related to biological factors (Jensen, 1968; Rushton & Jensen, 2010), school characteristics (Borman & Dowling, 2010; Coleman et al., 1966), family demographics (Bradley, Corwyn, McAdoo, & García Coll, 2001; Moynihan, 1967), and cultural factors (McWhorter, 2000; Ogbu, 2008) to explain
persistent levels of academic underachievement among African American adolescents. However, within this literature, there are several problems related to the examination of African American students’ educational difficulties that need to be addressed for further understanding of this issue.

The first problem in the literature is the persistent usage of demographic characteristics (e.g., family socioeconomic status, school racial composition, and parental education level) as explanatory variables for educational difficulties of African American students (Mandara, 2006). Demographic variables are static and difficult to influence with school-level resources. Thus, studies that explain educational difficulties of African American students by largely focusing on these variables provide limited assistance in developing school-level interventions. Furthermore, Davis-Kean (2005) found that the influence of demographic variables on African American students’ educational outcomes is mediated by relational interactions between students and significant adults (e.g., parents and teachers). Researchers should focus more attention on malleable relational variables (e.g., teaching styles and parenting styles) instead of demographic variables. These relational variables can be targeted and influenced with school-level resources to develop interventions (Davis-Kean, 2005).

Furthermore, the limited number of studies exploring multiple contextual environments is another area that needs to be addressed (Marchant, Paulson, & Rothlisberg, 2001). Marchant et al. (2001) pose that a large portion of the educational literature attempts to explain students’ educational difficulties from a microsystem approach and in these studies “patterns of activities, social roles, or interpersonal relations experienced by a developing person in a [single] face-to-face setting” are considered (Bronfenbrenner, 1994, p. 39). Thus, studies that examine associations between student-teacher relations and academic achievement are an example of a microsystem model because interactions within on setting (e.g., school) are considered. Instead of a microsystem approach, Marchant et al. (2001) encourage researchers to adopt a mesosystem approach and in these studies linkages and processes taking place between two or more settings containing the developing person (e.g., interactions between students and teachers,
as well as interactions between parents and children) are explored. Mesosystem models allow researchers to examine variables within multiple contextual environments simultaneously; as a result, a more holistic understanding of students’ difficulties can be obtained. African American students’ academic development is influenced by variables within the home, school, and community. Therefore, all of these contextual environments should be considered when examining African American students’ academic difficulties.

Lastly, the practice of taking a deficiency model approach to explain educational difficulties limits the educational communities’ understanding of academic underachievement among African American students (Cokley, 2003; Spencer, Noll, Stoltzfus, & Harpalani, 2001). To state it differently, many studies often assume that African American students are experiencing educational difficulties because they lack various motivational dispositions (Ogbu, 2008). Cokley (2003) note that many studies and theories that take a deficiency approach fail to directly assess motivational states of African American students. Instead, hypotheses about students’ motivational characteristics are made after analysis to explain findings. These studies also fail to examine environmental factors that may facilitate various motivational states of African American students. Therefore, it is important for researchers to assess directly motivational states of African American students, and the manner in which environmental factors influence African American students’ motivation patterns should also be examined.

**Study Rationale**

This study will provide a greater understanding of factors impacting African American students’ academic achievement by: (a) examining associations between academic achievement and malleable variables, specifically relational interactions between students and parents and students and teachers, as well as teachers and parents educational expectations; (b) examining variables within multiple contextual environments, specifically home, school, and community; (c) assessing directly African American students’ motivation patterns, specifically self-efficacy and
intrinsic motivation; and (d) examining the influence of environmental factors on academic achievement and motivation patterns.

One challenge in examining relational factors between students and significant adults, particularly parents and teachers, is identifying a theoretical lens to view these interactions. Parents and teachers are influential and consistent socialization agents in students’ lives. Therefore, it is important to find a theoretical framework that recognizes the importance of these interactions in shaping students’ views about themselves and the world around them. Baumrind’s parenting style theory can be used as a theoretical framework for parent-child interactions and student-teacher interactions. This theory suggests that behaviors of parents and teachers shape students’ views about themselves, the environment, and their ability to function within various environments (Baumrind, 1991; Darling & Steinberg, 1993; Walker, 2008). Furthermore, parenting style patterns and teaching style patterns—authoritative, authoritarian, permissive, and rejecting-neglecting—create an emotional climate that influences students’ receptiveness to engaging in academically related tasks. Various emotional climates also influence students’ internalization of socialization agents’ academic beliefs and values (Darling & Steinberg, 1993; Deci & Ryan, 2004).

While Baumrind’s parenting style theory examines the influence of parents’ and teachers’ behaviors on African American students’ academic development, this theory does not adequately consider the manner in which parents’ and teachers’ educational beliefs and attitudes influence students’ development. Flower and Flower (2008) note that interpersonal expectations (i.e., educational expectations) of significant socialization agents are vitally important for African American students’ academic achievement. When parents and teachers hold high educational expectations, students are more likely to engage in behaviors that produce high levels of academic achievement (Sanders & Jordan, 2000).

Associations between academic achievement and parenting style patterns, teaching style patterns, parents’ educational expectations, and teachers’ educational expectations have been
examined empirically. Generally, findings suggest that authoritative parenting and high educational expectations are associated with the most positive educational outcomes (Aunola, Stattin, & Nurmi, 2000; Gonzalez, Doan Holbein, & Quilter, 2002; Walker, 2008). However, findings from studies examining associations between parenting style patterns and educational variables among African American students are inconsistent. Specifically, studies have found insignificant associations (Bean, Barber, & Crane, 2006; Park & Bauer, 2002) and significant associations (Bean, Bush, McKenry, & Wilson, 2003; Radziszewska & Richardson, 1996) between parenting style patterns and educational outcomes (i.e., grades and motivation patterns). It is difficult to assess patterns of association within the teaching style literature because many of these studies fail to include African American students in their sample (Marchant et al., 2001; Walker, 2008).

Unlike parenting and teaching style variables, the influence of parent’s educational expectations on African American students’ educational outcomes has been examined extensively in the literature, and studies have constantly found positive associations between parental educational expectations and academic achievement (Kaplan, Liu, & Kaplan, 2001). However, findings in relations to associations between teacher educational expectations and academic achievement are mixed. Some studies report positive associations between these variables (Sanders & Jordan, 2000), while other studies report negative associations (Tyler & Boelter, 2008).

Examining moderators is an important step in understanding inconsistent findings within the literature. Several studies note that neighborhood risk is an important moderator to consider because neighborhood risk influences the manner in which parents interact with their children. Neighborhood risk also alters the strength of associations between parenting style patterns and academic achievement (Darling & Steinberg, 1993; Roche, Ensminger, & Cherlin, 2007; Steinberg, Lamborn, Dornbusch, & Darling, 1992). Gonzales, Cauce, Friedman, and Mason (1996) found restrictive parenting practices (e.g., authoritarian parenting) are associated with
higher grades for students in unsafe neighborhoods, and restrictive parenting practices are associated with lower grades for students living in safe neighborhoods. Thus, the most beneficial parenting style pattern for academic achievement within a safe neighborhood may not be the most beneficial parenting style pattern for academic achievement in a dangerous neighborhood.

Unfortunately, literature examining associations between academic achievement and teaching style patterns, parents’ educational expectations, and teachers’ educational expectations among African American students has not considered the influence of neighborhood safety on associations. However, several researchers suggest that authoritative teaching, high levels of parental educational expectations, and high levels of teacher educational expectations act as protective factors for African American students living in dangerous neighborhoods (Stanton-Salazar, 1997), but these hypotheses need to be investigated empirically. Therefore, examining neighborhood safety as a moderator of associations between academic achievement and parenting style patterns, teaching style patterns, parental educational expectations, and teacher educational expectations can assist with expanding and clarifying the literature.

Along with the examination of neighborhood safety, the research community’s understanding of African American students’ educational functioning can be further enhanced by exploring multiple educational variables. Dever and Karabenick (2011) note that along with academic achievement, academic motivation is an important factor to consider because this variable provides valuable information about students’ cognitive functioning. African American students’ motivation patterns have been largely examined using attribution theories as theoretical frameworks (Graham, 1994). Graham (1994) and Cokley (2003) urge researchers to examine African American students’ motivation patterns using a more diverse array of motivational theories, such as self-determination theory (SDT) and self-efficacy. SDT (Deci & Ryan, 2004) and self-efficacy (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996) pose that relational interactions between children and parents and students and teachers are major catalyst for the development of various motivation patterns. SDT and self-efficacy will be used as theoretical
frameworks for motivation variables in this study. SDT identifies several motivation patterns, specifically intrinsic motivation, extrinsic motivation, and amotivation. Intrinsic motivation will be the specific motivation pattern examined in this study because it is associated with the most positive educational outcomes (Deci & Ryan, 2004).

**Purpose of Study and Research Questions**

Guided by the theoretical frameworks of Baumrind’s parenting style theory, interpersonal expectations, SDT, and self-efficacy, the purpose of this study is threefold: (a) to investigate the influence of African American adolescents’ perceptions of parenting and teaching styles patterns and their perceptions of parents’ and teachers’ educational expectations on academic achievement, specifically GPA; (b) to examine the influence of African American adolescents’ perceptions of parenting and teaching styles patterns and their perceptions of parents’ and teachers’ educational expectations on self-reported motivation patterns, specifically intrinsic motivation and self-efficacy; and (c) to explore the moderating effects of African American parents’ perceptions of neighborhood safety on the aforementioned associations.

These research questions will be examined in this study:

1. Do parenting and teaching style indicators and parents’ and teachers’ educational expectations predict African American adolescents’ achievement?
2. Do parenting and teaching style indicators and parents’ and teachers’ educational expectations predict African American adolescents’ motivation patterns (i.e., intrinsic motivation and self-efficacy)?
3. Are associations between parenting and teaching style indicators and academic achievement and associations between parents’ and teachers’ educational expectations and academic achievement moderated by neighborhood safety?
4. Are associations between parenting and teaching style indicators and motivation patterns and associations between parents’ and teachers’ educational expectations and motivation patterns moderated by neighborhood safety?
Significance of the Study

Given the educational plight of many African American students, it is imperative that researchers begin to identify factors within students’ environment that facilitate academic achievement and adaptive motivation patterns. This study will focus on malleable variables within homes and schools that can be targeted by school psychologists when developing interventions to assist students. In addition, by examining variables associated with multiple socialization agents, this study will also assist researchers in determining the individual and combined effects that parents and teachers have on African American adolescents’ academic achievement. The impact of congruency or lack thereof in parenting and teaching styles on educational outcomes can also be examined.

Lastly, this study employs an intragroup comparison approach instead of an intergroup comparison approach. Many studies examining academic achievement and motivation patterns among African American students focus on identifying differences between African American and Caucasian students (intergroup comparison; Graham, 1994). The continual usage of intergroup comparisons within studies is problematic because studies using this approach often depict African American adolescents as a homogenous group (Lubienski, 2002; Tamis-LeMonda, Briggs, McClowry, & Snow, 2008). African American adolescents come from diverse backgrounds and have diverse schooling experiences. Intergroup comparisons overshadow this diversity and distract attention away from educational disparities among African American students. Therefore, by concentrating on African American students (intragroup comparison), this study will provide information related to educational differences among African American students. This study will also examine factors (e.g., neighborhood safety) that contribute to group differences in educational performance.

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Chapter II: Literature Review

The purpose of this chapter is to review the relevant literature on parenting styles and teaching styles, as well as, parents’ and teachers’ educational expectations. Literature discussing associations between the aforementioned variables and educational outcomes (i.e., achievement and motivation) will also be reviewed. This chapter begins by identifying a theoretical framework for parenting styles and teaching styles, and the manner in which these variables are assessed in the literature is discussed. Next, literature discussing parents’ and teachers’ educational expectations will be reviewed. Studies examining associations between academic achievement and parenting and teaching style indicators, as well as academic achievement and parents’ and teachers’ educational expectations will be presented. This section is followed by a brief discussion of associations between motivation and parenting and teaching styles indicators and motivation and parents’ and teachers’ educational expectations. Lastly, the moderating influence of neighborhood safety on relationships between educational outcomes and parenting style indicators, teaching style indicators, parents’ educational expectations and teachers’ educational expectations is explored.

Theoretical Framework for Parenting Styles and Teaching Styles

Parenting style refers to the overall emotional climate within the home established through parent-child interactions (Baumrind, 1989; Darling & Steinberg, 1993). Diana Baumrind’s (1989) parenting style theory is the leading conceptualization of parenting style. Baumrind (1971, 1989, 1991) identifies four parenting style typologies—authoritative, authoritarian, permissive, and rejecting-neglecting—that are differentiated by high or low levels of parental demanding and parental responsive behaviors. Demandingness refers to parental behaviors associated with control, such as parental monitoring and disciplinary actions. Responsiveness refers to nurturing parental behaviors, such as parental support, warmth, and guidance. Demanding parental behaviors socialize children to adhere to societal rules and expectation, whereas, responsive parental behaviors foster internal characteristics (e.g.,
autonomy, self-regulation, and competence) needed to become an integrated and functioning member of society (Baumrind, 2005).

Various combinations of parental demanding behaviors and responsive behaviors are used to describe parenting style typologies. Authoritative parenting is associated with high levels of demandingness and responsiveness. Research suggests that children reared in authoritative homes have the best academic and psychological outcomes in comparison to children reared in authoritarian, permissive, or rejecting-neglecting homes (Aunola et al., 2000; Gonzalez et al., 2002; Steinberg et al., 1992). Authoritative parents create an emotional climate that encourages adolescents to explore their interests and develop an independent sense of self. Furthermore, elements of demandingness are clearly communicated (e.g., rules and expectations) and expressed in an inductive manner (i.e., parents provide explanations for their behavior and rules) through bidirectional communication.

In comparison, authoritarian parenting is described as high levels of demandingness and low levels of responsiveness. Authoritarian parents establish clear boundaries. However, there is minimal support and guidance within the parent-child relationship. Instead, authoritarian parenting establishes an emotional climate that promotes strict obedience, and the usage of induction and bidirectional communication is replaced with parental assertion of power. Many studies report that African American parents are more authoritarian than Hispanic and Caucasian parents (Jackson-Newsom, Buchanan, & McDonald, 2008; Reitman, Rhode, Hupp, & Altobello, 2002). In these studies, African American parents are often depicted as firm, harsh, and cold disciplinarians because they use physical punishment and endorse parental assertion of power parenting beliefs at much higher rates than parents of other ethnic groups (Jackson-Newsom et al., 2008; Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004; Lansford et al., 2005). Furthermore, Gonzales, Cauce, and Mason (1996) note that research observers assessing the quality of parent-child interactions within African American homes reported that in some homes parental responsiveness, specifically communication patterns, were harsh and controlling.
Permissive parents exhibit low levels of demandingness and high levels of responsiveness. These parents establish an emotional climate that encourages bidirectional communication, but there is little to no parental authority evident because the child regulates this relationship. Lastly, rejecting-neglecting parents exhibit low levels of responsiveness and demandingness. These parents are not emotionally invested in the parent-child relationship. They do not put forth an effort to create or establish warmth or boundaries.

Baumrind’s parenting style theory is instrumental in providing a framework to understand parent-child interactions, and several researchers have extended this theory to the classroom to better understand the dynamics of student-teacher relationships (Dever & Karabenick, 2011; Walker, 2008, 2009). For decades, researchers have examined the manner in which student-teacher relationships influence students’ academic development, but much of this research is atheoretical (Wentzel, 2002). Thus, Baumrind’s parenting style theory can be used to provide a theoretical framework that views student-teacher interactions within a socialization context. Teachers’ demanding characteristics socialize adolescents to exhibit specific behaviors and attitudes that are important to become a competent member of the academic community. Teachers’ responsive behaviors communicate to students their value and level of acceptance within the academic community. Thus, teaching styles exhibited by teachers create an educational environment that guides students’ behaviors, beliefs about self, and motivation patterns (Walker, 2008).

Teaching styles are conceptualized in the same manner as parenting styles — authoritative, authoritarian, permissive, and rejecting-neglecting. Walker (2008) notes that authoritative teachers exhibit high levels of demandingness and responsiveness. Authoritative teachers focus on building students’ competence, and they recognize the importance of establishing strong emotional connections with students. Authoritative teaching is similar to the teaching style patterns of “warm demanders”, and several scholars describe effective teachers of African American students as warm demanders (Bondy & Ross, 2008; Bondy, Ross, Gallingane,
The term “warm demander” was coined by Kleinfeld (1975), and this term refers to teachers who exhibit personal caring and active demanding within the student-teacher relationship. Ertesvåg (2010) notes that the concept “warm demander” does not have origins in the parenting style literature, but there are many similarities between warm demanders and authoritative teaching.

Authoritarian teachers also exhibit high levels of demandingness, but they exhibit low levels of responsiveness. Authoritarian teachers demand high levels of educational and academic performance, but they use coercive tactics (e.g., threats and punishment) to obtain students’ compliance. Authoritarian teachers believe that compliance is more important than developing students’ competence, and they minimize the importance of emotional connections with students and place a higher value on students’ respect and obedience.

Permissive teachers are described as exhibiting low levels of demandingness and high levels of responsiveness. These teachers create very supportive and nurturing educational environment for students. However, they often have low levels of demandingness because these teachers often believe students cannot achieve at high levels for various reasons (e.g., impoverished background). For example, teachers may inconsistently enforce classroom rules or differentially assign punishments for breaking rules. However, permissive teachers value building competence in students, and they also feel that a strong emotional bond is important for academic success. Lastly, rejecting-neglecting teachers are detached from the classroom. They are neither demanding nor responsive.
Assessment of Parenting Styles and Teaching Styles

The typology measurement approach and the dimensionality measurement approach are used to assess parenting styles and teaching styles (Bean et al., 2006; Wentzel, 2002). Researchers using the typology approach assign parents and teachers to a typology (e.g., authoritarian, authoritative, permissive, or rejecting-neglecting) by examining both demanding and responsive parental behaviors. In contrast, researchers using the dimensionality approach assess specific demanding behaviors (e.g., rule setting) and specific responsive behaviors (e.g., guidance) independent of each other. Consequently, the typology measurement approach only allows researchers to examine the combined effects of demandingness and responsiveness on adolescents’ educational outcomes, and the dimensionality approach allows researchers to examine both the independent and combined effects of responsiveness and demandingness on adolescents’ educational outcomes (Bean et al., 2006).

