

An Examination of the Association Between Student-Teacher Interactions and Academic Self-Concept Among African American Male High School Students

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The purpose of this study is to determine whether there is a significant relationship between reports of perceived student-teacher interactions and reports of academic self-concept among African American male high school students. The independent variable, student-teacher interactions, was measured by the Student-Professor Interaction Scale (Cokley et al., 2004). The dependent variable is the students' academic-self-concept, which is measured by the Academic Self-Concept Scale (Reynolds, Ramirez, Magrina, & Allen, 1980). Findings showed that student-teacher interactions are associated with African American males' academic self-concept. Specifically, negative experiences and accessibility were predictive of academic self-concept for African American male students. Study limitations and future research directions are discussed

Keywords: Academic Self-Concept, Student-Teacher Interactions, African American Males

Introduction

According to Jackson and Hilliard (2013), African American male students are placed at-risk of being identified for special education, overrepresentation in school disciplinary action, and dropping out of school. Additionally, African American male students face a substantial number of factors that promotes significant challenges to academic performance in formal schooling environments. These factors include, but are not limited to, monocultural ethnocentrism, student-teacher interactions, classism, and individual, cultural, and institutional racism (Hudley & Daoud, 2008; Komarraju, Musulkin, & Bhattacharya, 2010; Tyler, 2014).

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AFRICAN AMERICAN MALES SELF-CONCEPT

For the current study, we focused on student-teacher interactions as some studies have shown that they are pivotal to academic success, specifically for African American male students (Cokley, 2000; Hudley & Daoud, 2008; Komarraju, Musulkin, & Bhattacharya, 2010). A student-teacher interaction is the interplay between students and teachers that encompasses several aspects such as, formal/informal out-of-class contact, availability outside of class, formal/informal in-class contact amongst others (Chickering & Reisser, 1993). Some research on student-teacher interactions and their impact among achievement-related outcomes exist for African American students. For example, Cokley examined the association between student-teacher interactions and academic self-concept among African American college students (84 males, 122 females) in a predominantly white institutional setting versus a predominantly black institutional setting. Specific aspects of these interactions, including ‘teachers being supportive’ and ‘opportunities to make friendships’ were analyzed. Cokley’s study revealed that African American students, and African American male students in particular, are more academically successful in a predominantly black setting and that such was due, in part, to their interactions with teachers.

The current study seeks to extend this line of research pursued by Cokley and colleagues by examining the predictive association between student-teacher interactions and academic self-concept among African American male high school students. In order to conduct this study, we will first write a literature review on the aforementioned variables. Then, we will examine the data related to the variables, run some data cleaning techniques and run a Pearson’s correlation to determine if the associations are significant. Next, we will determine whether the association between student-teacher interactions and academic self-concept is significant. We will then run a linear regression to examine whether there are any significant, predictive relationships between the variables and write up the results and a discussion, followed by implications and the conclusion.

Literature Review

Conceptual Framework

Social cognitive theory (Bandura, 1977, 1986) serves as the conceptual framework for the study. One key premise of the social cognitive theory is triadic reciprocity. Triadic reciprocity is the idea that personal, behavioral, and environmental factors influence one another in a correlative way (Bandura, 1986). An example of such would be a student’s academic self-concept—which is defined as the attitudes and feelings that an individual has about his or her academic abilities—being shaped by components within the academic environment, such as their interactions with teachers. Academic self-concept is also affected by students’ own thoughts and perceptions of their academic environment. Positive interactions with teachers affect academic self-concept by encouraging students to be more cognitively and affectively engaged, which results in academic success (Komarraju et al., 2010). Perceptions of the academic environment affect academic self-concept as students get a sense of their teachers’ expectations of them. Given that many African American male students are reported to have significant difficulties throughout their formal schooling experiences (Jackson & Hilliard, 2013), it is important to examine their experiences within the academic environment more closely, the impact such experiences may have on their academic performance, and the cognitive factors that precede

such performance, namely academic self-concept. A more detailed account of the school-related experiences of African American male students is provided below.