The typology measurement approach is criticized in the literature because researchers using this method often exclude large portions of their sample due to difficulties associated with classifying individuals within a particular typology (Fletcher, Steinberg, & Sellers, 1999; Kim & Rohner, 2002). For example, Fletcher et al. (1999) examined maternal and paternal parenting style patterns within a racially and ethnically diverse sample of high school students. One-third of Fletcher et al.’s (1999) sample, approximately 368 adolescents, was excluded from analysis because participants could not be classified into a typology. Kim and Rohner (2002) also reported that within their study examining associations between parenting style and academic achievement among Korean adolescents, 73% of Korean mothers and 75% of Korean fathers could not be classified into one of Baumrind’s typologies because many adolescents’ ratings of parental demandingness were in the moderate range. Baumrind’s parenting style typologies are based on high or low levels of demandingness and responsiveness. Therefore, it is difficult to classify individuals into a typology if their demanding and responsive scores are in the moderate range.
The lack of cultural considerations during the development of Baumrind’s typologies is another problem with the typology measurement approach. During the conceptualization of typologies, Baumrind observed interactions between Caucasian middle class mother and child dyads; therefore, variations in the interpretation of parenting behaviors related to cultural norms and values were not considered (Huynh-Nhu et al., 2008). Jackson-Newsom et al. (2008) argue that the meaning and impact of familial interactions within the home can differ between racial and ethnic groups. For example, within a sample of African American and Caucasian adolescents, Jackson-Newsom et al. (2008) found that ethnicity moderated the relationship between parental demandingness and adolescents’ perceptions of parental responsiveness. Specifically, Caucasian adolescents with mothers who engaged in authoritarian parenting practices (e.g., spanking and parental assertion of power beliefs) reported significantly lower levels of maternal warmth in comparison to African American adolescents with mothers who engaged in authoritarian parenting practices. Jackson-Newsom et al. (2008) concluded that cultural values influence African American adolescents’ perceptions of authoritarian parenting practices. This study’s findings suggest that researchers should not classify familial interactions as adaptive or maladaptive across ethnic and racial groups based on research from one racial or ethnic group. Dever and Karabenick (2011) also argue that the typology approach limits researchers’ knowledge about associations between specific aspects of demandingness and responsiveness and students’ academic development.

Because of difficulties found with the typology approach, much of the parenting style and teaching style literature uses the dimensionality approach (Bean et al., 2006; Rivers, 2008; Wentzel, 2002). Control and warmth are commonly identified demanding and responsive behaviors (Baumrind, 1989, 2005; Walker, 2009; Wentzel, 2002). However, the conceptualization of these variables varies across studies. Warmth has been used to refer to affective connectedness, understanding and awareness of adolescents’ feelings and needs, and guidance and support, and control has been used to refer to aspects of monitoring and limit setting
Aspects of warmth and control are important because these factors create an emotional climate that allows adolescents to explore and develop a sense of independence within clear and established boundaries.

The purpose of this section was to discuss the manner in which Baumrind’s parenting style theory is conceptualized and assessed within the home and classroom. Baumrind identifies four parenting style patterns — authoritative, authoritarian, permissive, and neglecting-rejecting — that are differentiated by demanding and responsive parental behaviors (Baumrind, 1991), and these patterns are used as a theoretical framework to view student-teacher relationships (Walker, 2008). Some studies depict African American parents as being authoritarian (Jackson-Newsom et al., 2008; Reitman et al., 2002). Furthermore, researchers often describe effective teachers of African American students as “warm demanders”, and these teachers exhibit authoritative teaching within the classroom (Bondy & Ross, 2008; Ross, Bondy, Gallingane, & Hambacher, 2008).

Within the home and classroom, Baumrind’s parenting style theory is conceptualized based on the typology measurement approach or the dimensionality measurement approach (Bean et al., 2006). The typology approach is criticized in the literature because participants are excluded from analysis due to difficulties associated with classifying them into a specific typology. Additionally, cultural differences in parenting were not considered during the development of Baumrind’s typologies, and Jackson-Newsom et al. (2008) found that parenting behaviors and beliefs are interpreted differently across racial groups. Because of problems associated with the typology approach, the dimensionality approach will be used in this study.

Within the parenting style and teaching style literature, several scholars have identified control as an important demanding characteristic and warmth as an important responsive characteristic (Bean et al., 2003; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Wentzel, 2002). In the present study, the assessment of control will focus on parents’ and teachers’ monitoring and limit setting behaviors. The assessment of warmth will focus on parents and
teachers connectedness with adolescents, and their understanding of adolescents’ academic and emotional functioning.

Baumrind’s theory provides an important framework that assists researchers in understanding the impact of parents’ and teachers’ behaviors on adolescents’ development. Unfortunately, Baumrind’s theory does not closely examine the influence of cognitive factors, such as expectations, on adolescents’ academic development. The purpose of the next section is to present literature that conceptualizes and examines the influence of teachers’ and parents’ educational expectations on adolescents.

Parents’ and Teachers’ Educational Expectations

For decades, social psychologists have used the self-fulfilling prophecy as a conceptual framework to explore how one person’s expectations can influence another person’s self-perceptions and behavior. Merton’s introduced the concept of self-fulfilling prophecy in the 1940s, but it wasn’t until the landmark Pygmalion in the Classroom study that this concept became a major topic of discussion in social psychology and education (Madon, Jussim, & Eccles, 1997). In 1968, Rosenthal and Jacobson engaged in an experimental design where students were given a false IQ exam, and teachers were provided information about students who were considered late bloomers (i.e., students who were expected to make the greatest improvements over the academic year). Contrary to the teacher’s knowledge, students were randomly assigned to the late bloomer category. Rosenthal and Jacobson’s objective was to determine if teachers would develop different expectations for and engage in different behaviors towards students classicized as late bloomers. Furthermore, they assessed differences in late bloomers performance on IQ examines at the end of the year.

Findings revealed that teachers were more supportive of late bloomers and late bloomers had higher IQ gains in comparison to the control group. Rosenthal and Jacobson (1968) concluded that teachers’ expectations are powerful predictors of students’ behaviors and performance. Furthermore, Jussim, Eccles, and Madon (1996) found that teacher’s educational
expectations are especially powerful predictors for African American students. In a study of adolescents, they found that African American students transitioning from a classroom with low teacher expectations into a classroom with high teacher expectations produced a four-point increase in grades, which is equivalent to going from a C to a B+. This increase in grades was not as strong for White students. Going from a classroom with the low teacher expectation into a classroom with high teacher expectation only produced a grade change of two-points, which is equivalent to going from a C+ to a B.

Studies examining the self-fulfilling prophecy have largely focused on student-teacher relationships. However, scholars have also found that parental educational expectations are important factors for students’ growth and development. In a meta analysis, Jeynes (2007) reports that parental educational expectations were the strongest predictors of adolescents’ academic growth and development in comparison to other parenting related variables such as, checking homework and parental involvement in school activities.

There are many different types of parents’ and teachers’ educational expectations examined in the literature, but for the purposes of this study, parents’ and teachers’ expectations related to the level of educational attainment (e.g., going to college or obtaining a particular degree) that adolescents can and should achieve will be examined. Level of educational attainment is a popular parental and teacher expectation examined in the literature because this belief will likely influence the manner in which parents and teachers interact with adolescents (Sanders & Jordan, 2000). Adults with high educational expectations are likely to interact in ways that hold adolescents more academically accountable.

The purpose of this section was to define and discuss educational expectations of parents and teachers and the influence that these expectations have on adolescents’ functioning. Associations between expectations, particularly teacher expectations, and students’ development have particularly been examined within the self-fulfilling prophecy literature. Self-fulfilling prophecy suggests that the beliefs of significant socialization agents regarding students’ ability
can influence a student’s functioning. Several scholars have found that both parents’ and teachers’ expectations influence adolescents' academic performance and the effect of self-fulfilling prophecy influences African American students more strongly than students from other racial groups (Jeynes, 2007; Jussim et al., 1996). There are many different conceptualizations of parents’ and teachers’ expectations in the literature, but expectations will be conceptualized as parents’ and teacher’s beliefs about a student’s level of educational attainment within this study.

The next section will discuss in detail the influence of parenting style and teaching style indicators on African American adolescents’ academic achievement and the influence of parents’ and teachers’ educational expectations on African American students’ academic achievement. A rationale as to why these factors influence academic achievement will be presented first. Secondly, empirical literature examining these associations is discussed.

**Manner in which Parenting Styles, Teaching Styles, and Educational Expectations Influence Academic Achievement**

Emotional climates created by parenting and teaching styles act as filters through which adolescents interpret parents’ and teachers’ behaviors, attitudes, and beliefs (Darling & Steinberg, 1993; Walker, 2008, 2009). If adolescents feel respected, accepted, and supported within the parent-child or student-teacher relationship, they carry out achievement-related tasks in a more autonomous manner, and they are more likely to internalize the educational values and beliefs of parents and teachers (Deci & Ryan, 2004). Autonomous functioning and internalization of positive educational values and beliefs are associated with better academic achievement (Davis, 2011; Joussemet, Landry, & Koestner, 2008).

Similar to parenting and teaching styles, expectations of parents and teachers can also influence how adolescents respond to and interpret the educational environment. Jussim et al. (1996) pose that Steele’s work on stereotype threat provides insight into how negative educational expectations influence African American students. The stereotype theory suggests African American students’ educational performance can be adversely influenced because they
fear negative self-evaluations from others (Steele, 1992). To state it differently, some African American students live in fear that poor performance on an educational task will confirm negative group stereotypes, such as African American students cannot perform equally well as their Caucasian classmates. The potential for a negative self-evaluation from others is a constant threat for some African American students, and this constant threat affects them academically. Steele (1992) has also shown that high educational expectations by socialization agents can influence students’ educational performance positively. Students began to internalize socialization agents’ high expectations and perform at a level conducive to those expectations. Furthermore, socialization agents with high expectations create an educational environment that is emotionally supportive and challenging, and this environment aids students in performing at high levels.

**Associations Between Academic Achievement and Parenting Styles and Parents’ Educational Expectations**

**Educational Expectations**

Most studies examining associations between academic achievement and behavioral control, warmth, and parental expectations find that high levels of parenting and teaching characteristics are positively associated with academic achievement (Aunola et al., 2000; Lamborn et al., 1991; Steinberg, Dornbusch, & Brown, 1992). However, this finding is not consistently replicated with African American samples. Within a nationally representative sample of ethnically diverse adolescents, Park and Bauer (2002) examined associations between academic achievement and indicators of parental control, and parental support. For the entire sample, Park and Bauer (2002) found that control and warmth predicted higher scores on standardized achievement measures. However, once associations between parenting style and academic achievement were examined for each ethnic group, findings revealed that dimensions of parenting style were unrelated to African American adolescents’ academic achievement. Similarly, within a sample of African American adolescents, Bean et al. (2006) found that parental control and parental support were not related to African American adolescents’ GPA.
Contrary to Park and Bauer (2002) and Bean et al. (2006), Radziszewska and Richardson (1996) reported that African American adolescents’ perception of parental control is associated with academic achievement. African American students had the highest grades when reared in homes where adolescents are involved in decision-making, but parents have the final say. In comparison, African American adolescents had the lowest grades when reared in homes where they made all the decisions. Bean et al. (2003) also found that maternal support predicted higher grades among African American adolescents.

Tamis-LeMonda et al. (2008) pose that discrepancies in the parenting style literature may be related to the manner in which studies assess African American students as a homogenous group without recognizing or examining aspects of intragroup diversity. Unfortunately, African American students often comprise very small portions of study samples, (Radziszewska & Richardson, 1996), and important demographic and contextual differences among African American youth are not considered (Murry, Bynum, Brody, Willert, & Stephens, 2001). Thus, there are many unknowns about the manner in which parenting style influences various sub-populations of African American students. Inconsistent findings could be related to moderating effects of various demographic and contextual factors. Several scholars have identified neighborhood safety as a moderator of parenting style patterns (Darling & Steinberg, 1993; Lamborn, Dornbusch, & Steinberg, 1996; Leventhal, Dupéré, & Brooks Gunn, 2009; Roche et al., 2007; Tamis-LeMonda et al., 2008). Closer examination of this variable within the parenting style literature may provide greater clarity in associations between parenting style and academic achievement.

Parental educational expectations are the last parenting factors discussed, and several studies have found consistent positive associations between parental educational expectations and academic achievement for African American students. Kaplan et al. (2001) explored associations between perceived parental expectations and academic achievement within an ethnically diverse sample of preadolescents and adolescents. They found that perceived parental expectations were
the strongest predictors of students’ grades. Perceived parental expectations was a stronger predictor of students’ academic achievement than parents’ level of educational attainment, students’ race, or students’ gender. Using the National Educational Longitudinal Study, Flower and Flower (2008) also found that parental expectations were the strongest predictor of urban African American high school students’ academic performance. Parental expectations had a stronger effect on academic performance than family income and hours spent doing homework. These studies suggest that parents’ expectations for their children’s level of educational attainment are related to academic achievement.

**Associations Between Academic Achievement and Teaching Styles and Teachers’ Educational Expectations**

Literature exploring the influence of teaching styles on African American adolescents’ academic achievement is a burgeoning area of study. Therefore, it is difficult to identify specific patterns of association between these variables. To the researchers’ knowledge, Wentzel (2002) conducted the only empirical study utilizing Baumrind’s parenting style theory to examine associations between teaching style and academic achievement with African American adolescents in the study’s sample. Within this study, negative feedback was used as an indicator for lack of teacher warmth, and rule setting and fairness were used as indicators of teachers’ control. Teachers’ educational expectations for students’ performance were also assessed. Negative feedback and educational expectations were the only significant teaching style variables within the model predicting adolescents’ grades. Higher rates of negative feedback predicted lower grades and high educational expectations predicted higher grades.

Studies examining the influence of student-teacher interactions on African American students’ academic performance support Wentzel (2002) findings in relation to teacher warmth (Anderman, 2002; Crosnoe, Johnson, & Elder, 2004). Within an ethnically diverse sample of adolescents, Anderman (2002) reported that warmth and connectedness was positively correlated with students’ GPA. Crosnoe et al. (2004) examined differences between ethnic groups in
relations to associations between teachers’ warmth and students’ grades. They hypothesized that teacher warmth would be more strongly associated with ethnic minority students’ grades, particularly African American males, because these students are at higher risk for school alienation and failure. Findings from their study show that teachers’ warmth predicted higher grades for the entire sample. However, the association between teacher warmth and academic achievement was not significantly higher for African American students in comparison to students of other ethnic groups.

Unlike the consistent findings between teacher warmth and educational outcomes, associations between teacher expectations and African American students’ academic achievement are not as consistent. Tyler and Boelter (2008), as well as, Gill and Reynolds (1999) examined the relationship between African American middle school students’ perceptions of teacher expectations and academic achievement. These studies reported a significant negative association between students’ perceptions of teacher academic expectations and grades, which suggest that students who perceive their teacher as having high educational expectations had lower grades in comparison to students who perceive their teacher as having low educational expectations. Contrary to the aforementioned findings, Sanders and Jordan (2000) reported a positive association between students’ perception of teachers’ academic expectations and grades within a nationally representative sample of ethnically diverse twelfth grade students. In this study, higher teacher expectations predicted higher grades among students. These findings were consistent when student demographic factors (e.g., race and socioeconomic status) were considered.

Inconsistent findings between these studies could be related to the manner in which perceived teacher expectations were assessed. Students were asked to assess perceived teacher expectations in a specific domain and with a specific teacher in Sanders’ and Jordan’s (2000) study. Specifically, students were asked if their favorite teacher expected them to attend college after completing high school. Tyler and Boelter (2008) and Gill and Reynolds (1999) did not ask students to rate a specific teachers’ expectation within a specific domain, such as college
attendance. The domain specific nature of teacher expectations in Sanders’ and Jordan’s study (2000) may have produced less error because the measure was less subjective. Furthermore, students were asked to assess expectations of a teacher in which they had an established positive relationship, and these teacher expectations may be more important to the student. Findings from Sanders and Jordan (2000) suggest that teacher expectations within a close and established relationship facilitate high level of academic achievement.

Rule setting was the only teaching style variable that was unrelated to adolescents academic performance in Wentzel’s study (2002). However, other empirical examinations have concluded that rule setting and rule clarity are important factors in facilitating academic success for African American students (Sullivan, 2010). Within a qualitative study of effective teachers of African American students, Sullivan (2010) found that effective teachers establish consistent rules that are communicated in a clear manner. Furthermore, implementation of consequences for rule violations is the same for all students. Clear rules and consistent implementation is very important for African American students because many of these students feel discriminated against within the educational setting due to differential treatment by school personnel (Thomas, Caldwell, Faison, & Jackson, 2009). African American students’ perceptions about bias discipline policies are supported by disproportionately high suspension rates and expulsion rates for African American students in comparison to students of other racial and ethnic groups (Townsend, 2000). Thus, clear rules with consistent enforcement of rules for all students may alleviate feelings of discrimination, and in turn, African American students may become more engaged and motivated.

**Associations Between Academic Achievement and Parenting and Teaching Styles, and Parents’ and Teachers’ Educational Expectations**

Examining the influence of parents’ and teachers’ warmth, control, and educational expectations on students’ academic achievement within the same model provides insight into how these two contextual factors coexist to influence educational outcomes. Within a sample of
middle school students, Marchant et al. (2001) investigated the influence of parenting styles and
teaching styles on students’ GPA. Parenting style and teaching style were assessed using
measures of responsiveness and demandingness. Responsiveness measured parents’ and
teachers’ interest in the child and the level of support provided to the child. Demandingness
assessed the presents of rules and use of disciple practices within the home and classroom.
Parental values (i.e., importance of effort and academic success) were also examined. The
parental values variable is not a true measure of parental expectation, but it provides some insight
into the manner in which parental beliefs and attitudes influence students’ academic development.
Unfortunately, African American students comprised only 2% of the study’s sample.

Marchant et al. (2001) found a positive relationship between students’ GPA and parental
responsiveness, parental values, teacher responsiveness, and teacher demandingness. Parental
demandingness was not significantly correlated with GPA, but the direction of the relationship
was positive. A statistical model examining the prediction of adolescents’ GPA found parental
values and teacher responsiveness to be positive predictors of students’ grades. However, these
associations were fully mediated by academic motivation. Associations between motivation and
parenting style and teaching style will be discussed in detail later. These findings suggest that
parenting and teaching style indicators uniquely influence students’ grades.

The purpose of this section was to discuss associations between academic achievement,
parenting and teaching style indicators, and parents’ and teachers’ educational expectations. The
majority of the literature reports that high levels of warmth, behavioral control, and expectations
facilitate the highest level of academic achievement among adolescents (Aunola et al., 2000;
Steinberg et al., 1992). However, consistent patterns of associations between these variables and
academic achievement are not consistently found with African American adolescents. Several
scholars reported that parental warmth and behavioral control are not significantly related to
African American adolescents’ grades (Bean et al., 2006; Park & Bauer, 2002), while
Radziszewska and Richardson (1996) and Bean et al. (2003) report significant associations
between these variables and academic achievement. Inconsistent findings in the literature could be related to limited attention given to examining within-group diversity among African American students (Tamis-LeMonda et al., 2008). African American students come from diverse backgrounds, and it is important to examine aspects of this diversity to determine if demographic and contextual factors moderate associations between academic achievement and parenting style. Scholars have suggested that neighborhood safety is an important moderator to examine in the parenting style literature (Leventhal et al., 2009; Tamis-LeMonda et al., 2008).

Unlike findings in relation to parental warmth and control, empirical examinations of parental expectations have produced consistent findings. African American children in homes where parents have high educational expectations have better grades than African American children in homes where parents have low educational expectations (Flowers & Flowers, 2008; Kaplan et al., 2001). Parental educational expectations were stronger predictors of students’ academic performance than parental income level, parental educational attainment, hours spent doing homework, and adolescents’ gender.

Studies examining associations between teaching style, as conceptualized by Baumrind’s parenting style theory and academic achievement, are scarce. Therefore, it is difficult to determine consistent patterns of associations between academic achievement and teaching style indictors. To the researcher’s knowledge, Wentzel (2002) conducted the only study examining associations between African American adolescents’ academic achievement and teachers’ warmth and behavioral control. Furthermore, Wentzel (2002) also examined teachers’ educational expectations within this study. She reported that teachers’ warmth and educational expectations are significantly associated with adolescents’ academic achievement. Higher levels of warmth and expectations predicted higher grades. Associations between warmth and higher grades have been replicated in additional studies (Anderman, 2002; Crosnoe et al., 2004). However, findings from literature examining the relationship between teacher expectations and academic performance are inconsistent mixed. Some studies report that high teacher expectations
are related to higher grades for adolescents (Sanders & Jordan, 2000); while others show, high
teacher expectations are related to lower grades (Gill & Reynolds, 1999; Tyler & Boelter, 2008).
Differences between these studies could be related to the manner in which teacher expectations
were assessed.

Within the same statistical model, Marchant et al. (2001) examined the influence of
parenting and teaching styles, as well as, parents’ educational beliefs on students’ academic
achievement and several indicators were positively correlated with students’ academic
achievement. However, these relationships were fully mediated by students’ motivation patterns.
Thus, parents’ and teachers’ warmth, parental educational values, and parental control are
important factors for students’ academic achievement because they influence students’ motivation
patterns. Due to the small number of African American students within the study’s sample, it is
difficult to determine if these findings can be replicated with African American adolescents.

This section highlights literature that demonstrates the potential for parents’ and teachers’
warmth, control, and expectations to be used as target variables in school-level interventions
designed to facilitate positive academic achievement for African American students. However,
there are some important advances needed in the literature, such as examining moderators, to
better understand associations between academic achievement and parents’ and teachers’ warmth,
control, and expectations. As scholars continue to explore these associations, the types of
educational outcomes examined should be expanded. Dever and Karabenick (2011) note that
along with academic achievement, motivation is an important variable to investigate when
assessing the impact of parenting style and teaching style on educational outcomes. Among
ethnic minority groups, various parenting style and teaching style patterns have different effects
on academic achievement and motivation. For example, among Asian adolescents, high levels of
parental demandingness and low levels of parental responsiveness are associated with better
grades, but this same pattern is also associated with maladaptive motivation patterns (Dever &
Karabenick, 2011). Therefore, the influence of parenting and teaching style patterns may vary for
different educational outcomes, and examining the influence of parenting and teaching style patterns, as well as the influence of parents’ and teachers’ educational expectations on academic achievement and motivation, will provide researchers with a more holistic depiction of how these variables affect African American students’ educational development. The next section of this review will discuss associations between motivation and parents’ and teachers’ warmth, control, and expectations.

**Self-Determination Theory**

SDT is based on the premise that all individuals are motivated to engage in achievement related behaviors because of an innate need to create an integrated sense of self (Deci & Ryan, 2004). Integration is a two-fold process that involves the unification of internal aspects of self (e.g., knowledge, personality, beliefs, and goals), as well as, the unification of self with others in the external environment. Innate needs identified by SDT are autonomy, competence, and relatedness (Deci & Ryan, 2004). Autonomy refers to the extent individuals feel they are the origin or source of their behavior. Individuals who function in an autonomous manner engage in behaviors willingly, and they are not coerced by external factors. Competence refers to feelings of effectiveness and security as individuals engage in achievement-related behaviors. Individuals with high levels of competence feel they have the opportunity to perform various achievement related behaviors, and they have the ability to successful complete achievement-related tasks. Lastly, relatedness is defined as ones connectedness to their environment or community, and connectedness is not contingent on a particular status.

SDT argues that students will adopt one of three motivation patterns— intrinsic motivation, extrinsic motivation, or amotivation— depending on their level of need fulfillment (Deci & Ryan, 2004). Students with the highest level of need fulfillment adapt intrinsic motivation patterns. Intrinsically motivated behaviors are regulated and initiated by an internal locus of causality, meaning students engage in achievement-related behaviors because of an internal pleasure experienced when engaging in these tasks. There are several different types of
internal pleasures or motivators (e.g. intrinsic motivation to know, intrinsic motivation to experience stimulation, and intrinsic motivation to accomplish) associated with intrinsic motivation. However, all internal sources are influenced solely by an internal locus of causality (Ryan & Connell, 1989). In comparison, extrinsic motivation is controlled by dual loci of causality (Deci & Ryan, 2004). To state it differently, factors that initiate and regulate extrinsic motivation are multi-faceted, and students with extrinsic motivation patterns engage in achievement related behaviors for several reasons. For instance, they may be motivated to engage in behaviors to obtain tangible rewards (e.g., money), social rewards (e.g., approval from others), or idealistic rewards (e.g., to make one’s life better). Lastly, students who are amotivated do not have their needs fulfilled. These students are not motivated to engage in achievement related behaviors, or they cannot identify a reason for engaging in achievement related behaviors.

Of all the motivation patterns identified by SDT, intrinsic motivation is often associated with the most adaptive educational outcomes (Black & Deci, 2000; Deci & Ryan, 2004).

**Self-efficacy**

Self-efficacy is defined as beliefs about one’s ability to successful complete specific actions under specific circumstances (Bandura, 1999, 2001). Self-efficacy is best conceptualized within the framework of social cognitive theory (Maddux, 2002). Bandura (1999) explains that social cognitive theories are founded on a causal model of triadic reciprocal causation. This model suggests that human behaviors and thoughts are shaped by reciprocal interactions between personal factors (e.g., personality and affect), behavioral patterns, and environmental events. To state it differently, individuals are both the creators and the products of their environments. The development of self-efficacy is largely related to the capacity to understand cause and effect relationships between self and the environment (Bandura, 1999, 2001). Self-efficacy is rooted in the idea of human agency, which is the belief that one has the capacity to control or act as an agent of change in their environment. Therefore, positive experiences, which increase an
individual’s belief about his or her ability to be an agent of change, can enhance self-efficacy beliefs.

Parents and teachers are consistent and influential aspects of adolescents’ social environments and interactions with them can greatly impact students’ self-efficacy beliefs (Maddux, 2002). Warm, supportive, and autonomous classroom and home environments assists students in developing self-efficacy because these environments increase students’ perceptions of control in relations to their behaviors and expected outcomes (Alivernini & Lucidi, 2011). Bandura (2001) explains that attempts to control the environment are the most powerful sources of self-efficacy development. Furthermore, verbal persuasion cues provided by parents and teachers in relations to students’ abilities to perform tasks are also influential to the development of self-efficacy (Maddux, 2002). For instance, parents’ and teachers’ educational expectations act as verbal persuasion because these messages provide information to students about their ability to carry out particular tasks.

**Associations Between Intrinsic Motivation, Self-efficacy, and Academic Achievement**

Intrinsic motivation and self-efficacy are important for students’ academic achievement (Turner, Chandler, & Heffer, 2009). Numerous empirical studies have found that higher levels of intrinsic motivation and self-efficacy predict better grades among adolescents (Alivernini & Lucidi, 2011; Carroll et al., 2009; Gold, 2011; Turner et al., 2009). Despite the positive association, the influence of intrinsic motivation and self-efficacy on African American students' educational development is rarely examined in empirical studies (Pajares, 2003; Uwah, McMahon, & Furlow, 2008).

However, the few studies that have used these theories found positive associations between African American students’ self-efficacy beliefs and academic achievement (Britner, 2002; Jonson-Reid, Davis, Saunders, Williams, & Williams, 2005). Within a sample of African American middle school students, Britner (2002) examined associations between students’ science grades and their science self-efficacy. A positive significant relationship was found
between these variables. Jonson-Reid et al. (2005) also found a significant positive association between African American high school students’ self-efficacy beliefs and academic achievement.

Studies examining associations between intrinsic motivation and academic achievement with African American students report inconsistent patterns of associations. Shernoff and Schmidt (2008) found that African American adolescents reported higher intrinsic motivation scores than Caucasian students, yet African American adolescents reported lower grades. Cokley (2003) and Davis (2009) also reported that intrinsic motivation was not related to African American college students’ GPA. However, Guthrine, Coddington, and Wigfield (2009) examined associations between domain specific intrinsic motivation and domain specific academic achievement. Within a sample of middle age African American children, they reported that intrinsic motivation in reading was significantly correlated with reading achievement.

Findings from literature examining associations between academic achievement and motivational constructs suggest that self-efficacy and intrinsic motivation, specifically domain specific intrinsic motivation, are important factors for African American students’ academic achievement. Therefore, researchers should examine factors that can be used to create positive environments to assist with the development of these motivation patterns. The following section will discuss empirical literature examining relationships between parenting and teaching styles and motivation, specifically intrinsic motivation, self-efficacy, and related motivational constructs (e.g., competence and academic interest).

**Associations Between Motivation and Parenting Style and Parents’ Educational Expectations**

Studies that examine associations between motivation and parenting style using the dimensionality approach are rare. Gray and Steinberg (1999) explored the impact of parental warmth, parental behavioral control, and parental autonomy granting on adolescents’ academic competence. Within an ethnically diverse sample, they found that behavioral control and warmth predicted higher levels of academic competence. Academic competence refers to the feeling of
confidence and effectiveness when engaging in academic-related tasks (Deci & Ryan, 2004). Self-efficacy and competence are similar motivational constructs. However, competence is generally discussed in terms of a personality trait, and self-efficacy is generally discussed in terms of a belief (Maddux, 2002). Given that these two terms are defined in similar manners, information related to associations between competence and parenting and teaching styles can provide some insight into associations between parenting and teaching styles and self-efficacy.

Within an ethnically diverse sample of high school students, Fan and Williams (2010) also conducted an empirical investigation of associations between parental educational expectations and motivation, specifically intrinsic motivation and self-efficacy. They also examined associations between parental involvement and motivation. Although the authors did not specifically examine parenting style, several of the parental involvement indicators (e.g., parental monitoring and parental advice giving in academic areas) are closely related to parenting style variables used in other studies (Bean et al., 2006; Park & Bauer, 2002). Furthermore, other scholars have used indicators of parental involvement as proxies for parenting style (Park & Bauer, 2002). Therefore, Fan and Williams’ (2010) investigation can provide insight into the manner in which parenting style influences students’ motivation patterns.

Fan and Williams (2010) reported that parenting measures influence adolescents’ motivation patterns differently. For instance, parental educational expectations and parental warmth predicted higher levels of intrinsic motivation and self-efficacy. In comparison, parental monitoring of grades predicted lower levels of intrinsic motivation, but parental monitoring of television watching predicted higher levels of intrinsic motivation. Fan and Williams (2010) suggest that monitoring of television causes fewer distractions in the home environment, and adolescents have more time to engage in constructive learning. This additional time exploring achievement-related materials may help facilitate students’ intrinsic interest (Deci & Ryan, 2004). The negative association between parental monitoring of grades and motivation could be related to adolescents’ perceptions of parental control. Several scholars argue that exerting control over
adolescents’ within domain specific area (e.g., academics) lowers their levels of intrinsic motivation, competence, and self-efficacy (Deci & Ryan, 2004; Lamborn et al., 1991). Rules about maintaining specific grade point averages may be perceived as controlling by adolescents. Therefore, students’ motivation may be negatively influenced. It is important to note that although insignificant, associations between parental monitoring of homework completion and intrinsic motivation and self-efficacy were also in the negative direction.

Contrary to Fan and Williams (2010), Gray and Steinberg (1999) noted that parental control was positively related to students’ competence. Inconstant findings between these studies could be related to the manner in which parental monitoring was assessed. Gray and Steinberg (1999) defined parental monitoring as parents’ knowledge of adolescents’ behavior, and Fan and Williams’ (2010) conceptualization of parental monitoring was based on implementation of rules in the home. Parental behaviors may be perceived as more controlling than parental knowledge because adolescents have more control over the information they divulge to their parents in comparison to controlling their parents’ behaviors. Furthermore, Fan and Williams (2010) assessed domain specific areas of parental control and Gray and Steinberg (1999) adopted a more global indicator of parental control.

**Associations Between Motivation and Teaching Style and Teachers’ Educational Expectation**

Wentzel (2002) conducted one of the few empirical studies examining associations between teaching style, teachers’ educational expectations, and motivation that included African American adolescents in the study sample. She reported that teachers’ expectations are significant predictors of students’ mastery goals and interest, and rule setting is a significant predictor of students’ interest in class. Students who perceived their teachers as having higher expectations were more interested in class materials and more focused on becoming competent in various academic areas. Moreover, students who preceded their teacher as having more classroom rules had lower levels of interest. Wentzel (2002) reported that ethnicity did not
moderate associations between teaching variables and students’ motivation patterns. Therefore, associations between teaching style indicators and motivation were the same for African American students, which consisted of approximately half of the study’s sample, and Caucasian students.

Contrary to Wentzel (2002), Dever and Karabenick (2011) reported that ethnicity moderated associations between teaching style variables and students’ motivation. Within a sample of Hispanic, Caucasian, and Vietnamese adolescents, they reported that Hispanic and Caucasian students’ perceptions of teacher warmth (i.e., teacher caring) predicted higher levels of interest in math, but among Vietnamese students, teacher warmth predicted lower levels of interest in math. For the entire sample, academic press, which is an indicator of teacher expectations, predicted higher levels of interest in math.

Based on findings from Wentzel (2002) and Dever and Karabenick (2011), teacher expectations are significant and consistent predictors of adaptive motivation patterns that transcend across ethnic groups. Among students of different races and ethnicities, teacher expectations predicted greater levels of intrinsic interest in class materials and a desire to become more competent in academic areas. However, determining the significance of warmth in facilitating adaptive motivation patterns is more difficult based on findings from these studies because warmth was related inconstantly to students’ motivation patterns. In both studies, interest was positively related to warmth. However, warmth was not related to mastery goals. Mastery goals and interest are correlated motivational constitutes, but they assess different aspects of motivation. Therefore, teacher warmth may be more beneficial for some motivation patterns in comparison to others. Lastly, teacher monitoring was an insignificant predictor or a negative predictor of students’ motivational patterns across studies. Teacher monitoring behaviors may be perceived as controlling by students, and as a result, monitoring behaviors may adversely affect students’ motivation patterns.
Associations Between Motivation and Parenting and Teaching Style and Parents’ and Teachers’ Educational Expectations

Within a sample of middle school students, Marchant et al. (2001) investigated the influence of parenting style and teaching style on students’ perceived motivation, competence, and academic achievement. Parenting style and teaching style were conceptualized as responsiveness and demandingness, and parental educational values were also examined. As discussed earlier, parental values is not a true measure of educational expectations, but this measure can provide some insight into how parental beliefs influence adolescents’ motivation patterns. Marchant et al. (2001) reported that parental values were the strongest predictor of students’ motivation patterns, and parental demandingness and responsiveness were not related to students’ motivation or competence. Students with parents who valued effort and educational success had higher motivation and competence scores. Additionally, teachers’ use of discipline policy (i.e., teacher demandingness) was not related to students’ motivation, but teacher responsiveness was a positive predictor of competence and motivation. Students in classrooms with high levels of perceived teacher interest and warmth had higher competence and motivation scores in comparison to students in classrooms with low levels of perceived teacher interest and warmth. Motivation and perceived competence also fully mediated associations between parental values and academic achievement and teacher responsiveness and academic achievement.

Marchant et al. (2001) findings are supported by previous research that shows parental expectations are consistent and strong predictors of students’ motivation (Jeynes, 2007; Kaplan et al., 2001), and teachers’ and parents’ use of discipline and monitoring are unrelated to students’ motivation patterns (W. Fan & Williams, 2010; Wentzel, 2002). Marchant et al.’s (2001) work also provides some insight into how teaching and parenting variables coexist to influence motivation. It appears that teachers and parents have a unique influence on student’s motivation patterns. Parents’ expectations for academic success appears to be most salient to the
development of adaptive motivation patterns, and teachers’ warmth appears to be the most salient factor to the development of adaptive motivation patterns.