African American Male Students

African American students have been at a disadvantage in relation to education, amongst other factors, for well over a century. In both the 20th and 21st centuries, the academic dilemmas of African American male students have often been the face of academic failure, school discipline, and special education (Garibaldi, 1992; Jackson & Hilliard, 2013; Thomas, 2014). According to the US Department of Education (2013), African American male students are only 16% of the student population, but represent about 42% of students who are suspended from school. Casella (2003) noted that school personnel typically perceive ethnic minority students, especially African American males, as “not fitting into the norm of school” (Fenning & Rose, 2007, p.537). Such a perception often renders African American male students dangerous, often times before they even enter a public school classroom and even more-so than their White male counterparts who may engage in similar behaviors (Casella, 2003; Okonofua & Eberhardt, 2015). When teachers perceive African American male students as dangerous, teachers may often take minor infractions such as disrespect, tardiness, defiance, and loitering much too seriously and thus, engage in harsh disciplinary actions that often result in their suspension/expulsions from school (Okonofua & Eberhardt, 2015; Skiba, Horner, Chung, Rausch, May, & Tobin, 2011). Further, some research has shown that, in relation to school discipline, African American students may receive differential treatment (e.g., not having as many opportunities to participate in the academic environment, harsher responses from teacher regarding misconduct) from their teachers as compared to their White counterparts (Carter, Skiba, Arredondo, & Pollock, 2014; Okonofua & Eberhardt, 2015). Differential treatment occurs when teachers behave differently towards students based on preconceived notions of the student. These preconceived notions can be due to a variety of factors including previous test scores, teacher feedback, and/or student characteristics such as race and the stereotypes that accompany these (Bae, Holloway, Li, & Bempechat, 2008; Good & Brophy, 1970). Having discipline-related issues can lead to students not being in the classroom, which may result in academic hardship because they are not physically present during instruction.

Though such disciplinary actions have often resulted in significant challenges for African American male students, it is important to note that there has been major improvement in the academic experiences of this population. Specifically, the National Center for Education Statistics (NCES) (2013) has reported that, from 1971-2012, African American middle-school age students have improved on their reading assessment scores by 25 points and math assessment scores by 36 points. Additionally, the graduation rate of African American students overall has improved by eight percent from the 2010-2011 academic year to 2012-2013. Moreover, some studies have shown that African American students have demonstrated high levels of educational expectations, academic motivation, school engagement, academic self-concept, and mastery orientation (Graham, 1994; Mello, 2009; Shim, Ryan, & Anderson, 2008; Sirin & Rogers-Sirin, 2004). Despite these findings, some studies show that only 16% of African American males have a bachelor's degree (Schott Foundation, 2015) and as of late (2008-2012), math and reading scores have not improved among this population (NCES, 2013).

To address these and other schooling difficulties faced by many African American male students, Lynn, Bacon, Totten, Bridges, and Jennings (2010) used critical race ethnography to

examine teachers' beliefs about why African American students face difficulties in school. This study took place in a small urban area, in a low-performing high school with 99% African American students (953 total), where more than 50% of the African American male students either dropped-out, transferred, or graduated at the bottom of their class. Results of the study showed that 80% of teachers (40 African American women, 8 African American men, and 2 Caucasian women) believed African American students and their home environments were responsible for their academic failures. The teachers, however, did not identify themselves or their interactions with African American students as part of the reason the students struggled academically. The section below provides some insight into why such interactions between teachers and students should not only been considered by teachers in the aforementioned study, but all teachers providing pedagogical and social experiences to members of this population.

Student-Teacher Interactions

Chickering (1969) was one of the early researchers to conceptualize student-teacher interactions. He believed that student-teacher interactions should include the teacher being accessible, authentic, knowledgeable, and a good communicator. Also, these interactions should occur throughout schooling with students being an active participant in the interaction. Chickering's explanatory model of student development (as cited in Cokley et al., 2004) stated that when students and teachers have positive formal and informal interactions, students are motivated academically.

Cox and Orehovec (2007) and Komarraju et al. (2010) discuss several types of student-teacher interactions, including (a) functional, which is an interaction outside of the classroom, but is focused solely on school-related topics; (b) personal, which goes beyond school-related issues and focuses on the personal interests of the student or teacher and may result in a friendship; (c) incidental, which is an occasional greeting in passing; and (d) disengagement, which is a bare minimum interaction or none at all. Each type of interaction, in itself, can be regarded as negative or positive. Positive student-teacher interactions, for instance, can encourage students to meet higher expectations, utilize their strengths to succeed, and potentially promote professional education endeavors (Komarraju et al., 2010). However, negative student-teacher interactions can demonstrate a lack of appraisal, appreciation, acknowledgment, acceptance, or comfort between the pair, which can cause the student to lose self-esteem, motivation, and decrease his or her academic performance (Casteel, 1998). Positive student-teacher interactions involve teachers who are approachable, respectful, and provide time outside of the classroom for informal interactions, whereas negative interactions are displayed by teachers who are disinterested in students personally or academically (Komarraju et al., 2010). Thus, the type of interaction that a student has with a teacher may affect him or her negatively or positively.