The purpose of this section was to review empirical literature examining the influence of parenting and teaching styles, as well as, parents’ and teachers’ educational expectations on students’ motivation patterns. Studies examining these associations are in the infantile stage, but some patterns have emerged in the literature. First, parents’ and teachers’ expectations are strong predictors of students’ motivation (Fan & Williams, 2010; Wentzel, 2002). Across all reviewed studies, this variable emerged as a consistent positive predictor of adaptive motivation patterns. Unlike expectations, there were inconsistent findings related to associations between motivation and warmth (Dever & Karabenick, 2011). Parents’ and teachers’ warmth are important variables for student’s motivation patterns, but associations appeared to be moderated by students’ ethnicity. Specifically, Dever and Karabenick (2011) reported that teacher warmth was important for Caucasian and Hispanic students’ motivation but not for Vietnamese students’ motivation.

Parents’ and teachers’ control also produced inconstant results in the literature. Studies reported positive associations, negative associations, and insignificant associations between parental monitoring and motivation patterns (Gray & Steinberg, 1999; Marchant et al., 2001; Wentzel, 2002; Fan & Williams, 2010). These findings could be related to the manner in which control was assessed. Parental control assessed in terms of parental knowledge was positively related to competence (Gray & Steinberg, 1999), but control assessed in terms of parental behavior was negatively related to self-efficacy and intrinsic motivation (Fan & Williams, 2010). Furthermore, forms of parental control that monitor academic related behaviors were negatively related to motivation patterns, and this association consistent emerges (Fan & Williams, 2010). Studies reported that teachers’ control was negatively related and unrelated to students’ motivation patterns (Marchant et al., 2001; Wentzel, 2002). Although studies have found different patterns of associations, results suggest that teachers’ controlling behaviors are not beneficial for the development of adaptive motivation patterns.
Lastly, the examination of both parenting style and teaching style variables within the same model suggest that parents and teachers have a unique influence on the development of students’ motivation patterns (Marchant et al., 2001). Measures of parental beliefs were the most important predictor of students’ motivation patterns and teacher responsiveness was the most important predictor of students’ motivation patterns. The inclusion of both parental and teacher variables in the same model demonstrate that factors within the home and school environment are important factors for the development of adaptive motivation patterns.

Conclusions from the studies above should be cautiously generalized to African American adolescents for several reasons. First, African American adolescents are not adequately represented in the studies’ samples. Additionally, several studies found that associations between academic outcomes and parenting style and teaching style variables are moderated by race or ethnicity (Dever & Karabenick, 2011; Park & Bauer, 2002). For instance, Mason, Walker-Barnes, Tu, Simons, and Martinez-Arrue (2004) reported that African American adolescents reported that parental controlling behaviors demonstrate love and concern, while Caucasian adolescents perceived these behaviors as harsh and cold. Therefore, it is important for studies to explore the influence of race or ethnicity when examining associations between parents’ and teachers’ warmth, control, and expectations on motivation patterns of adolescents.

The next section of this review will discuss neighborhood safety as a moderator of associations between academic outcomes (i.e., academic achievement and motivation) and parenting and teachings styles and parents’ and teachers’ educational expectations.

**Associations Between Neighborhood Risk and Parenting and Teaching Style and Parents’ and Teachers’ Educational Beliefs**

Several scholars discuss the need for researchers to recognize diversity among African American adolescents to better understand the manner in which unique experiences influence their academic development (Carpenter & Ramirez, 2007; Lewis et al., 2010; Lubienski, 2002). African Americans are often examined as a homogenous group with little attention paid to
important demographic and contextual differences. Tamis-LeMonda et al. (2008) suggest that this monolithic view of African Americans within the parenting style literature may be related to inconsistencies found within studies. Neighborhood environments are important contextual factors that influence parenting style patterns of African Americans, and researchers often overlook these contextual factors when describing parenting style patterns in African American homes (Brody & Flor, 1998). Thus, parent-child interactions are taken out of context, and African American parents are often depicted as firm, harsh, and cold disciplinarians (Gonzales, Cauce, & Mason, 1996; Jackson-Newsom et al., 2008; Lansford et al., 2004).

Parenting style is one facet of parenting that is situated within the large context of child socialization. Thus, the goals of socialization and the context in which socialization takes place largely impacts the types of behaviors evident within the home (Hill, 2001; Huynh-Nhu et al., 2008). Many African American children are reared in impoverished neighborhoods that have limited resources and high crime rates (Taylor, Hinton, & Wilson, 1995). Therefore, African American parents may engage in perceived harsher demanding behaviors and use fewer democratic parenting techniques to keep their children from dangerous neighborhood influences (Roche et al., 2007).

Empirical exploration the effects of neighborhood safety on parenting style patterns show that parents in dangerous and impoverished neighborhoods monitor their children’s behavior more and are more likely to enforce punishments for rule violations (Leventhal et al., 2009). Furthermore, the use of restrictive parenting has a positive effect on African American students’ academic development in dangerous neighborhoods and restrictive parenting practices have a negative effect on African American students’ academic development in less dangerous neighborhoods (Roche et al., 2007). These studies suggest that contextual environmental factors moderate the significance of various parenting practices in facilitating academic success for African American students.
Studies examining the influence of neighborhood safety as a moderator of teaching style patterns and parents’ and teachers’ educational expectations are not prevalent in the literature. However, neighborhood safety is an important factor to consider when examining teachers’ behavior because just as parents’ behavior act as protective factors, teachers’ behavior can also serve as protective factors for African American youth in dangerous neighborhoods. The following section will review literature discussing the manner in which neighborhood safety moderates associations between academic outcomes (i.e., academic achievement and motivation), and parenting style and teaching style.

**Neighborhood Risk as a Moderator of Associations Between Academic Achievement and Parenting and Teaching Style and Parents’ and Teachers’ Educational Expectations**

Several researchers have examined the moderating influence of neighborhood safety on associations between academic achievement and parental warmth, behavioral control, and expectations. Within a sample of African American adolescents, Gonzales, Cauce, Friedman, et al. (1996) reported that parental warmth and control were not related to African American students’ GPA, but once the moderating effects of neighborhood safety were considered, maternal control was related to students’ GPA. In dangerous neighborhoods, higher levels of parental control predict higher GPAs. In safe neighborhoods, high levels of parental control predict lower student GPAs. Thus, parental control facilitates positive academic performance in dangerous neighborhoods, and impedes academic performance in safe neighborhoods. Parental warmth was not directly related to GPA for students in dangerous or safe neighborhoods.

Few studies have examined the influence of neighborhood safety on adolescents’ perceptions of parents’ educational expectations. Across all of these studies, parental expectations were not related to neighborhood factors (Goldner, 2009; Medley, 1995; Nichols, Kotchick, McNamara, & Haskins, 2010). To the researcher’s knowledge, neighborhood safety has not been explored as a moderator of associations between parental expectations and academic
achievement. Therefore, it is difficult to determine if high parental educational expectations are more beneficial for African American youth living in dangerous neighborhoods.

There is also a scarcity of studies examining the moderating influence of neighborhood safety on associations between teaching styles and academic achievement. However, Stanton-Salazar (1997) argue that teacher warmth and support are important resources for students living in impoverished and disadvantaged neighborhoods because these factors facilitate emotional ties, and these ties act as social capital that assist adolescents in thriving and obtaining access to important institutional resources and information. The significance of neighborhood safety in moderating associations between teacher warmth and academic achievement was examined by Clayton (2008) within a sample of African American high school students. Clayton (2008) reported that teacher warmth is a significant positive predictor of students’ GPA, but associations between teacher warmth and GPA were not moderated by neighborhood safety. Therefore, teacher warmth was equally beneficial for African American students living in safe neighborhoods and dangerous neighborhoods. Crosnoe and colleagues (2004) reported similar findings in that teacher warmth and support was important for students’ academic performance, and teacher warmth was equally beneficial for students “at-risk” for school failure and students not “at-risk” for school failure.

The significance of neighborhood risk in moderating associations between teacher expectations and teacher behavioral control are not directly assessed in the literature. However, several conceptual and qualitative studies suggest that the most effective teachers of students in dangerous and impoverished neighborhoods expect their student to excel academically, and they establish clear classrooms rules that are enforced in a consistent manner (Bondy & Ross, 2008; Bondy et al., 2007; Ross et al., 2008). These teachers are often described as warm demanders, and Ware (2006) identifies several key characteristics of warm demanders that are essential to the educational development of African American students. First, they promote a culture of achievement that is established through high expectations and a “no excuse policy.” Warm
demanders do not make excuses for failure or lack of effort. Instead, they push their students to succeed. Warm demanders realize that many of their students are reared in impoverished environments and face environmental barriers outside of their control, but these barriers are not used to justify failure (Bondy & Ross, 2008). Warm demanders also communicate their academic and behavioral expectations to students in a very direct and firm manner. High levels of demanding behaviors from warm demanders is an important aspect of teaching African American students because many of these students have experienced persistent school failure. Furthermore, many students do not have the foundational skills, especially in reading, necessary to be academically successful (Bondy & Ross, 2008). As a result, they become disengaged from the academic environment, and their grades suffer. Warm demanders directly combat academic disengagement by establishing high educational expectations, providing support for students’ academic development, creating a classroom environment that facilitates learning, and developing strong emotional connections with students (Bondy & Ross, 2008; Bondy et al., 2007; Ross et al., 2008; Ware, 2006).

**Neighborhood Risk as a Moderator of Associations Between Motivation and Parenting and Teaching Style and Parents’ and Teacher’s Educational Expectations**

Several researchers have found that students living in dangerous neighborhoods are less interested in class materials, have lower levels of intrinsic motivation, lower levels of perceived competence, and lower levels of academic self-efficacy (Clayton, 2008; Plybon, Edwards, Butler, Belgrave, & Allison, 2003; Whitaker, Graham, Severtson, Furr-Holden, & Latimer, 2011). Whitaker et al. (2011) examined the influence of neighborhood risk on associations between parenting style and motivation within a sample of African American children and adolescents. They found that youth exposed to both dangerous neighborhoods and chaotic home environments had higher levels of maladaptive motivation patterns in comparison to youth exposed to one of these negative environmental factors. However, parental control acted as a protective factor for students living in dangerous neighborhoods. Motivation patterns of children and adolescents
living in dangerous neighborhoods were not influenced negatively when they lived in homes with high levels of parental control, but motivation patterns were influenced negatively when children and adolescents lived in homes with little parental control. Parental warmth did not emerge as a moderator of associations between parenting style variables and motivation. Parental educational expectations were not assessed in this study.

Researchers exploring associations between teaching style variables and motivation unfortunately have not considered the moderating influence of neighborhood safety. Furthermore, it is difficult to generalize assumptions from the limited parenting style literature to the classroom level because research has shown that similar aspects of parenting style and teaching style have different effects on students’ motivation patterns (Fan & Williams, 2010; Marchant et al., 2001). Thus, there is limited guidance in the empirical literature to discuss these associations. However, conclusions and findings from conceptual and qualitative studies suggest that high levels of teacher warmth, greater rule clarity, consistent rule enforcement, and high levels of teacher expectations maybe more beneficial for students in dangerous neighborhoods. These teacher characteristics may protect students from developing a sense of helplessness that is related to skill deficits and persistent school failure (Ware, 2006).

The purpose of this section is to discuss neighborhood risk as a moderator of associations between and academic outcomes (i.e., academic achievement and motivation) and parents’ and teachers’ warmth, control, and expectations. Scholars often suggest that neighborhood safety acts as a moderator of associations between parenting style and teaching style and academic outcomes for African American adolescents (Brody & Flor, 1998; Steinberg et al., 1992). However, there is limited empirical literature, especially in relations to teaching style, examining these relationships, but patterns have emerged in the limited literature base. Findings indicate that neighborhood safety moderates relationships between parental behavioral control and academic achievement, but parental warmth and expectations are not moderated by neighborhood safety (Gonzales, Cauce, Friedman et al, 1996; Medley, 1995; Nichols et al., 2010; Whitaker et al.,
Specifically, in dangerous neighborhoods, greater levels of parental control are related to better academic achievement and more adaptive motivation patterns. Given the limited number of studies examining these associations, additional research is needed to provide a better understanding about the moderating effects of neighborhood safety on associations between educational outcomes and parental control, expectations, and warmth.

The significance of neighborhood safety in moderating associations between teaching style and academic outcomes is difficult to assess based on current literature because of the limited information available in this area. However, qualitative and conceptual studies suggest that high levels of teacher connectedness, high teacher expectations, clear rules, and consistent rule enforcement is more beneficial for students’ academic achievement and motivation patterns in dangerous neighborhoods (Bondy et al., 2007; Ross et al., 2008). These teaching factors may act as protective factors shielding students from the adverse effects of dangerous neighborhoods (Stanton-Salazar, 1997; Ware, 2006). However, these associations need to be examined empirically.

Conclusion

Baumrind’s parenting style theory can be applied to both the home and school environment to obtain a greater understanding about the unique and combined effects that parent-child and student-teacher interactions have on African American adolescents’ academic achievement and motivation. Furthermore, by using the dimensionality approach to investigate parenting styles and teaching styles, researchers are able to identify the most salient aspects of parenting and teaching styles for the facilitation of academic success and adaptive motivation patterns. Furthermore, examining parental educational expectations provides information about the manner in which adolescents’ perceptions of parental beliefs influence their educational development. Empirical literature examining the influence of parenting and teaching styles and parents’ and teachers’ educational expectations on African American students’ academic achievement and motivation patterns is scarce, and within this limited literature base, findings are
inconsistent. An extensive review of the literature highlights the need for additional research examining these associations.

**Research Questions/Hypotheses**

1. Do parents’ and teachers’ warmth, control, and educational expectations predict African American adolescents’ achievement?
   
   Research Hypothesis 1A: Parents’ warmth, control, and educational expectations will be significant predictors of African American adolescents’ academic achievement.
   
   Research Hypothesis 1B: Teachers’ warmth, control, and educational expectations will be significant predictors of African American adolescents’ academic achievement.

2. Do parents’ and teachers’ warmth, control, and educational expectations predict African American adolescents’ motivation patterns (i.e., intrinsic motivation and self-efficacy)?
   
   Research Hypothesis 2A: Parents’ warmth, control, and educational expectations will be significant predictors of adolescents’ intrinsic motivation and self-efficacy.
   
   Research Hypothesis 2B: Teachers’ warmth, control, and educational expectations will be significant predictors of adolescents’ intrinsic motivation and self-efficacy.

3. Are associations between parents’ and teachers’ warmth, control, and educational expectations and achievement moderated by neighborhood safety?
   
   Research Hypothesis 3A: Neighborhood safety will moderate associations between parents’ warmth, control, and educational expectations and academic achievement.
   
   Research Hypothesis 3B: Neighborhood safety will moderate associations between teachers’ warmth, control, and educational expectations and academic achievement.

4. Are associations between parents’ and teachers’ warmth, control, and educational expectations and motivation patterns moderated by neighborhood safety?
   
   Research Hypothesis 4A: Neighborhood safety will moderate associations between parents’ warmth, control, and educational expectations and intrinsic motivation and self-efficacy.
Research Hypothesis 4B: Neighborhood safety will moderate associations between teacher’s warmth, control, and educational expectations and intrinsic motivation and self-efficacy.
Chapter III: Methods

The purpose of this study is threefold: (a) to examine the influence of parenting style and teaching style indicators, as well as, the influence of parents’ and teachers’ educational expectations on African American students’ academic achievement; (b) to examine the influence of parenting style and teaching style indicators, as well as, the influence of parents’ and teachers educational expectations on African American students’ motivation patterns (i.e., intrinsic motivation and self-efficacy); and (c) to examine the moderating effects of neighborhood safety on the aforementioned associations. This chapter outlines the research design and methodology, specifically, the data source is described, data set availability is discussed, participants’ details are provided, variable selection process is discussed, and data analysis techniques are presented.

Data Source

Data for this dissertation study are derived from the Educational Longitudinal Study of 2002 (ELS: 2002). ELS: 2002 is sponsored by the U.S. Department of Education and Institute of Education Science, and it is the fourth study in a series of longitudinal studies that provide information about adolescents’ educational experiences during their transition from high school into postsecondary education or the workforce (Ingels et al., 2004). Data for ELS: 2002 are collected across numerous years specifically, students’ sophomore year, senior year, and two years after completing high school, and from multiple respondents (i.e., students, parents, teachers, and librarians) (Ingels et al., 2004). This dissertation study used data from the ELS: 2002 base-year study, which was collected students’ sophomore year, and data from the ELS: 2002 transcript study, which was collected students’ senior year.

Data File Availability

The base-year study contains two data files, school-level files and student-level files (Ingels et al., 2004). School-level files provide information from questionnaires that assess schools’ policies, procedures, and daily functioning (e.g., academic calendar, school approach to providing instruction, and grade levels represented at the school). Administrators and librarians
provided information for school-level data; in addition, ELS assessors completed a facility checklist, which assessed aspects of school cleanliness, noise-level, and school security. Student-level files contain data from students, teachers and parents, as well as, data related to students’ scores on standardized reading and math assessments.

Questionnaires within the student-level files, particularly questionnaires completed by students and parents, were used in this dissertation study. The student questionnaire contains information related to demographics, school experiences, plans for the future, language, money and work, family, and beliefs and opinions about self. The parent questionnaire contains information related to demographics, family background, child’s school life, child’s family life, and opinions about child and child’s future plans.

Data for the follow-up transcript study are comprised of school-level files and course-level files. School-level files contain information related to courses offered by schools and courses taken by students (e.g., on-line courses and career academy courses), as well as, information about types of diplomas offered by schools and the type of diploma received by students (e.g., Vocational diploma and International Baccalaureate diploma). Course-level data contain information related to students’ course grades ("Available Data and Related Products," n.d.).