Interactions with teachers, amongst other factors, influence academic achievement and motivation (Finn & Rock, 1997; Hudley & Daoud, 2008; Komarraju et al., 2010; Trumbull & Rothstein-Fisch, 2011). In addition, the way that teachers behave in class towards students determines whether students want to interact with them outside of class (Cole, 2007). For example, Komarraju et al. (2010) conducted a study examining the different aspects of student-teacher interactions. The sample consisted of 242 (67% Caucasian, 24% African American, 9% other; 54% female, 46% male) undergraduate students from a university in the Midwest region of the United States. The data were collected using the Student-Professor Interaction Scale,

Academic Self-Concept Scale, and Academic Motivation Subscales, and were analyzed using regression analyses. The regression analysis indicated 18% of the variance in academic self-concept was explained by facets of student-professor interactions, including feeling respected, being approachable, and off-campus contact. The overall results showed that interactions with teachers were related to psychosocial and academic outcomes for undergraduate students. Students who perceive their teachers to be approachable, respectful, and available were more likely to be confident about their academic skills and academically motivated. On the contrary, students who perceived their teachers to be disinterested in them and their learning were more likely to be unmotivated to learn and achieve.

Cokley et al. (2004) stated that African American students tend to prefer personal interactions with teachers of the same ethnicity because they feel as if they will be able to relate to them. However, there are far fewer African American teachers (about 18% of all ethnic minority teachers) than Caucasian teachers in the public school system nationwide (Center for American Progress, 2014). Therefore, the lack of racial similarity may result in African American students avoiding interactions with their teachers, a strategy that may negatively affect their academic performance. Prior to the impact on academic performance, however, it is likely that limited positive experiences and interactions with classroom teachers can influence how students, African American students in particular, think about themselves as students, that is, their academic self-concept.

Academic Self-Concept

Cokley and Chapman (2008) defined academic self-concept as “the attitudes and feelings that an individual has about his or her academic abilities” (p. 354). How a person perceives himself or herself is based, in part, on how he or she believes someone of significance in his or her life (e.g., a teacher) perceives them. Students who have positive perceptions of their schools’ social context—including their interactions with teachers—generally have a positive academic self-concept (Liu & Wang, 2008; Locke, 2014). On the contrary, students who are estranged and dissatisfied within the school context—most likely with their interactions with teachers—typically lack motivation to attend school and to engage in the learning process (Meece, Anderman & Anderman, 2006). Such factors would be indicative of a negative academic self-concept. Cole (2011) conducted a study that investigated the relationship between African American college students’ academic-related activities and their interracial interactions in relation to their intellectual self-concept. Specifically, one of the purposes was to examine the relationship between student-teacher interactions and intellectual self-concept. There were 460 African American students in the sample from 96 coeducational predominantly white institutions (PWIs). The student-teacher interaction data were collected using the Faculty and Support and Encouragement survey and intellectual self-concept was measured by student’s perceptions of their academic ability, writing ability, and intellectual self-concept. The regression analysis showed that faculty support and encouragement (student-teacher interactions) was significantly related to students’ intellectual self-concept.

Additionally, for minority students, the perception of racism or racial tension can create a barrier to positive student-teacher interactions, which may adversely affect their academic self-concept (Cole, 2007). Cokley (2000) examined the academic self-concept of 206 African American undergraduate students (84 males and 122 females) attending either a historically black university or a predominantly white institution. The data included reports from the

AFRICAN AMERICAN MALES SELF-CONCEPT

Academic Self-Concept Scale and the National Study of Black College Students Questionnaire. The regression analyses showed that African American students who attend historically black universities have more favorable student-teacher interactions than those attending a predominantly white institution. These interactions significantly predicted academic self-concept (Cokley, 2000).