Data files from the base-year study can be downloaded for free from the National Center for Educational Statistics web site, http://nces.ed.gov/surveys/els2002/avail_data.asp. Data from the transcript study can be obtained by applying for a restricted use data license from the National Center of Educational Statistics. For the purposes of this study, ELS: 2002 public use and restricted use data were utilized.

Participants

A two-stage stratified probability sampling technique was used to identify a nationally representative sample of schools and students for the ELS: 2002 study (Ingels et al., 2004). In the first stage of sampling, schools were selected as the unit of analysis, and 1,221 eligible public,
private, and Catholic schools from all regions of the United States were invited to participate in the study. During the second stage of sampling, a stratified sample of tenth grade students from the following racial and ethnic groups were invited to participate in the study: Asian/Pacific Islander, Hispanic or Latino, Multiracial, Black/African American, American Indian or Alaskan Indian, and White. Of those schools and students invited to participate in the ELS: 2002 study, 752 schools participated and 15,362 sophomores completed the base-year questionnaire. Furthermore, 13,488 parents completed the parent questionnaire. For the purposes of this dissertation study, data from participants who identified themselves as African American were analyzed. Fourteen percent of ELS: 2002 participants identified themselves as African American, which is approximately 2,100 students (Ingels et al., 2004).

**Variable Selection Process**

The researcher sought to identify variables consistent with Baumrind’s parenting style theory, SDT, self-efficacy, and educational expectations, as well as, variables that assessed neighborhood safety and academic achievement. To aid in the process of identifying items that assessed above-mentioned constructs, the researcher reviewed several sources, specifically individual items in the ELS: 2002 parent and student questionnaires, ELS: 2002 test manual, and scales constructed by the ELS: 2002 test developers. Lastly, a comprehensive search of literature within various databases, such as Elseviers’ Science Direct, Pubmed, JSTOR, SpringerLink, Wiley Interscience, Informaworld, Psyc Info, and ERIC, was conducted to identify studies utilizing data from ELS:2002 to examine students’ motivation patterns, parents’ perceptions of neighborhood safety, parenting patterns, and teacher-student interactions.

After reviewing questionnaires, manuals, and literature, a mixture of individual items used in several research studies, as well as, ELS: 2002 constructed scales were selected to measure variables in this dissertation study. Specifically, 25 items were selected to measure indicators of parenting and teaching styles and parents’ and teachers’ educational beliefs, and 16 items were selected to measure intrinsic motivation and self-efficacy. Information related to
students’ GPAs was obtained from their transcripts. Lastly, one item from the parent questionnaire was selected to assess neighborhood safety. The following section will describe each variable used in this study, see appendix for a link to find a copy of questionnaires.

**Instruments**

**Parent warmth.** Students’ perceptions of parental warmth in academic areas and personal areas were assessed with eight items. Students were asked to provide a frequency in which parents discussed various topics. Responses were obtained on a Likert scale ranging from 1 (never) to 3 (often). The following are the specific items for this scale: (a) Selecting courses or programs at school, (b) School activities or events of particular interest to you, (c) Things you studied in class, (d) Plans or preparation for ACT or SAT tests (e) Going to college, (f) Community, national, and world events, (g) Things that are troubling you, and (h) Grades. Items selected for the parental warmth scale were used by Wells, Lohman, and Marron (2009) in a study examining factors that influence grade acceleration. Exploratory Factor Analysis (EFA) was conducted with an ethnically diverse group of sophomores from the ELS: 2002 study, and for these items, EFA produced a single factor with a high internal consistency score, $\alpha = .85$.

**Parent control.** Students’ perceptions of parental control in areas of household responsibilities, educational monitoring, and monitoring of leisure time were assessed with seven items: (a) Check on whether you have done your homework, (b) Help you with your homework, (c) Give you privileges as a reward for good grades, (e) Require you to do work or chores, (f) Limit the amount of time watching/playing video games, and (g) Limit the amount of time going out with friends on school nights. Students were asked to rate their perceptions of parents on a four-point Likert scale, with 1 representing never and 4 representing often.

**Parent educational expectations.** Parental educational expectations were assessed with a single item. Specifically, the item asks, “How far in school do you think your mother and father want you to?” Students were provided a list of nine responses that indicated different levels of educational attainment. Higher responses on this scale are related to higher levels of educational
attainment (e.g., 1 represents less than a high school degree and 9 represents PhD or professional degree). An item with a similar response pattern was used in the Educational Child Longitudinal Study, and several researchers have used this item to access parental educational expectations (Bodovski, 2010; Cheng & Powell, 2007; Suizzo & Stapleton, 2007). In these studies, higher responses on the scale were also related to higher levels of parental educational expectations.

**Teacher warmth.** Students’ perceptions of teachers’ warmth were assessed with four items: (a) When I work hard on schoolwork, my teachers praise my effort; (b) In class, I often feel “put down” by my teacher; (c) Students get along well with teachers; (d) Teachers are interested in students. Responses were obtained on Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree).

**Teacher control.** Students’ perceptions of clearly stated classroom rules and consistent and fair enforcement of rules were assessed with four items: (a) Everyone knows what the school rules are; (b) The school rules are fair; (c) The punishment for breaking school rules is the same no matter who you are; and (d) If a school rule is broken, students know what kind of punishment will follow. Responses were obtained on a Likert scale ranging from one (strongly agree) to four (strongly disagree).

The factor structure for teachers’ control items and teachers’ warmth items were examined using Confirmatory Factor Analysis (CFA) in a study investigating associations between students’ trust and academic achievement (Romero, 2010). Teachers’ warmth items all loaded on a single factor, and the teacher control items all loaded on a single factor. Based on standards recommended by Hair, Anderson, Tatham, and Black (1998), the item loadings were in the moderate to high range, specifically ranging from .59 to .75 for the teacher warmth items and .65 to .88 for the teacher control items. All factor loadings were in the positive direction.

**Teacher educational expectations.** Students’ perceptions of their teachers’ expectations that they will attend college after high school were assessed with one item that specifically asks, “What does your favorite teacher think is the most important thing for you to do right after high
school? Students were provided a list of nine responses that indicated different expectations after completing high schools. For the purposes of this study, the response “go to college” will be coded as one and all other responses will be coded as zero. Items will be coded in this manner because teachers with expectations for students to attend college immediately after high school will often hold those students to more rigorous educational standards (Sanders & Jordan, 2000). Therefore, the response that corresponds to college attendance is associated with higher levels of educational expectations. Coding all other responses as zero is not intended to imply that these teachers do not have educational expectations. Instead, a score of zero indicates that students’ perceptions of these teachers’ expectation for them after completing high school is not connected with an educational outcome related to college attendance.

The item used in this study to access teachers’ educational expectations was also present in the ELS study of 1988 student questionnaire. Sanders and Jordan (2000) used this item to access students’ perceptions of teachers’ educational expectations. They also recoded item responses to represent a dichotomous response scale.

**Math and English intrinsic motivation.** Math and English intrinsic motivation scales assess the level of inherent satisfaction experienced by students as they engage in math or English related tasks. These scales were constructed by ELS: 2002 test developers and were adapted from scales used in the Program for International Student Assessment study of 2002 (PISA: 2002). Math intrinsic motivation was assessed with three items: (a) When I do math, I sometimes get totally absorbed; (b) Because doing math is fun, I don’t want to give it up; and (c) Mathematics is important to me personally. English intrinsic motivation was also assessed with three items: (a) Because reading is fun, I don’t want to give it up; (b) I read in my spare time; and (c) When I read, I sometimes get totally absorbed. Students were asked to rate their beliefs on a four-point Likert scale with 1 representing almost never and 4 representing almost always. Fan and Williams (2010) used these items to examine the impact of parenting practices on students’ motivation patterns, and with the entire ELS: 2002 sample the math intrinsic motivation items
yielded a moderate internal consistency score, $\alpha = .67$ and the English intrinsic motivation items yielded high internal consistency score, $\alpha = .87$.

**Math and English self-efficacy.** Math and English self-efficacy scales assess students’ belief about their ability to successful complete and learn math and English related materials. These scales were constructed by ELS: 2002 test developers, and scales were adapted from measures used in the PISA: 2002 study. Five items assess Math self-efficacy: (a) I am confident I can do an excellent job on my math test, (b) I am confident I can understand the most difficult materials presented in math texts, (c) I am confident I can understand the most complex material presented by my math teacher, (d) I am confident I can do an excellent job on my math assignments, and (e) I am confident I can master skills being taught in math class. Five items also assess English self-efficacy: (a) I’m certain I can understand the most difficult material presented in English texts, (b) I am confident I can understand the most complex material presented by my English teacher, (c) I am confident I can do an excellent job on my English assignments, (d) I am confident I can do an excellent job on my English test, and (e) I am confident I can master the skills being taught in English. Students were asked to rate their beliefs on a four-point Likert scale with 1 representing almost never and 4 representing almost always.

The math self-efficacy scale was used in a study by Liu and Koirala (2009) to examine the impact of math achievement on students’ math self-efficacy. An EFA was conducted with the entire ELS: 2002 sample and the math self-efficacy scale yielded a single factor with a high internal consistency score, specifically $\alpha = .93$. Within an ethnically diverse sample of adolescents, the English self-efficacy items also have high internal consistency, $\alpha = .85$ (Fan & Williams, 2010).

**Academic achievement.** Academic achievement will be assessed by using students’ Grade Point Averages (GPA) in academic courses. GPA’s will be obtained from students’ transcripts.
Neighborhood safety. A single item, specifically asking, “How would you rate your neighborhood in terms of safety for yourself and your family,” will be used to obtain information about parents’ perceptions of neighborhood safety. Responses on this item are obtained on a four-point Likert scale with 1 representing very safe, and 4 representing very unsafe.

Procedures for ELS: 2002 Study

Data for ELS: 2002 were collected on behalf of the National Center for Educational Statistics by the Research Triangle Institute (RTI), which is a non-profit organization with headquarters in North Carolina, and Educational Testing Services and MPR Associates acted as subcontractors to RTI (Ingels et al., 2004). To elicit participation in the study, the Council of Chief State School Officers (CSSO) were sent endorsement letters from nationally recognized organizations (e.g., Association of School Administrators, National Parent Teacher Association, and National Education Association) encouraging participation in the study. Permission to participate in the study at the state level was obtained from CSSOs. Information packages were sent to CSSOs, and one week later they were contacted by phone. The CSSOs identified a person of contact to assist with recruitment at the district, school, and Dioceses level.

Next, information packages were sent to superintendents by RTI, and a few days letter, they were contacted by phone. Most superintendents and administrators voiced concerns related to loss of instructional time and over-testing of students. To address these concerns, RTI provided flexible testing and incentives for schools reluctant to participate. There was a 79.1% response rate from school districts and Dioceses.

Parent consent forms were translated into various languages to accommodate families, specifically Spanish, Mandarin, Vietnamese, Korean, and Tagalog. At the request of schools, parent consent was obtained via an active consent process or a passive consent process (Burns et al., 2003). The active consent process involved RTI sending packages containing consent forms and information about the study to students’ homes via mail or a school coordinator. These packages were sent four weeks prior to the schools’ testing data. If parents agreed to have their
children tested, they signed the consent form and indicated that they would allow their child to be tested. Using this consent method, 60% of students were tested. Very few parents refused to allow their children to be tested; low response rates were related to a large portion of students not returning consents.

In schools using the passive consent process, parent consent packages were also sent to students’ homes via mail or a school coordinator four weeks prior to the schools’ testing date. However, instructions for the passive consent process asked parents to return forms if they did not want their child to participate in the study. Approximately, 78% of students were surveyed in schools using the passive consent process.

RTI hired and trained survey administrators and assistant survey administrators to collect data from students (Burns et al., 2003). The student questionnaire is a 45-minute self-administered instrument that was given in a group format, and accommodations were provided to students with Individual Education Plan. Furthermore, a make-up date was schedule for schools if all students eligible to be tested on the initial test date were not assessed. To improve student participation, several incentives were offered, such as a $20.00 gift card drawing in schools requiring an active consent process, a $20.00 gift card to each participant in schools where surveys were administered during non school hours, and a $20.00 gift card for each participant in schools where students’ addresses were not provided to RTI by school officials. A few students were interviewed through a computer-assisted telephone interview (CATI) because they could not be assessed at the school.

Parents were asked to complete the parent questionnaires via mail or telephone. Mailing addresses were gathered from schools or locator information on the students’ questionnaires was used to obtain parents’ mailing addresses. Parent questionnaires were mailed on the scheduled day of student testing or immediately after locator information was gathered from student questionnaires. One week later, a thank you/reminder card was sent to parents. If parents did not return questionnaires within four weeks of the initial mailing date, ELS personnel contacted them.
to complete a phone interview. Parents reluctant to participate in the phone interview were asked to complete an abbreviated interview to obtain critical information.

**Procedures for Current Study**

Given that this study is using secondary data with all identifying information replaced with codes, exempt status from the University of Kentucky’s Institutional Review Board (IRB) was obtained for this study. Furthermore, unrestricted data files for this study were obtained from the NCES website, http://nces.ed.gov/surveys/els2002/avail_data.asp, and a restricted data use license was obtained from the Institute of Education Sciences (IES) of the United States Department of Education. Unrestricted data files contained information from student and parent questionnaires, and restricted data contained information from students’ transcripts.

**Research Analysis Plan**

The research analysis plan is broken down into three parts. Part I discusses preliminary analysis procedures, specifically data cleaning and scale validation procedures for parenting style scales, parental expectation scale, teaching style scales, and motivation scales. Part II provides information related to statistical procedures used to explore the following questions: (a) Do parents’ and teachers’ warmth, control, and educational expectations predict African American students’ academic achievement?; (b) Do parents’ and teachers’ warmth, control, and educational expectations predict African American students’ intrinsic motivation?; and (c) Do parents’ and teachers’ warmth, control, and educational expectations predict African American students’ self-efficacy? Lastly, part III describes procedures used to examine the moderating influence of neighborhood safety on associations between parents’ and teachers’ warmth, control, and educational expectations and educational outcomes (e.g., GPA, intrinsic motivation, and self-efficacy).

**Part I: Data Cleaning and Confirmatory Factor Analysis.** Data were inspected for missing variables, univariate outliers, multivariate outliers, and normality. To address missing data, list wise deletion procedures were used. List wise deletion is a process that deletes cases in
which values critical to the analysis are missing, and this procedure is used when data are missing in a random pattern (Tabachnick & Fidell, 2007). Furthermore, given the large number of participants in the data set, utilizing list-wise deletion did not severely minimize the number of participants needed to use various analysis procedures.

Next, data were scanned for univariate and multivariate outliers. A univariate outlier is a value that lies in the outer extreme range of data, meaning that relative to the other data points, this value is extremely high or low. Moreover, inclusion of this variable within analysis can distort statistical findings. A multivariate outlier is present when the combination of two or more variables for the same participant significantly differs from patterns of variables found for other participants. Similar to univariate outliers, the inclusion of multivariate outliers can also distort statistical findings.

Identification of univariate outliers was accomplished by standardizing values for each variable. Tabachnick and Fidell (2007) suggest that standardized scores above 3.29 standard deviations should be deleted. However, they also recognize that in large data sets many cases may have standard scores above 3.29. Therefore, for this study, the pattern of standard scores was analyzed and scores in the extreme range were deleted.

Mahalanobis distance test was used to identify multivariate outliers. Mahalanobis distance test assesses the distance of a case from the centroid (i.e., the intersection of means for variables of interest in the data set), and if there are values that are of significant distance from the centroid, the Mahalanobis distance statistic will have a significant Chi square value (Tabachnick & Fidell, 2007). Cook’s statistic was also used in conjunction with Mahalanobis distance because this indicator provides information about the influence an outlier has on distorting statistical findings (Tabachnick & Fidell, 2007). Similar to Mahalanobis distance test, Cooks also uses Chi-square test, and significant Chi-square values indicate influential outliers.

The distribution of the data or normality was assessed by using graphical methods. Specifically, a histogram for each item was generated and visually inspected to determine if the
item’s distribution significantly deviated from a normal distribution. For large scale-data sets, graphical methods of accessing normality are recommended over statistical methods; furthermore, statistical deviations from normality in large data sets have a minimal impact on overestimations or underestimations of variance (Tabachnick & Fidell, 2007).

Linearity (i.e., a linear relationship between variables) was assessed using scatter plots. Tabachnick and Fidell (2007) note that it is impractical to examine all pair-wise scatter plots when associations between a large number of items or variables are examined, and they suggest spot-checking a few plots to determine linearity. Therefore, this method was used in this study.

After data cleaning was complete, psychometric properties of scales were examined, specifically scale reliability and construct validity, using Confirmatory Factor Analysis (CFA). CFA is a type of Structural Equation Modeling (SEM) that assesses the measurement model or associations between observed variables and latent variables (Brown, 2006). In this study, observed variables were test items (e.g., How often does your parent check on whether you have done your homework) and latent variables were the factors thought to account for variance in the test items (e.g., parental control and intrinsic motivation). To use CFA, a prior structure of the measurement model based on theory and prior research must be established (Brown, 2006). Given that the measurement model for this study is based on several theories, particularly Baumrind’s parenting style theory, SDT, and self-efficacy, and items selected to measure various constructs have been used in other empirical studies assessing aspects of parenting and teaching (Romero, 2010; Sanders & Jordan, 2000; Wells et al., 2009), CFA is deemed an appropriate technique for assessing measurement models in this study.

CFA models yield several statistics that allow researchers to examine the goodness-of-fit of the model, relationships between latent variable and observed variables, and relationships between latent variables (Brown, 2006). Goodness-of-fit statistics provide information about statistical differences between the implied covariance matrix (i.e., covariance matrix produced by the measurement model) and actual covariance matrix (i.e., covariance matrix produced by data).
Chi-Square values are among the most commonly used fit statistics, and insignificant chi-square values indicate that the actual and implied covariance matrix do not differ significantly (Brown, 2006). Thus, Chi-square is a measure of absolute fit. Chi-square values are very sensitive to sample size, and to address this concern, the researcher uses the normed chi-square. To obtain a normed-chi-square statistic, the chi-square is divided by degrees of freedom. Brown (2006) notes that the range for acceptable chi-square values is broad. For instance, Carmines & McIver (1981) suggest that a normed chi-square statistic between two and three indicate good model fit, while Schumacker and Lomax (2004) note that value less than one reflect poor model fit and a value of five or more reflect the need for model improvements. However, given that normed chi-square does not fully correct for issues related to sample size sensitivity, other fit statistics, such as Root Mean Square Error of Approximation (RMSEA), Tucker-Lewis Index (TLI) and Comparative Fit Index (CFI), should be used in conjunction with normed chi-square.