This study (a) supports the idea that African American students are more comfortable having interactions in a setting where the majority of people look like them and (b) shows how student-teacher interactions are associated with academic self-concept for this population. Also, it supports the claim that race is significant to student-teacher interactions, academic self-concept, and achievement motivation by showing how being in an environment with a different racial composition has contrasting outcomes on African American students. In addition, Cokley's study supports our reasoning for studying how student-teacher interactions affect academic self-concept in African American male high school students.

To date, we have not found any studies that focus solely on how the types of student-teacher interactions affect academic self-concept among African American male high school students. The studies that have been conducted at this point have focused on student-teacher interactions and academic self-concept in college students of multiple ethnicities and gender or have been qualitative, specifically focusing on high school students (Cokley, 2000; Hudley & Daoud, 2008; Komarraju et al., 2010). The current quantitative investigation will help enhance educational research on African American male students by determining whether student-teacher interactions have a statistically significant association with reports of academic self-concept for this population. The contributions of this study are two-fold. First, the study will illustrate African American male high school students' perceptions of their interactions with their teachers, which will give an idea of what these students are facing throughout their high school experiences. In addition, this study will add to educational research by examining African American male students' academic self-concept, specifically, whether it can be predicted by their student-teacher interactions. Thus, our research question is "Are there specific types of student-teacher interactions that are predictive of African American male high school student academic self-concept?" Given the reviewed literature, we hypothesize that student-teacher interactions will be predictive of African American male students' academic self-concept.

Methodology

Participants

The sample for this study included 154 African American male high school students. The data were collected from a secondary school located in an urban area in the Southeastern region of the United States. Participants included freshman (Grade 9) through senior (Grade 12) levels. Within the sample were 11.5% high school freshmen, 51.9% sophomores, 27.6% juniors, and 9% were seniors. About three percent (2.6%) of the sample reported a grade point average (GPA) of 3.5 or higher, 26.3% indicated a GPA between 3.0-3.5, 37.8% indicated a GPA of 2.5-3.0, 23% indicated a GPA of 2.0-2.5, and 10.3% indicated a GPA below 2.0. Eighty-two percent (82.4%) of students received free or reduced price lunch.

Measures

The Student-Professor Interaction Scale (SPIS). This measure is a 40-item, nine subscale instrument designed to assess different types of student-faculty interactions. The scale employs a 7-point Likert response pattern ranging from *strongly disagree* (1) to *strongly agree* (7). Validation of the scale yielded a 9-factor structure and internal consistency coefficients ranged from .73 to .87 (Cokley et al., 2006). The nine subscales include the following: (1) Career guidance, (2) Off-campus interactions, (3) Approachability, (4) Validity scale, (5) Accessibility, (6) Negative experiences, (7) Respectful interactions, (8) Caring attitudes, and (9) Connectedness.

The Academic Self-Concept Scale (ASCD). This 40-item scale employs a 4-point Likert-type response pattern ranging from 1 (*strongly disagree*) to 4 (*strongly agree*) (Reynolds, et al., 1980). Cokley, Komarraju, King, Cunningham, and Muhammad (2003) uncovered a seven-factor solution for the ASCS with an African American sample. Internal consistency coefficients for the subscales were low to moderate (i.e., .57-.76). The 7-factor structure consists of (1) grade and effort dimension, (2) study habits/organizational self-perceptions, (3) peer evaluations of academic ability, (4) self-confidence in academics, (5) satisfaction with school, (6) self-doubt regarding ability, and (7) self-evaluation with external standards. Considering the subscales have only a modest degree of reliability, which may also be the case in our sample, we will use the mean of all 40 items as the sole measure of academic self-concept.

Procedures

The researchers obtained permission to collect data from a high school located in an urban metropolitan area within the Southeastern region of the country. Informed consent forms were submitted to all African American male high school students two days prior to survey administration. On the day of survey administration, participants were called into the auditorium where the principal investigator explained the purpose of the research study and collected signed informed consent forms. Participants took the surveys home to complete and return the following day. To incentivize prospective participants, upon completing and returning surveys the next day to the research team, participants received twenty dollars (\$20).

Data Analysis

To address the research question, Pearson's correlation coefficient ($p < .05$) and linear regression were used to examine the relationship between student-teacher interactions and academic self-concept among African American male high school students.

Results

Descriptive statistics

The mean scores on all nine student-teacher interaction subscales were above the scale midpoint after reverse-coding the negative experiences subscale. This indicates that, on average, students were fairly positive about their interactions with their teachers. Also, there was enough variance in these scores to justify assessing their predictive association with academic self-concept (see Table 1).