RMSEA, TLI, and CFI are less sensitive to sample size, and they are among the most stable fit indices within simulated data (Brown, 2006). RMSEA is a fit statistic that adjusts for model parsimony, meaning that this indicator provides a better fit statistic for parsimonious models. Furthermore, unlike Chi-square, RMSEA assesses reasonable fit of the implied covariance matrix to the actual covariance matrix instead of absolute fit (Brown, 2006). Values closer to zero indicate better model fit; Brown (2006) provides the guideline that values of .05 or less indicate good model fit.

The TLI and CFI are comparative fit indices because these statistics compare the implied covariance matrix to a null or independence model (i.e., a model in which all covariance are fixed to zero). Similar to RMSEA, TLI also favors more parsimonious models and penalties are applied for freely estimated parameters that do not improve model fit (Brown, 2006). Values for TLI and CFI vary between zero and one, and values of .90 or above indicate good model fit (Brown, 2006).
After model fit has been established, construct validity was examined. Construct validity is generally comprised of discriminant validity and convergent validity, and together, these aspects of validity assist researchers in determining if a test is measuring what it purports to measure (Cohen & Swerdlik, 2002). Convergent validity assesses the degree of agreement between measures or items purporting to measure similar constructs, while discriminant validity assesses degree of divergence between measures or items purporting to measure different constructs (Cohen & Swerdlik, 2002). To assess convergent validity, parameter estimates (e.g., factor loadings) were examined for direction, magnitude, and significance. Direction of factor loadings (i.e., positive or negative) provide information related to the consistency of factor loadings with theory. To state it differently, associations between latent variable and the observed variable should be in the positive direction because they purport to measure similar constructs. The magnitude of factor loadings provides information about the amount of shared variance between the latent structure and items. Steven (2001) suggests that factor loadings should be at least .40, and this standard is often used by researchers in the social sciences (Comrey & Lee, 1992; Lievens & Anseel, 2004). For this study, items with a factor loading below .40 were deleted. Factor loadings were also examined for statistical significance, and there should be a statistically significant relationship between latent variables and items.

Shared variance between latent structures (i.e., covariances) and the average extracted variances (AVE) (i.e., the average variance accounted for in the items by the latent structure) was examined to access discriminant validity. Latent constructs were expected to be correlated given respondent and setting patterns. To state it differently, students provided multiple forms of information about the same person (e.g., their parents and their teachers) in the same settings (e.g., their school and their home). Because the target person and the target settings are the same, it is expected that students’ perceptions of parents will be significantly correlated, students’ perceptions of teachers will be significantly correlated, and students’ perceptions of their motivation patterns will be significantly correlated. However, given that different constructs are
being assessed for parents and teachers (e.g., warmth, control, and expectations), as well as, different constructs in relation to self (e.g., self-efficacy and intrinsic motivation), correlations for latent constructs should not exceed .90 (Tabachnick & Fidell, 2007). A correlation of .90 between two latent variables indicates that these variables are assessing the same construct, which is an indicator of multicollinearity (Tabachnick & Fidell, 2007). Furthermore, Fornell and Larcker (1981) suggest that the AVE should exceed the shared variance between latent variable to establish the existence of discriminant validity.

Three CFA measurement models were examined in this dissertation study, specifically a motivation model with intrinsic motivation in math, intrinsic motivation in English, self-efficacy in math, and self-efficacy in English as latent variables; a parenting model with parental control, parental warmth, and parental expectations as latent variables; and a teaching model with teacher control and teacher warmth as latent variables, see figure 3.1 for measurement models. Educational expectations were not included in the teaching model because this variable is assessed with a single indicator item. The purpose of the CFA is to determine if variance in multiple items are accounted for by latent factors (Brown, 2006). Thus, a latent factor assesses shared variance of multiple items, and a single item cannot make up a latent factor.
Figure 3.1. CFA Measurement Models

Teacher Warmth

Teacher Control

Measurement Model
Teaching Variables
Figure 3.1. CFA Measurement Models (continued)
Figure 3.1. CFA Measurement Models (continued)
Figure 3.1. CFA Measurement Models (continued)
Part II: Structural Equation Modeling (SEM). This section discusses the rationale and procedure for using SEM to answer the following research questions: (a) Is academic achievement predicted by parents’ and teachers’ warmth, control, and educational expectations? (b) Is intrinsic motivation predicted by parents’ and teachers’ warmth, control, and educational expectations?; and (c) Is self-efficacy predicted by parents’ and teachers’ warmth, control, and educational expectations? SEM is a combination of statistical technique that examine complex relationships between observed variables, unobserved variables, and combinations of observed and unobserved variables (Kline, 2005). In order to employ SEM techniques, the researcher must have prior information about the directionality of effect between variables, and directionality should be based on theory and prior research (Kline, 2005). Given that the current study is interested in examining multiple relationships simultaneously and prior research and theory has been used to determine directionality of associations between variables, SEM is an appropriate analysis to examine the above mentioned research questions.

Parenting indicators, specifically parent warmth, parent control, and parent educational expectations, and teaching indicators, specifically, teacher warmth and teacher, control are exogenous variables. The exogenous variables are predictors’ for the endogenous variables, specifically, academic achievement, intrinsic motivation, and self-efficacy, see figure 3.2 for a graphical representation of the model.
Figure 3.2. SEM model with all tested paths
Prior to answering specific research questions using the model, fit statistics, specifically Normed chi-square, RMSEA, CFI, and TLI were examined. The same criteria for good model fit used for CFA models also apply to SEM models (Brown, 2006; Kline, 2005). Therefore, normed chi-square values between one and five, RMSEA values of .05 or less, and CFI and TLI values of .90 or higher indicates good model fit. After model fit was examined, individual parameters (i.e., direct paths) within the model were assessed to answer research questions. Individual parameters are t-tests, and they determine if predictions of an endogenous variable by an exogenous variable are significant (Kline, 2005). Individual parameters also provide information about how much the endogenous variable (e.g., academic achievement) will increase with a one-point increase in the exogenous variable (e.g., parental control). Lastly, the proportion of the explained variance in the endogenous variables by the exogenous variables was examined using $R^2$ (Kline, 2005).

**Part III: Moderation.** This section discusses procedures used to examine neighborhood safety as a moderator, and the following research questions were answered using SEM multi-group modeling techniques: Does neighborhood risk moderate associations between parents’ and teachers’ warmth, control, and educational expectations and academic achievement? and Does neighborhood safety moderate associations between parents’ and teachers’ warmth, control, and educational expectations and motivation (i.e., intrinsic motivation and self-efficacy). Multi-group modeling was used because this procedure allows researchers to determine if various components of SEM models differ between groups (e.g., moderation effects). There are several different aspects of moderation, such as differences in parameter estimates, error loadings, and factor loadings that can be examined using multi-group modeling techniques (Bryne, 2001; Kline, 2005). For the purposes of this study, differences between parameter estimates will be examined because research questions specifically inquire about variation in direct effects (i.e., direct associations between exogenous variables, such as parental control, and endogenous variables, such as academic achievement).
Utilizing multi-group modeling within SEM is a multi-step process (Bryne, 2001). First, a statistical model is analyzed for the entire pooled sample of individuals to obtain a base-line Chi-square. Next, the sample is divided into various groups. A statistical model is examined for each group, but direct effects for each modeled are constricted to be equal. This process is often referred to as adding path restraints, and the model with path restraints is analyzed and compared to the base-line SEM model to determine if there are moderation effects. Comparisons between models are made using a chi-square difference test, and moderation effects are present if there is a significant difference between chi-square values for the base-line SEM model and the model with path constraints. If moderation is established, parameter statistics are compared to determine which paths differ significantly between groups. SEM models with multi-group modeling techniques use the same criteria for model fit (e.g., RMSEA, CFI, and TLI) and parameters estimates as models without multi-group comparison techniques.

For this study, neighborhood safety is the moderating variable. Neighborhood safety was used as a categorical variable, and the participants were divided into two groups. Group one consisted of adolescents residing in safe neighborhoods and group two consisted of adolescents residing in unsafe neighborhoods. These two groups were determined based on single item asking parents if their neighborhood is safe for themselves and their family. Item responses were provided on a four-point Likert scale, and participants who responded very safe and somewhat safe comprised the safe neighborhood group. Participants who responded somewhat unsafe and very unsafe comprised the unsafe neighborhood group.
Chapter IV: Results

The goals of this study are threefold: (a) to examine the influence of parenting style and teaching style indicators, as well, the influence of parents’ and teachers’ educational expectations on African American students’ academic achievement; (b) to examine the influence of parenting style and teaching style indicators, as well, the influence of parents’ and teachers’ educational expectations on African American students’ motivation patterns (i.e., intrinsic motivation and self-efficacy); and (c) to examine the moderating effects of neighborhood safety on the aforementioned associations. SEM techniques were employed to examine associations between these variables. This chapter of the study presents findings and it is outlined in the following manner, data cleaning, sample characteristics, psychometric properties of scales, and hypotheses testing.

Data Cleaning

Prior to analysis and scale construction, data were examined for missing variables. There was a high concentration of missing variables throughout the data sets; specifically 76% of cases had missing data. The high percentage of missing data is not uncommon within large scale data sets, and Tabachnick and Fidell (2007) argue that the “pattern of missing data is more important than the amount of missing data” (p. 62). Missing data can occur in completely random patterns, random patterns, and nonrandom patterns. The best missing data pattern the completely random pattern because it indicates that missing data are not occurring in a predictable manner (Tabachnick & Fidell, 2007).

Little’s MCAR test was performed with IBM SPSS missing values package 19 to determine if data in this study are missing completely at random. Little’s MCAR test uses the Little’s chi-square statistic to assess the randomness of missing data (SPSS Inc, 2007). If the chi-square statistic is significant, the researcher should reject the null hypothesis, which states data are missing completely at random. However, if the chi-square statistic is insignificant, the researcher should fail to reject the null hypothesis, which would indicate that the data are missing
completely at random (SPSS Inc, 2007). All scale items as well as several auxiliary items (i.e.,
gender, family income, parents’ education level, and family composition) were used to determine
the missing data pattern. The insignificant Little’s chi-square statistic obtained for this data,
specifically 15921.96 (df = 15680 p=.08), suggest that data are missing completely at random.
Given the large-scale nature of the data set and the completely random missing data pattern, cases
with missing values for scale items were deleted from this study. After missing values were
deleted, 405 cases remained in the sample.

Next, scale construction began, and the first step was to reverse code items so that Likert scales would be consistent across measures. All items for the intrinsic motivation in English and
math scales and one item on the teacher warmth scale, specifically “I often feel put down by my
teachers”, item BYS20H, were reverse coded. Scales were also examined for univariate and
multivariate outliers, normality, linearity, and multicollinearity using IBM SPSS 19.

Examination of Z-scores for each scale did not reveal any univariate outliers.
Furthermore, Mahalanobis distance test and Cook’s statistic did not reveal any multivariate
outliers within the data set. Normality was assessed using graphical methods, specifically
histograms, and most variables did not significantly deviate from a normal distribution.
However, the distribution for parents’ expectations and teachers’ expectations did not appear to
be normal. Researchers generally perform data transformations to correct for normality concerns.
However, the researcher did not transform data because interpreting values for data that have
been transformed can be difficult because transformed values are not consistent with the Likert
scale used to measure the construct. Furthermore, many statistical techniques, such as SEM, are
robust to data that is not normally distributed (Fan & Wang, 1998).

Lastly, the data were examined for linearity and multicollinearity. Examinations of
scatter plots revealed linear relationships between variables. Multicollinearity was not a problem
with the data given that correlation coefficients between scales did not exceed .70, see table for
correlations and means.
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<td>4. Teacher Expectations</td>
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<td>5. Teacher Control</td>
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<td>9. Math Self-efficacy</td>
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Mean: 4.81 2.86 2.19 2.78 2.25 2.10 2.6 2.5 2.58 2.92
Standard Deviation: 1.90 .71 3.47 .41 .53 .53 .67 .72 .82 .77

*p ≤ .05
Sample Characteristics

The sample was comprised of 405 African American tenth grade students, and 61% of the sample consisted of females. Approximately, 40% of adolescents reported being reared in homes with a mother and father present, and most families reported a total family income between $35,001 to $50,000. Graduating from high school or obtaining a GED was the largest reported parental education level, approximately 20%. Parents reported living in their current neighborhood on average 11.1 years.

Scales psychometric properties

This section discusses the psychometric properties of each scale, and three different models were examined, specifically, a parenting style model, a teaching style model, and a motivation model. For each model, goodness-of-fit, construct validity, specifically convergent validity and discriminant validity, and reliability are discussed. The teaching style model was examined first, and this model contains a teacher warmth scale and a teacher control scale. Prior to examining model fit, factor loadings were assessed to determine if items should be deleted because of insufficient loadings onto latent structures. Item BYS20A on the teacher warmth scale was removed because its factor loading of .39 was below the .40 criteria. After this item was removed, goodness-of-fit statistics, specifically a normed \( \chi^2 \) of 2.29, TLI of .93, CFI of .95, and RMSEA of .05, indicated that the model fit the data well. Furthermore, all factor loadings were significant in the positive direction with a range of .42 to .68. The teacher warmth latent construct was comprised of two items, and 55% of the variance in item BYS20G and 25% of the variance in item BYS20H was accounted for by the latent structure. The teacher control latent structure accounted for the most variance in item BYS21C (46%) and the least variance in item BYS20H (18%). See figure 3.3 for information about factor loadings.

Further examination of factor loadings revealed a problem with divergent validity. The AVE for the teacher control scale, specifically 30%, is lower than the shared variance between teacher warmth and teacher control, specifically 37%. These findings suggest that mathematical
support for discriminant validity between these two latent structures is not evident. However, a major premise of SEM is the consideration of theoretical support, and theoretical support should be considered more strongly than mathematical solutions (Brown, 2006). The literature clearly differentiates teacher warmth from teacher control (Bean et al. 2003; Baumrind, 1991), and the wording for items used to measure these construct in the current study is similar to the

Figure 4.1. Teacher CFA Model
wording used to measure similar constructs in other studies (Bossert, 1977; Klem & Connell, 2004; Madsen, Becker, & Thomas, 1968). Theory and previous research suggest that teacher warmth and teacher control latent structures are distinctively different constructs in this study. Lastly, Cronbach alphas for the teaching style scales were low, specifically .54 for teacher warmth and .66 for teacher control.

Next, a CFA model containing four motivation scales (i.e., self-efficacy in English, self-efficacy in math, intrinsic motivation in English, and intrinsic motivation in math) was examined. Goodness-of-fit statistics, specifically normed χ2 of 2.99, TLI of .936, CFI of .948, and RMSE of .070, indicated adequate fit. To improve model fit, model specification procedures were employed. First, item BYS87A was removed because the item’s factor loading of .34 was below the .40 criteria. Modification indices also suggested that correlating error terms for items BYS89C and BYS89F, as well as, error terms for item BYS89B and BYS89K would improve model fit. Correlated error terms suggest that there is a relationship between unexplained variance among items. There is debate in the literature about the cause of correlated error terms and the best method of addressing correlated error terms. Bollen and Lennox (1991) suggest that factors such as item wording and item placement can explain why error terms are correlated. In the current study, items with shared variance between error terms have similar item stems, which is “I can understand difficult.” Furthermore, items BYS89B and BYS89K refer to classroom text, and they assess a similar construct, self-efficacy. Given that there is a plausible explanation for correlated error terms within this model and correlating error terms does not violate any theoretical underpinning of the model, error terms for item BYS89B and BYS89K, as well as, error terms for item BYS89F and BYS89K were correlated. Goodness-of-fit statistics for the model improved, and the normed χ2 of 2.30, TLI of .96, CFI of .97, TL of .96, and RMSE of .05 indicated good model fit.

Factor loadings for all motivation scales were significant and in the positive direction. The intrinsic motivation in English latent structure accounted for the most variance in item
BYS87B, specifically 72%, and the least variance in item BYS87E, specifically 30%, while intrinsic motivation in math accounted for the most variance in item BYS87C, specifically 82%, and the least variance in item BYS87F, specifically 57%, see figure 3.4 for specific information about factor structure.

Figure 4.2 Motivation CFA Model
The percentage of variance accounted for by the self-efficacy latent structure was also high. Self-efficacy in English latent structure accounted for the most variance in item BYS98M, specifically 74%, and the least variance in item BYS89F, specifically 66%. The self-efficacy in math latent structure accounted for the most variance in item BYS89L, specifically 73%, and the least variance in item BYS89B, specifically 64%.

AVE values for the self-efficacy scales and intrinsic motivation scales ranged from .54 to .69, specifically .54 intrinsic motivation in English, .69 for self-efficacy in math, .68 for self-efficacy in English, and .69 for intrinsic motivation in math. Shared variances between latent structures were smaller than AVE values. Reliability coefficients for the scales ranged from excellence to good, specifically self-efficacy in math α=.92, self-efficacy in English α=.91, intrinsic motivation in math α=.81, and intrinsic motivation in English α=.77.