AFRICAN AMERICAN MALES SELF-CONCEPT

Table 1

Pearson's Correlation and Descriptive Statistics for Student-Teacher Interactions, Academic Self-Concept, and Demographic Variables

	Variable	ASCS	<i>M</i>	<i>SD</i>	α
1.	SPIS1	.239*	5.082	1.32	.857
2.	SPIS2	.340*	4.297	1.39	.793
3.	SPIS3	.271*	5.010	1.27	.798
4.	SPIS4	.351*	4.589	1.34	.732
5.	SPIS5	.412*	4.562	1.28	.782
6.	SPIS6	-.453*	3.752	1.47	.867
7.	SPIS7	.225*	4.715	1.19	.916
8.	SPIS8	.215*	5.034	1.52	.897
9.	SPIS9	.322*	4.351	1.24	.780
10.	GPA	.085	2.889	1.00	—
11.	FREE LUNCH	.125	1.821	.384	—
12.	GRADE LEVEL	-.080	2.344	.803	—
	<i>M</i>	2.667			
	<i>SD</i>	.814			

Note. SPIS = Student-Professor Interaction Scale (student-teacher interactions); SPIS 1 = Student Professor Interaction Subscale 1 (Career Guidance), SPIS 2 = Student Professor Interaction Subscale 2 (Off-Campus Interactions), SPIS 3 = Student Professor Interaction Subscale 3 (Approachability), SPIS 4 = Student Professor Interaction Subscale 4 (Validity), SPIS 5 = Student Professor Interaction Subscale 5 (Accessibility), SPIS 6 = Student Professor Interaction Subscale 6 (Negative Experiences), SPIS 7 = Student Professor Interaction Subscale 7 (Respectful Interactions), SPIS 8 = Student Professor Interaction Subscale 8 (Caring Attitudes), SPIS 9 = Student Professor Interaction Subscale 9 (Connectedness); ASCS = Academic Self-Concept Scale; Demographic variables include GPA (grade point average), free lunch, and grade level.

* $p < .001$

AFRICAN AMERICAN MALES SELF-CONCEPT

Table 1 also shows the descriptive statistics for the Academic Self-Concept Scale. A Cronbach's alpha reliability coefficient of .81 indicates that responses to all of the items were reasonably internally consistent and the scale mean of 2.66, suggests that the participants did not have particularly high academic self-concepts.

Bivariate Correlation Analysis

Pearson's correlation coefficients were computed to examine the direction and the strength of the relationships between each type of student-teacher interaction and academic self-concept among African American male high school students. All of the Student-Teacher Interaction subscales demonstrated statistically significant associations with academic self-concept (see Table 1).

Linear Regression Analysis

After finding significant individual associations between different forms of student-teacher interactions and academic self-concept, a simple linear regression analysis was used to determine the cumulative predictive value of all nine forms of student-teacher interactions. Nearly 37% ($R^2 = .36$) of the variance in academic self-concept was explained by student-teacher interactions overall. In addition, as shown in Table 2, in analyzing the different types of student-teacher interactions, it was found that accessibility ($\beta = .40, p < .01$) and negative experiences ($\beta = -.39, p < .01$) predicted academic self-concept, which are the two subscales with the highest correlations. This indicates that accessibility and negative experiences uniquely predict academic self-concept among African American male high school students. In addition, the beta weights indicate that, for every 1 standard deviation increase in accessibility, academic self-concept increases by .40. Moreover, for every 1 standard deviation increase in negative experiences, academic self-concept decreases by -.39. Therefore, the more accessible teachers are, the better student's academic self-concept and the more teachers engage with students in a negative manner, the lower their academic self-concept was reported to be.