Lastly, the parenting model was comprised of a parental warmth scale, a parental control scale, and a parental educational expectation scale. Goodness-of-fit statistics for this model indicated adequate model fit, normed χ²=2.657, TLI=.892, CFI=.908, and RMSEA=.064. Model specification procedures were used to improve overall model fit. First item BYS85E was deleted because the factor loading of .35 was below the .40 criteria. Modification indices suggested that correlating error terms for item BYS85F and BYS85G, as well as, error terms for item BYS86A and BYS86B would make the largest improvements in model fit. Examination of items with correlated error terms on the parent control latent structure suggested that correlated errors might be a result of the specific area of control assessed by these items. BYS85F and BYS86G focus on parental control of leisure time (e.g., television watching and time with friends), while the other items focus on parental control in academic areas (e.g., home work completion and grade monitoring). Therefore, shared error variance may be related to the measurement of domain specific control. Correlated error terms for item BYS86A and BYS86B located on the parental warmth latent structure could be related to proximity of items and stem of items, which is “how often discussed school.” Given that there is plausible explanation for
shared variance between items and correlating error terms does not violate any theoretical underpinnings for the model, error terms were correlated.

Once item BYS85E was removed and error terms correlated, model fit improved. A normed χ² of 2.32, TLI of .92, CFI value of .93, and RMSEA value of .05 indicate good model fit. Factor loadings were significant in the positive direction, and they ranged from .44 to .80 across all scales. The latent structure parental control accounted for the most variance in item BYS85A, 54%, and the least variance in item BYS85G, 19%. The latent structure parental warmth accounted for the most variance in item BYS86C, 55%, and the least variance in item BYS86I, 25%. Parental expectations latent structure was comprised of two items and 50% of the variance in item BYS65B and 64% of the variance in item BYS65A was accounted for by this latent structure. See figure 3.5 for information about factor loading.

Figure 4.3. Parenting CFA Model
The AVE values for scales within the parent model ranged from .35 to .56, specifically .35 for parental control, .42 for parental warmth, and .56 for parental expectations. Most of the shared variance values between latent structures were lower than AVE values across the parenting scales. However, shared variance between parental control and parental warmth was .44, and this value exceeded the AVE value of .35 for parental control and the AVE value of .42 for parental warmth. Therefore, based on mathematical considerations, discriminant validity was not established between the parental warmth and parental control latent structures. However, there is theoretical support that clearly delineates parental warmth and parental control as two separate constructs (Baumrind, 1965, 1991). Furthermore, items with similar wording and content have been used in other studies to access parental warmth and parental control (Bean et al., 2003; Park & Bauer, 2002). Therefore, based on theoretical support and previous empirical examinations, the parental warmth and parental control latent structures in this study were considered to be distinctively different constructs. Lastly, reliability coefficients for the parenting style scales were in the good range, specifically parental control \( \alpha = .77 \), parental warmth \( \alpha = .85 \), and parental expectations \( \alpha = .71 \).

CFA was used to examine the psychometric properties of several scales assessing aspects of parenting style, parental expectations, teaching styles, and motivation patterns. Three different models were analyzed to determine scale properties. Fit statistics for these models indicated good fit, which suggest that the implied covariance matrix is doing a good job of reproducing the actual covariance matrix. Furthermore, construct validity for each scale was examined by assessing convergent validity and discriminant validity. For all of the scales, convergent validity was established by positive and significant loadings for all items on the latent structures. The direction of factor loadings shows that relationships between items and latent structures are consistent with theory. Furthermore, the strength of the loadings exceeded the .40 criteria often used within the literature. Discriminant validity for scales was established when the AVE was higher than the shared variance between latent structures. This pattern held for most of the
scales; however, shared variances between control and warmth for parenting and teaching models were higher than the AVE for warmth and control latent constructs. Therefore, mathematical support for discriminant validity was not present, but theory and previous research support the premise that parental warmth and parental control latent structures in the parent and teacher models are different constructs.

Also there is literature to suggest that, for African American adolescents’, aspects of control and warmth may be more closely related in comparison to adolescents from other racial and ethnic groups. To state it different, Mason et al. (2004) found that African American adolescents view aspects of parental control as demonstrating warmth, support, and affection, and these pattern was not found among Caucasian adolescents. Therefore, although control and warmth are distinctively different constructs, for some populations, these constructs may be more closely related. Lastly, reliability coefficients for most scales within this study were acceptable, ranging from .54 to .92. Examinations of the psychometric properties of these scales show they are valid and reliable, see table 1 for correlations and descriptive statistics.

Hypotheses testing

Once the psychometric properties of each scale was examined, a SEM model was analyzed using IMB SPSS AMOS 19 to determine if parenting style indicators, parents’ expectations, teaching style indicators, and teachers’ expectations influence African American students’ motivation patterns and academic achievement. In addition, multi-group modeling techniques were employed to determine if associations would be moderated by neighborhood safety. Prior to discussing specific research questions and hypotheses, the overall fit of the statistical model was examined. Model fit statistics, specifically normed $\chi^2$ of 9.586, TLI of .247, CFI of .754, and RMSEA of .146 indicated poor model fit.

To improve model fit, model specification procedures were employed. Modification indices suggested that correlating error terms between indicator variables on the motivation latent construct would make the largest improvement in model fit. Specifically, error terms for intrinsic
motivation in math and self-efficacy in math were correlated, and error terms for intrinsic motivation in English and self-efficacy in English were correlated. The correlation of these error terms suggest that unexplained variances of these indicator variables are correlated. Given that correlated error terms are between variables within the same subject areas (e.g., math and English), unexplained variance could be related to content area differences not accounted for by latent motivation variables (i.e., intrinsic motivation and self-efficacy). After error terms were correlated, model fit indices greatly improved as indicated by a normed $\chi^2$ of 1.61, TLI of .946, CFI or .984, and RMSEA of .039.

Model parameters were examined next to explore research questions and hypotheses, see figure 3.6 for graphical representation of SEM model. Findings will be presented by specific research question.

1. Do parents’ and teachers’ warmth, control, and educational expectations predict African American adolescents’ achievement?

   • Hypothesis 1: Parents’ warmth, control, and educational expectations will predict African American adolescents’ academic achievement.
   • Hypothesis 2: Teachers’ warmth, control, and educational expectations will predict African American adolescents’ academic achievement.

   All of the parenting variables were significant predictors of African American students’ academic achievement. Parent educational expectations was the strongest predictor of students’ grades, $\beta=.204$, $p<.05$, followed by parent warmth, $\beta=.190$, $p<.05$. Contrary to the other parenting variables, parent control was negatively related to African American students’ academic achievement $\beta=-.183$, $p<.05$. Teacher warmth was the only teaching indicator that significantly predicted African American students’ academic achievement, $\beta=.181$, $p<.05$. All of the parenting and teaching variables accounted for 12% of the variance in GPA.
Figure 4.4 SEM Model Significant Paths

All depicted paths are significant at the .05 level
The next research question investigated the impact of parents’ and teachers’ warmth, control, and educational expectations on African American students’ intrinsic motivation. The following research question and hypotheses were explored:

2. Do parents’ and teachers’ warmth, control, and educational expectations predict African American adolescents’ intrinsic motivation?

- **Hypothesis 1:** Parents’ warmth, control, and educational expectations will predict African American adolescents’ intrinsic motivation.
- **Hypothesis 2:** Teachers’ warmth, control, and educational expectations will predict African American adolescents’ intrinsic motivation.

Similar to findings presented for academic achievement, all of the parenting indicators were significant predictors of African American students’ intrinsic motivation patterns. Parent warmth was the strongest predictor, $\beta=.783$, $p<.05$, followed by parent control $\beta=-.341$, $p<.05$ and parent educational expectations, $\beta=.296$, $p<.05$. Teacher warmth was the only significant predictor of students intrinsic motivation patterns, $\beta=.338$, $p<.05$.

Lastly, the influence that parents and teachers have on African American students’ self-efficacy was examined. The following research questions and hypotheses were explored:

3. Do parents’ and teachers’ warmth, control, and educational expectations predict African American adolescents’ self-efficacy?

- **Hypothesis 1:** Parents’ warmth, control, and educational expectations will predict African American students’ self-efficacy.
- **Hypothesis 2:** Teachers’ warmth, control, and educational expectations will predict African American students’ self-efficacy.

Parent educational expectations and parent warmth were significant positive predictors of African American students’ self-efficacy, $\beta=.258$, $p<.05$ and $\beta=.200$, $p<.05$, respectively. Furthermore, teacher expectations was a significant positive predictor of African American
students’ self-efficacy, $\beta = .176$, $p<.05$. Contrary to any other variable, teacher control was a significant positive predictor of students’ self-efficacy, $\beta = .145$, $p<.05$.

The last research question explores the manner in which neighborhood safety moderates associations between parents’ and teachers’ warmth, control, and educational expectations and African American students’ motivation patterns and academic achievement. Below are research questions and hypothesis examined:

4. Does neighborhood risk moderate associations between parents’ and teachers’ warmth, control, and educational expectations and motivation patterns (i.e., intrinsic and self-efficacy) and academic achievement?

- **Hypothesis 1**: Neighborhood safety will moderate associations between parents’ and teachers’ warmth, control, and educational expectations and intrinsic motivation.

- **Hypothesis 2**: Neighborhood safety will moderate associations between parents’ and teachers’ warmth, control, and educational expectations and self-efficacy

- **Hypothesis 3**: Neighborhood safety will moderate associations between parents’ and teachers’ warmth, control, and educational expectations and academic achievement.

The researcher intended to use multi-group analysis to assess differences between families residing in safe neighborhoods and families residing in unsafe neighborhoods. However, the sample could not be categorized in this manner because the majority of respondents indicated that their neighborhood was a safe environment. Specifically, 50.1% rated neighborhood as very safe and 45.7% rated neighborhood as somewhat safe. Only 4.2% of respondents, approximately 17 individuals, rated their neighborhood as somewhat unsafe or unsafe. It is not possible to use multi-group modeling on a sample of 17 individuals.

Therefore, to compensate for poor distribution across neighborhood safety, the sample was split into two groups. Group one represents individuals who rated their neighborhood as very safe, approximately 50%, and group two represents individuals who rated their neighborhood as
somewhat safe, somewhat unsafe, or very unsafe. Multi-group modeling technique was used with these two groups.

Model fit was good for the first model analyzed with free parameter estimates, $\chi^2 = 46.269$, df = 32, CFI = .97, GFI = .97, RMSEA = .033. To determine if model fit indices and parameter estimated differed across the two samples, the model with free parameter estimates was compared to a model where parameter estimates were constricted to be equal across both groups, and a chi-square difference test was performed. Chi-square for the model with constrained parameter estimates was $\chi^2 = 58.66$, df = 50. The chi-square difference test produce an insignificant chi-square value of 12.39 df = 18 p > .05. Therefore, neighborhood safety did not moderate associations between parent and teacher warmth, control, and educational expectations and student’s motivation patterns (i.e., intrinsic motivation and self-efficacy) and academic achievement. Relationships between parenting and teaching variables and academic variables are the same for African American adolescents living in very safe neighborhoods and African American adolescents living in somewhat safe, somewhat unsafe, and unsafe neighborhoods.

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Chapter V: Discussion

The purpose of this study is to examine the influence of parents’ and teachers’ warmth, control, and educational expectations on African American students’ achievement and motivation (i.e., intrinsic motivation and self-efficacy). Furthermore, this study explored the moderating influence of neighborhood safety on the abovementioned associations. This chapter will provide a brief overview of the study’s theoretical underpinnings; identify specific research questions examined; present and discuss the study’s findings, limitations, recommendations for future research, and implications.

Theoretical Foundation

Adolescents’ interactions with parents and teachers are influential in shaping their educational trajectory, and Baumrind’s parenting style theory was used to identify important parental and teacher behaviors that aid in facilitating positive educational outcomes. Baumrind (1971, 1991) suggests that socialization figures’ (e.g., parents and teachers) behaviors can be classified into two categories, responsive behaviors and demanding behaviors. In the literature, warmth is identified as an important responsive behavior that facilitates academic success, and control is identified as an important demanding behavior that facilitates academic success (Bean et al., 2003; Radziszewska & Richardson, 1996). These aspects of parenting were examined in this study. Warmth was conceptualized as connectedness with adolescents and awareness of and understanding of adolescents’ academic and emotional functioning. Control was conceptualized as monitoring and limit setting.

Baumrind’s parenting theory focuses on socialization agents’ behaviors, but beliefs and attitudes are also important. In the educational literature, educational expectations are among the most widely examined parent and teacher beliefs. There are many conceptualizations of educational expectations, but for the purposes of this study, expectations were conceptualized as parents’ and teachers’ beliefs about an adolescents’ level of educational attainment.
Just as there are many definitions for educational expectations, there are also numerous academic variables explored in the literature, and GPA is the most commonly examined variable. However, students’ academic functioning and well-being consists of more than their grades, and it is important for researchers to consider other important factors such as motivation (Dever & Karabenick, 2011). The current study examined a diverse array of academic variables, specifically GPA, intrinsic motivation, and self-efficacy. Lastly, this study attempted to further the research community’s understanding of African American students’ academic functioning by examining neighborhood safety as a moderator of associations between socialization agents’ behaviors and beliefs (i.e., warmth, control, and educational expectations) and adolescents’ academic functioning (i.e., GPA, intrinsic motivation, and self-efficacy).

Guided by the theoretical frameworks of Baumrind’s parenting style theory, interpersonal expectations, SDT, and self-efficacy, the following research questions were examined:
1. Do parents’ and teachers’ warmth, control, and educational expectations predict African American adolescents’ achievement?
2. Do parents’ and teachers’ warmth, control, and educational expectations predict African American adolescents’ motivation patterns (i.e., intrinsic motivation and self-efficacy)?
3. Are associations between parents’ and teachers’ warmth, control, and educational expectations and achievement moderated by neighborhood safety?
4. Are associations between parents’ and teachers’ warmth, control, and educational expectations and motivation patterns moderated by neighborhood safety?

A SEM model was employed to explore the above-mentioned research questions. Findings are presented in the next section by outcome variables (e.g., achievement, self-efficacy, and intrinsic motivation).

**Academic Achievement**

Findings from this study demonstrate that parents’ beliefs and attitudes play a role in adolescents’ academic development. Contrary to finds from Bean et al. (2006) and Park and
Bauer (2003) found that parents’ warmth, control, and expectations were significant predictors of African American students’ GPA. In contrast, teacher’s warmth was the only significant predictor of African American students’ GPA.

Parents’ educational expectations were the strongest predictor of students’ GPA. Adolescents with parents who expect them to obtain an advanced degree have GPAs that were 1.8 points higher than adolescents whose parents expect them to earn less than a high school diploma. Sanders and Jordan (2000) argue that socialization agents with higher educational expectations (e.g., expectation for their child to obtain an advanced degree) often hold students to more rigorous educational standards, and these educational standards appear to be influential for African American students’ academic performance.

Contrary to parental expectations, teachers’ expectations were not significant predictors of African American students’ GPA. Findings from empirical studies exploring the importance of teacher expectations are mixed. Some studies show that high levels of teacher expectations predict lower GPAs (Gill & Reynolds, 1999; Tyler & Boelter, 2008), while other studies show that high levels of teachers’ expectations predict higher GPAs (Sanders & Jordan, 2000). Although this empirical examination supports findings that teacher expectations do not predict African American adolescents’ GPA, drawing the conclusion that teachers’ expectations do not have a significant influence on African American students’ academic achievement is presumptuous. Jussim et al. (1996) reported that among African American students, teachers’ expectations are particularly influential on their level of academic achievement. For example, they found that transitioning from a classroom where a teacher has low educational expectation into a classroom where has high educational expectations had the largest effect on African American students’ grades in comparison to students from other racial and ethnic groups.

African American adolescents’ reared in homes where parents engage in behaviors that provide support and for adolescent’s academic, emotional, and social functioning had GPA’s that were .57 points higher in comparison to African American adolescents living in homes where
parents and children didn’t frequently engage in these behaviors. Significant associations between parental warmth and GPA are not prevalent in the literature. Bean et al. (2006) suggests that parental warmth is often discussed as a broad concept, and many conceptualizations of warmth do not consider how demonstrations of warmth can differ across various ethnic groups. Therefore, an overarching definition of warmth may not be the best approach to studying this variable, and it may be helpful for researchers examine specific behaviors associated with warmth to determine the most important behaviors for various groups of adolescents. This study largely focused on behaviors associated with the academic environment. African American adolescents’ who parents are aware of and informed about their functioning through direct interactions (i.e., conversations) earn better grades.

Also, African Americans in classrooms where they feel connected to and valued by their teacher have GPAs that are .72 points higher in comparison to African Americans in classrooms where they felt disconnected from and devalued by their teachers. Other studies have also found that teacher support and warmth are strong predictors of African American students’ academic performance (Anderman, 2002; Crosnoe et al., 2004). Deci and Ryan (2004) argue that connectedness is an important factor for adolescents because students who feel connected to socialization agents are more likely to internalize values and behaviors promoted by those agents. However, if students feel disconnected or unsupported by the educational environment, they may reject achievement-related beliefs and behaviors promoted by socialization agents, and these students may suffer academically.

Parental control was the only negative parenting style predictor of adolescents’ GPA. Students reared in homes where parents have rules regulating various areas of students’ academic functioning (e.g., home work completion) and students’ social interactions (e.g., how long can stay out with friends) have GPAs that are .73 points lower than parents who do not strictly regulate these aspects of adolescents’ lives. Baumrind (1989) notes boundaries and rules are important for adolescents’ development and functioning, but the manner in which boundaries and
rules are implemented is just as important as the presence of boundaries and rules. For instance, the use of bi-directional communication assists in creating healthy interactions between parents and children. Baumrind (1989) suggests that adolescents should be provided with the opportunity to express themselves and have input in various decisions, such as rule implementation. Radziszewska et al. (1996) found that parental control in the form of rule setting was positively related to African American students’ GPA when students were allowed to have some input but not complete control during the development and implementation of rules.

In the current study, the researcher only assessed the presence of rules, and the manner in which rules were developed and implemented was not assessed. Therefore, negative associations between parental control and academic performance may be related to the manner in which rules were implemented and not the mere presence of rules. Future research should consider the presence of rules and the manner in which they are implemented.