AFRICAN AMERICAN MALES SELF-CONCEPT

Table 2

Linear Regression Analysis Prediction Academic Self-Concept

Model	Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	Sig.
	<i>B</i>	<i>SEB</i>	<i>B</i>			
1	(Constant)	2.589	.138		18.800	.000
	SPIS 1	.019	.029	.079	.675	.501
	SPIS 2	.011	.020	.046	.529	.597
	SPIS 3	-.019	.029	-.074	-.642	.522
	SPIS 4	.017	.022	.069	.762	.447
	SPIS 5	.099	.029	.400	3.460	.001
	SPIS 6	-.086	.017	-.394	-5.168	.000
	SPIS 7	-.047	.028	-.174	-1.692	.093
	SPIS 8	.001	.022	.004	.041	.968
	SPIS 9	.019	.025	.074	.766	.445

Note. SPIS 1 = Student Professor Interaction Subscale 1 (Career Guidance), SPIS 2 = Student Professor Interaction Subscale 2 (Off-Campus Interactions), SPIS 3 = Student Professor Interaction Subscale 3 (Approachability), SPIS 4 = Student Professor Interaction Subscale 4 (Validity), SPIS 5 = Student Professor Interaction Subscale 5 (Accessibility), SPIS 6 = Student Professor Interaction Subscale 6 (Negative Experiences), SPIS 7 = Student Professor Interaction Subscale 7 (Respectful Interactions), SPIS 8 = Student Professor Interaction Subscale 8 (Caring Attitudes), SPIS 9 = Student Professor Interaction Subscale 9 (Connectedness); ASC = Academic Self-Concept. Dependent Variable: ASC

Discussion

The results of this study provide an understanding of the associative relationship between student-teacher interactions and academic self-concept. Consistent with other research, (Cokley, 2000; Hudley & Daoud, 2008; Komarraju et al., 2010), student-teacher interactions were shown to be statistically associated with academic self-concept. However, data from the current study showed that the types of interactions that are significantly associated with academic self-concept differ from what other studies have found. Correlation analysis results showed that all of the student-teacher interaction subscales were significant in their relationship with academic self-concept. The correlations that were the strongest were negative experiences ($r = -.45$) and accessibility ($r = .41$). The lowest correlations were caring attitudes ($r = .21$) and respectful interactions ($r = .22$). In explaining these yielded results, high school teachers come in contact with hundreds of students throughout the day; therefore, it may be difficult for teachers to provide some interactions that are demonstrative of caring and respect to all students, particularly

adolescent African American male students (Baron & Banaji, 2006; Hudley & Graham, 2002; McKown & Weinstein, 2003; Nasir, Mclaughlin, & Jones, 2009). Approachability ($r = .27$), connectedness ($r = .32$), and off-campus interactions ($r = .34$) are the correlations with strengths that fall in-between the strongest and weakest correlations presented, which means that they have a moderate positive association with academic self-concept.

In examining the regression analysis, the two subscales that were statistically significant were accessibility ($\beta = .40, p < .01$) and negative experiences ($\beta = -.39, p < .01$). In this model, accessibility is a predictor of academic self-concept. A statistically significant positive partial standardized linear slope exists between accessibility and academic self-concept, which means that for every 1 standard deviation increase in accessibility, we can expect academic self-concept to increase by .40 standard deviations. Also, in comparing the beta weights, accessibility was the largest contributor to variance in academic self-concept. This shows that the increased accessibility of the teacher is associated with an increase in academic self-concept. Thus, African American male high school students need teachers who are willing to help them when they need it.

In addition, negative experiences were also predictive of academic self-concept. A statistically significant negative partial standardized linear slope exists between negative experiences and academic self-concept, which means that, for every 1 standard deviation increase in negative experiences, we can expect academic self-concept to decrease by -.39 standard deviations, holding the other predictors in the model constant. This shows that an increased level of negative experiences is associated with lower academic self-concept. These results support the hypothesis that student-teacher interactions are predictive of academic self-concept particularly among African American male high school students. While we are somewhat surprised that other subscales were not significant, these results can be expected from a large model. Accessibility and negative experiences rose to the top and were found to be the most important for this sample.

Findings from the current study mirror those from previously published works. For example, Cokley (2000) showed that GPA, class status, and quality of student-teacher interactions are significant predictors for African American male student's academic self-concept. For this study, GPA and class status were not significant predictors, but two types of student-teacher interactions were. Cokley (2000) used the National Study of Black College Students Questionnaire to assess GPA, sex, class status, and quality of student-teacher interactions, whereas this study used the SPIS to assess student-teacher interactions. Without exception, both studies found that student-teacher interactions are significant predictors of academic self-concept, specifically for African American male students. However, this study extends the current literature on student-teacher interactions specifically by showing which types of interactions significantly predict academic self-concept among African American male high school students. These results provide evidence that, for African American male high school students, it is important for teachers to be accessible and engage in positive interactions, such interactions are associated with African American male students' academic self-concept. Additionally, McFarland, Murray, and Phillipson (2016) conducted a study that examined the relationship between student and teacher gender, quality of student-teacher interactions, and students' academic self-concept. The variables were measured using the People in My Life Teacher Affiliation Scale, Marsh Self-Description Questionnaire I, and the Student-Teacher Relationship Scale. The sample consisted of 3,286 (50.5% boys, 49.5% girls, 71.4% female teachers and 28.6% male teachers) students ages 10-11 and teachers. The results from the Rasch