Lastly, there were no significant differences in GPAs among adolescents in classrooms where teachers consistently enforced rules and in classrooms where rules were not consistently enforced. Studies exploring African American students’ perceptions related to the presence of school rules and implementation of school rules are scarce. However, several scholars believe comprehensive classroom management systems (i.e., systems that include proactive strategies such as rewards for positive behaviors and reactive strategies consequences for negative behaviors) are important for students’ academic development (Sullivan, 2010). Unfortunately for adolescents, many classroom management systems at the middle and high school level are not comprehensive and they only focus on reactive strategies or punishments for rule violation, such as no tolerance policies (Townsend, 2000). This study suggests that simply developing rules and enforcing them does not have a direct influence on African American students’ academic achievement.
Self-efficacy

Parents and teachers influence adolescents’ self-efficacy beliefs differently. For instance, parental warmth was positively related to students’ self-efficacy beliefs, while teacher control was positively related to self-efficacy. Expectations were the only significant indicators of self-efficacy for both parents and teachers.

African American adolescents’ beliefs regarding their ability to master and perform academic tasks are influenced by parents’ and teachers’ expectations regarding students’ level of educational attainment. Thus, an African American student who thinks that his or her parent or teacher believes her or she can earn a college degree has more confidence in his or her academic ability compared to an African American student who thinks that his or her parents or teachers believe her or she can only earn a high school degree. Bandura et al. (1996) suggest that self-efficacy beliefs can be enhanced through verbal cues that relay information about students’ ability to perform a particular task within a given environment. If parents and teachers have an expectation for adolescents to continue their education beyond high school, these socialization agents may provide verbal information to adolescents about their ability to perform academic related tasks successfully. As a result, parents and teachers enhance students’ self-efficacy beliefs.

Bandura’s beliefs related to the significance of verbal cues in the development of self-efficacy also assist in understanding findings in relation to parental warmth and teacher warmth. Parental warmth was positively related to self-efficacy beliefs, while teacher warmth was not related to self-efficacy beliefs. In the current examination, parental warmth assessed parents’ understanding of and knowledge of adolescents’ functioning via conversations between parents and children. Children who had more frequent conversations with their parents felt more self-efficacious in comparison to students who had few or no conversations with their parent. It is important to note that this study assessed the content of these conversations and conservations
largely consisted of academic related topics. Thus, many of the verbal exchanges between parents and children were related to their performance within academic related areas.

Bandura (2001) argues that it is difficult to define a broad sense of self-efficacy because beliefs can change across settings or tasks. Therefore, self-efficacy is best conceptualized in domain specific areas (e.g., by environments or specific tasks). Parental warmth largely focused on academic related areas; thus, it is closely aligned with the particular self-efficacy beliefs’ examined. In contrast, teacher warmth focused more on connectedness.

Bandura et al. (1996) suggests that connectedness to the particular model (e.g., teacher) providing educational cues is an important factor in the development of self-efficacy. However, in this study, connectedness to teachers was not enough to enhance students’ self-efficacy beliefs. Perhaps for African American adolescents, communication about the educational environment and their ability to perform is more important than the connectedness to a particular model.

Lastly, students’ sense of efficacy was not related to parental control. The insignificant relationship may be related to the importance of person control and mastery for the development of self-efficacy beliefs (Bandura et al., 1996). External control and external motivators (e.g., punishment) often lowers students’ sense of mastery. As a result, they may feel less competent in their ability to perform a task (Deci & Ryan, 2004).

In contrast, teacher control was positively related to students’ self-efficacy beliefs. Thus, students in classrooms where rules are present and consistently enforced felt more self-efficacious than students in classrooms where rules were not present and constantly enforced. Findings in relations to self-efficacy and teacher control may appear to conflict with findings in relations to self-efficacy and parental control, but the manner in which control was assessed in the home and classroom may help explain differences. Teacher control was assessed from a broad perspective (e.g., presence and the implementation of rules) and parent control focused more on specific behaviors. Gray and Steinburg (1999) found that moderate levels of control that focused on general aspects of adolescents’ functioning were positively related to academic competence.
Findings from this study and Gray and Steinburg (1999) suggest that adolescents’ beliefs about their ability to be successful can be enhanced when they are in a structured and orderly environment. However, when socialization agents impose a high level of control (e.g., monitoring specific behaviors), adolescents’ sense of control and mastery is diminished. As a result, their internal belief regarding their ability to master tasks and perform them independently may decrease.

**Intrinsic Motivation**

Similar to academic achievement, all of the parenting variables were significant predictors of students’ intrinsic motivation. Teacher warmth was the only significant teaching style predictor of intrinsic motivation.

Parental educational expectations emerged as the strongest parenting style indicator of African Americans adolescents’ academic achievement and self-efficacy, and similarly, parents educational expectations are also positively related to intrinsic motivation. However, parental educational expectations had the smallest influence on adolescents’ intrinsic motivation patterns in comparison to the other parenting style indicators. Despite the size of the association between parental expectations and intrinsic motivation the relationship is significant, and adolescents in homes where parents expect and encourage high levels of educational attainment have higher levels of internal pleasure associated with engaging in achievement related task when compared to adolescents in homes where parents do not expect a high level of educational attainment. Gottfried et al. (1994) found that parents’ messages related to task persistence and mastery positively influences students’ intrinsic motivation. In order to obtain an advanced degree, students must persist and master various academic areas. Thus, African American parents’ expectations provide information to students that suggest parents believe they have the ability to persist and master, and students’ internal desire and pleasure to engage in academic tasks are also enhanced.
Educational expectations were defined and assessed in the same manner for parents and teachers. However, teacher educational expectations were not significant predictors of African American students’ intrinsic motivation patterns. A similar patterned emerged in relation to African American students’ GPA. Parents educational expectations were significantly related to student’s grades, but teachers’ educational expectations were not. In relation to these two educational outcomes (i.e., intrinsic motivation and academic achievement), it appears that the socialization agent providing the messages related to expectations play a vital role in how these messages will influence students. In comparison to teachers, parents have a distal connection with the classroom environment and the content taught within that environment. Therefore, it seems counter-intuitive that parents’ expectations would have a greater effect on the pleasure and satisfaction students experience when engaging in academic-related tasks. Deci and Ryan (2004) suggest that students’ connectedness with the model providing educational messages is vitally important to the development of intrinsic motivation patterns. Perhaps, parents’ educational expectations are more influential because of the level of connectedness students feel in relation to their parents compared to their level of connectedness to teachers. The significance of connectedness in facilitating positive communication patterns is further highlighted by findings that show both parents and teacher warmth is positively related to intrinsic motivation.

African American students’ intrinsic motivation patterns were higher when reared in homes where parents understand and area aware of their emotional and academic functioning, and when they are in classrooms where they feel connected to and supported by teachers. The manner in which warmth was assessed within the parent-child and student-teacher relationship differs slightly. Both conceptualizations encompass aspects of connectedness, but teacher warmth focuses more directly on connectedness in comparison to parental warmth. In addition, parental warmth assesses aspect of students’ academic functioning more than teacher warmth. This study demonstrates that warmth is an important factor for the development of intrinsic
motivation patterns for African American students despite the manner in which warmth was assessed or despite of the socialization agent engaging in behaviors associated with warmth.

Another important factor to consider when examining the association between warmth and intrinsic motivation is autonomy. Autonomy is arguably the most important factor in the development of intrinsic motivation, and Deci and Ryan (2004) identify supportive nurturing connections with others as an important component in the development of autonomy. As students’ perceptions of warmth and support from parents and teachers increase, they may feel more autonomous. Higher levels of autonomy are likely related to higher levels of intrinsic motivation.

Just as warmth enhances students’ intrinsic motivation, control thwarts intrinsic motivation (Deci & Ryan, 2004). African American students’ living in homes where parents have established rules governing aspects of students’ academic and social functioning have lower levels of intrinsic motivation in comparison to African American students reared in homes where parents do not govern these aspects of students’ functioning. Students’ intrinsic motivation may be negatively influenced because rules can create an environment where students feel coerced to engage in certain academic behaviors. As a result, adolescents feel less autonomous and their level of intrinsic motivation decreases. Teacher control was unrelated to intrinsic motivation patterns and this relationship may have emerged because teacher control was not directly related to academic behaviors. Instead, teacher control assessed the presence and enforcement of rules. Thus, students’ feelings of autonomy when engaging in academic behaviors may not be affected by this form of control.

**Neighborhood Safety**

Several scholars pose that, in dangerous neighborhoods, relational ties between adolescents and parents and teachers may act as protective factors for African American students (Brody & Flor, 1998; Steinberg et al., 1994). Thus, within these environments, the influence that parents and teachers have on academic achievement and motivation were expected to be stronger.
Unfortunately, adolescents could not be divided into distinct community environments (e.g., safe and unsafe communities) because the majority of African American parents, specifically 95%, perceived their neighborhoods to be safe or somewhat safe environments. Therefore, to compensate for the uneven distribution of parents across neighborhood types the two neighborhood groups were redefined (i.e., group one, safe neighborhoods and group two, somewhat safe, somewhat unsafe, and unsafe neighborhoods). The relationships between parenting and teaching factors and academic outcomes did not differ between these two groups.

The insignificant findings in relation to parental warmth and control are supported by previous studies. Several scholars found that for African American adolescents living in safe and socially intact neighborhoods parental warmth and parental control were negatively related to or unrelated to educational outcomes (Roche et al., 2007; Gonzales, Cauce, Friedman et al., 1996).

Given the limited availability of studies examining the moderating effects of neighborhood safety on associations between educational outcomes and teaching style, educational expectations, and motivation, it is difficult to identify specific patterns of association. Findings from the current study suggest that, similar to the parenting style literature, higher levels of teacher control, teacher warmth, and educational expectations do not act as protective factors for African American adolescents in safe neighborhoods. Unfortunately, this study did not have many participants who viewed their neighborhood as an unsafe environment. Therefore, the current examination cannot provide insight into how parenting and teaching style indicators, as well as, educational expectations influence students’ educational outcomes in unsafe neighborhoods.

Given that the literature examining neighborhood safety as a moderator of associations’ between educational outcomes and parent-child and student-teacher interactions is in the infantile stage, it is important that additional studies with more variability in neighborhood composition are conducted in order for the research community to have a more comprehensive understating of how relational interactions can act as protective factor for adolescents.
Limitations and Recommendations

The current study examined the influence that parents and teachers have on African American adolescents’ academic functioning, and several consistent patterns emerged. First, parental warmth and expectations predicted higher levels of academic achievement and adaptive motivation pattern, and parental control predicted lower levels of these variables. Associations between academic outcomes and teaching variable were not as consistent as parenting variable. Teacher warmth was positively related to academic achievement and intrinsic motivation, while teacher control and teacher expectations were positively related to self-efficacy.

Findings from this study suggest that parents and teachers are influential in shaping African American students’ academic development, but the manner in which teachers influence students varies depending on the type of educational outcome assessed. As researchers and educators continue to build upon and generalize findings from this study there are several limitations that need to be considered. First, discriminant validity between warmth and control latent variables could not be established using mathematical methods. Warmth and control were closely related in CFA models, which could be an indication they are accounting for the same pool of variance (Cohen & Swerdlik, 2002). Therefore, it is difficult to assume separate constructs are being assessed. Insignificant associations between teacher control and academic achievement and teacher control and intrinsic motivation may be influenced by associations between control and warmth.

Future studies should continue to explore aspects of warmth and control to determine if they are distinct constructs of parenting for African American youth. Mason et al. (2004) suggest that African American adolescents view parental control as communicating warmth and support. Therefore, future studies should explore several factor structures for these constructs to determine if a one factor structure or two factor structure best explains associations between warmth and control for African American adolescents.
The manner in which aspects of warmth and control were assessed for parents and teachers is also a limitation in this study. Warmth and control are broad terms that can encompass many different behaviors, and these variables were conceptualized differently for parents and teachers. Different conceptualizations of similar constructs act as a confounding variable in the present study. It is impossible to determine if significant findings in relations to warmth and control are due to the manner in which variable were conceptualized, the socialization agent (i.e., parent or teacher), or a combination of the aforementioned factors. Given that there are several explanations for significant findings, comparisons in relations to parents and teachers warmth and support should not be made. In future studies, aspect of warmth and control should be measured similarly.

Also the presences, as well as, the quality of various parenting behavior need to be explored in future studies. The current examination focused on the mere presence of behavior by assessing frequency of behavior. Baumrind (1989) note that the manner in which various parenting behavior are implemented in the home can influence their effectiveness in facilitating positive outcomes. Unfortunately, the quality of interactions is difficult to capture in quantitative researcher because Likert scale often do no capture the subtle and dynamic aspects of quality. Researchers can build upon these studies findings and conduct qualitative researcher that focuses on identifying aspect of bidirectional communication, tone, and messages provided during parent-child and student-teacher interactions.

Unfortunately, the present examination was unable to adequate explore the moderating influence of neighborhood safety. Future studies should continue to explore this concept and the manner in which neighborhood safety is assessed needs to be broadening in future examinations. The current study focused on parents’ subjective reports related to neighborhood safety. Leventhal et al. (2009) notes that measuring safety using subjective measures provided by study participants is important because an individual’s personal experiences and beliefs are likely to influence their behavior. However, inclusions of objective data to assess safety, such as number
of reported crimes in areas, can also provide valuable data regarding neighborhood safety. In addition to both subjective and objective measures of neighborhood safety, additional demographic information about the neighborhood, such as location of neighbored (e.g., urban or rural) or type of housing families in the area typically reside in (e.g., single family house, multi-family home, or apartment) is also valuable information that can be used to explore the effects of neighborhoods on relational interactions. Unfortunately, the data set used for the current study explored a limited range of neighborhood variables, and information about neighborhood demographics could not be explored.

Implications

Due to failing test scores and overrepresentation in failing schools, the nation is clamoring to find something that will assist African American students academically. There is a focus on increasing money, reallocating resource, and improving technology. All of these initiatives are great, but in the mist of new programs and policies, the power and influence of social interactions in facilitating positive academic outcomes are lost. Findings from this study show that the climate created through positive parent-child and student-teacher interaction have a significant impact on student’s academic development. Parents and teacher influence student’s academic functioning differently, but both of these socialization agents are important. Therefore, school psychologist and school leaders need to capitalize on these readily available and inexpensive resources to assist African American student.

School level program need to promote a less punitive no tolerance policies and focus on building African American student connectedness to teachers. Furthermore, schools should also develop programs that target aspect of the parent-child relationships. Even as adolescents transition into high school, parents continue to play a vital role in their academic success. However, many parents may be unaware of how significant seemingly mundane behaviors (i.e., conversations about school) are for adolescents’ academic futures. Many school programs that target parent focus on increasing their presence within the school. However, this study
demonstrates that parents can make significant differences by creating a supportive environment at home, and Jeynes (2002) found that parental beliefs had a greater influence on educational outcome than parental involvement in school activities. Therefore, school psychologist can develop psychoeducational curriculums that educate parents on the importance of various behaviors and the importance of communicating and promoting various expectations.
Appendix

Student Base Year Questionnaire

Parent Questionnaire
References


on academic achievement among African American and Caribbean Black adolescents.

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School-Based Experience:

APPIC Internship School-Based Mental Health Provider,
Alliance County Schools, OH 9/2012-5/2013
  • Supervisors: David Coleman, Ph. D., Licensed Psychologist
                  Jennifer Reese, Psy. D., Licensed Psychologist
                  Linda Menes, Ph. D., Licensed Psychologist

Advanced Practicum School-Based Therapist, Grant County Schools, KY
08/2007-05/2008
  • Supervisor: Rich Gilman, Ph. D., Licensed Psychologist

School Psychology Practicum Clinician, Fayette County Schools, KY
08/2006-05/2007
  • Supervisors: Rich Gilman, Ph. D., Licensed Psychologist
                Scott Graves, Ph. D., School Psychologist
                Kori Buttles, NCSP, School Psychologist

Psychological Services Experience:

APPIC Internship, Child and Adolescent Behavioral Health, OH
7/2012-6/2013
  • Supervisors: David Coleman, Ph. D., Licensed Psychologist
                Jennifer Reese, Psy. D., Licensed Psychologist
                Linda Menes, Ph. D., Licensed Psychologist
Advanced Practicum Clinician, Comprehensive Assessment & Training Services (CATS) Clinic, University of Kentucky Department of Psychiatry, 08/2009-12/2009
- Supervisors: Aimee Mau, LCSW, Licensed Clinical Social Worker
  Lisa Ruble, Ph.D., Licensed Psychologist

Advanced Practicum Clinician, University of Kentucky Autism Clinic, 8/2009-5/2010
- Supervisors: Lisa Ruble, Ph.D., Licensed Psychologist

Practicum Clinician, University of Kentucky School Psychology Clinic, 06/2006-05/2007
- Supervisors: Scott Graves, Ph.D., School Psychologist
  Tom Prout, Ph.D., Licensed Psychologist

Other Professional Experience
Family and Community Liaison, Knight Foundation Grant, 2007-2009
- Supervisors: Lynda Brown Wright, Ph.D., Counseling Psychologist
  Deneia Best-Thomas, Ph.D., Educational Psychologist

Statistician and Data Collector, KIDS NOW Grant, 2009-present
- Supervisors: Jennifer Grisham-Brown, Ed.D.
  Mary Gravel, LCSW, Licensed Clinical Social Worker

Training/Teaching Experience
- Invited lecture: What is Classroom quality? : An examination of early childhood classrooms, University of Kentucky and University of Louisville, 2010
- Autism parent and educator training series: Managing challenging behaviors, University of Kentucky Autism Clinic, 2009
- Autism parent and educator training series: Social skills training, University of Kentucky Autism Clinic, 2009
- Introduction to Structural Equation Modeling, Training for Project P.R.O.M.I.S.E., 2008

Certifications Held:
- Trauma Focused Cognitive Behavioral Therapy
- Incredible Years Parent Training
- QPR Suicide Prevention Gatekeeper Certification
- Recognizing & Reporting Child Abuse and Neglect Certification
- Classroom Assessment Scoring System rater

Awards and Honors:
- AERA’s Division E Distinguished Research Award in Human Development, 2010
- Lyman T. Johnson Graduate Fellowship Recipient, University of Kentucky, 2005-2008
- Dean’s List, Valdosta State University, 2001-2005
• Most Outstanding BS Psychology Student Award, Valdosta State University, 2005

Publications


Presentations