and structure equation modeling analysis showed (a) supportive teacher relationships are important for student's school wellbeing; (b) girls self-concept was higher than boys and boys had more conflict with teachers; (c) for boys, conflict with their teachers negatively affected their self-concept; and (d) boys had a higher self-concept when they were not in conflict with their teachers. The findings from this study emphasize the importance on examining male students' interactions and teachers and how these may impact their students' academic self-concept. The findings are also aligned with the conceptual framework for this study, social cognitive theory. Specifically, social cognitive theory explains that a person's belief about his/her ability to succeed can arise from personal or vicarious experiences and/or social persuasions and interactions (Bandura, 1986). Findings from the current study support this claim, specifically with the association between negative experiences with teachers being a significant predictor of lower academic self-concept. Additionally, the social cognitive theory also states that learning is social and people and their environments influence one another. In examining the social aspect of the theory, it supports the significance of accessibility being influential to academic self-concept. With learning being a primarily social endeavor, it is important for African American male high school students to be able to positively interact with and have access to those individuals who help shape their learning processes and outcomes.

Limitations and Future Research Directions

Several limitations in the current study should be addressed. To begin, the first is sample size. The sample consisted of 154 African American male secondary students; therefore, it cannot be generalized to populations other than African American male adolescents, particularly high school students. In addition, the data collected for the study were dependent upon participants' self-reported responses. The self-reported responses could have been influenced by the presence of the university-based research team during survey explanation or by someone in the location where participants completed the survey. Related to this issue and hence, another limitation to the study, is the fact that the participants took the questionnaire home to complete. The time needed to take this questionnaire would have taken away from instructional time. Therefore, to avoid more classroom and school operations disruptions, the questionnaires were completed at home and returned to the research team the following day. In future research, all instrumentation should be distributed over a specified amount of days or shortened to allow ample time to be completed at school without taking away from instructional time, possibly during students' lunch or homeroom.

Future research should also include running a data analysis of other factors in the dataset that may influence academic self-concept in African American male high school students. We believe that there are other factors that play a role in the development and enhancement of academic self-concept such as self-efficacy, academic motivation, parental involvement, and reported disciplinary issues. Further, this study should be conducted in different demographic areas in order for the results to be generalizable and to determine more external validity. Cokley et al. (2004) conducted a study to validate the student-teacher interaction scale and its relation to academic self-concept by using a diverse sample of college students. Additionally, Cokely et al. (2003) conducted a study at PWIs and historically black colleges and universities (HBCUs) to determine the validity of the academic self-concept scale using a diverse sample (N = 291 White, N = 396 Black). The findings showed that each ethnicity resulted in different factor structures, which guided them to use the mean of all 40 items as the sole measure. It could be argued that

AFRICAN AMERICAN MALES SELF-CONCEPT

Cokley and his colleagues' studies provide more external validity to the measures, but other ethnicities could be taken into account. Moreover, this study should be conducted using different age groups in order to determine whether perceptions of student-teacher interactions change over time.

Conclusion

African American male students are continuously placed at-risk for academic failure. There are several assumptions regarding the factors that contribute to their academic failures. However, this study supports the claim that student-teacher interactions, specifically, negative experiences and accessibility, are important when considering factors that may impact African American male high school students' academic success, namely academic self-concept. Considering possible professional development training for teachers should be taken into consideration. In attending training, teachers should receive information about how to address their biases toward all students, but specifically African American male students. Also, teachers should be shown examples of positive student-teacher interactions in order to know the difference from what has been previously taken place in their classrooms. Additionally, teachers should receive information on what it means to be accessible in their classrooms. In receiving this type of training, this may allow teachers to have better interactions with African American male high school students and build more positive relationships, which will inevitably improve upon the students' academic self-concept. Thus, this study is a unique contribution to the field of education and the education literature.

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