The Dissertation Committee for Brettjet Lyn Cody certifies that this is the approved version of the following dissertation:

The Mediating and Moderating Role of Student-Professor Interaction on the Relationship Between Cultural Mistrust and Academic Self-Concept Among African American College Students

Committee:

Kevin Cokley, Supervisior

Timothy Keith

Deborah Tharinger

Stephanie Cawthon

Dorie Gilbert

The Mediating and Moderating Role of Student-Professor Interaction on the Relationship Between Cultural Mistrust and Academic Self-Concept Among African American College Students

by

Brettjet Lyn Cody, B.A.; M.A.

Dissertation

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Doctor of Philosophy

The University of Texas at Austin

August 2014

The Mediating and Moderating Role of Student-Professor Interaction on the Relationship Between Cultural Mistrust and Academic Self-Concept Among African American College Students

Brettjet Lyn Cody, Ph.D.

The University of Texas at Austin, 2014

Supervisor: Kevin O. Cokley

Research indicates that cultural mistrust can have negative impact on academic attitudes and outcomes for Black American students. However, few studies have specifically investigated the role that cultural mistrust has on student's academic self-concept, or perceptions of their academic abilities. Further, no study has explored to what degree student's perceptions of interpersonal relationships with faculty can impact the link between cultural mistrust and academic outcomes. The purpose of the present study was to investigate the impact of cultural mistrust in education and training and interpersonal relationships on academic self-concept in a population of undergraduate Black American students enrolled at a predominately white university. Secondarily, the study sought to examine whether aspects of student-professor interaction, specifically faculty approachability, caring attitude, and connection, mediate or moderate the effect of cultural mistrust on academic self-concept. Results of this study show that faculty approachability and caring attitude mediate the effect of the interpersonal relationships sub domain on academic self-concept. Student-professor interaction did not moderate the relationship between cultural mistrust and academic self-concept. Results support the need to

facilitate and encourage positive student-faculty interactions with Black American university students. Perhaps mentoring initiatives could aim to foster positive interactions with students and promote the recruitment and retention efforts of African American faculty members.

Table of Contents

List of Tables

List of Figures

Introduction

Considerable research has focused on the academic underachievement of Black Americans at all levels of schooling when compared to their White American peers in the American education system (Whaley & Noël, 2012; Warikoo & Carter, 2009). In an effort to understand why significant differences exist between these two groups, factors assessed have focused on environmental differences (Hill, Castellino, Lansford, Nowlin, Dodge, Bates, & Pettie, 2004; Jeynes, 2003), socioeconomic status (Leventhal & Brooks-Gunn, 2004), and social psychological factors, such as stereotype threat (Osborne, 2001). Unique cultural factors (Swanson, Cunningham, & Spencer, 2003; Whaley & Noël, 2012), such as cultural mistrust, have also been investigated. Although researchers suggest that cultural mistrust can negatively impact both academic attitudes and interpersonal relationships (Terrell & Terrell, 1981), little inquiry has been made to examine how interpersonal relationships in academic settings are linked to cultural mistrust and how these interactions could impact a relationship between cultural mistrust and one's academic self-concept, or beliefs about one's academic ability.

Cultural Mistrust

Cultural mistrust is defined as a general mistrust of White Americans and institutions in Black Americans (Terrell & Terrell, 1981). This mistrust is thought to have developed from a history of traumatic events including centuries of enslavement, verbal and mental persecution, discrimination, and physical maltreatment for people of African descent (Bennet, 1966; Eyerman, 2001; Meriham, 1970; Grier & Cobbs, 1968). These large-scale and long-term distressing experiences have had reverberating effects among Black Americans, some who may now exhibit characteristics of cultural trauma as a result (Alexander, 2004; Eyerman, 2001). Mistrust for White Americans and institutions can be present in political, social, medical, and

educational settings, often shaping perceptions, relationships, and interactions individuals have within them (Terrell & Terrell, 1981). For example, research has shown that individuals with increased levels of cultural mistrust are less likely to seek out aid from law enforcement officials or continue with mental health services (Whaley, 2001). Perhaps, however, the most interesting consequences are those noted within the educational settings.

Cultural mistrust can have negative effects on academic outcomes for Black Americans. For example, some Black American students with high levels of mistrust may underperform on standardized and intelligence tests when compared to those with low levels of cultural mistrust (Terrell & Terrell, 1983). Terrell and Terrell (1983) offer that it may be that Black American students are suspicious of the intentions and implications of such tests. Additionally, high levels of cultural mistrust have been linked to lower expected benefits of academic achievement, lower educational value, and lower motivation in both high school and undergraduate populations (Caldwell & Obasi, 2010; Irving & Hudley, 2005; 2008). Accordingly, Irving and Hudley (2008) and Caldwell and Obasi (2010) have also demonstrated an inverse relationship between cultural mistrust and GPA among Black American undergraduate students.

When considering the impact of cultural mistrust on educational outcomes, it is critical to take into account the educational setting. Research has demonstrated that Black American student performance and motivation as well as his or her overall view of White Americans and institutions may differ depending on the academic environment. Black Americans at Historically Black Colleges or Universities (HBCUs) exhibit *greater* intrinsic motivation, academic self-concept, and increased positive perceptions of student-professor interaction than those Black Americans at Predominantly White Colleges or Universities (PWCUs: Cokley, 2002). Interestingly, Black American students at HBCUs display higher levels of cultural mistrust than

those at PWCUs (Caldwell & Obasi, 2010). It can be extrapolated that cultural mistrust can have positive ramifications for Black American learners. Thus, cultural mistrust may not solely be a detriment, but a protective factor for some Black American students. Sanders (1997) offered that Black Americans respond to racial discrimination in the educational system in different ways, and this may be linked to one's racial identity; emphasizing that the link between cultural factors and academic outcomes is a complex area of study. A positive relationship between racial identity and cultural mistrust has been previously established (Phelps, Taylor, Gerard, 2001; Townes, Chavez-Korell, & Cunningham, 2009). If Black Americans at HBCUs tend to have higher levels of racial identity than those at PWCUs, it would seem cultural mistrust combined with racial identity lend to increased academic outcomes. The converse might be true in PWCU's and it is critical to explore the effects of cultural mistrust in these settings.

It is possible that Black American students' perception of his or her self, namely academic self-concept, in predominately white educational settings is negatively influenced by cultural mistrust.

Academic Self-Concept

Academic self-concept has been previously defined as a student's attitudes, feelings, and perceptions of his or her self in academic settings (Lent, Brown, & Gore, 1997). This construct is often confused with academic self-efficacy, which refers to one's beliefs about their capabilities to succeed or execute a given task (Bandura, 1977). Though similar, one's academic self-concept is often formed and reinforced by environmental factors and meaningful individuals within the academic setting (Shavelson, Hubner, & Stanton, 1976).

Academic self-concept is strongly correlated with one's academic achievement. As researchers have consistently and frequently demonstrated a positive correlation between one's

academic self-concept and his or her grade point average. (Cokley, 2002, Isiksal, 2010; Marsh & Seaton, 2012) There have been inconsistent findings in the academic self-concept of Black American students at HBCU's and those at PWCU's (Berger & Milem, 2000; Cokley, 2002; Cokley, 2000; Milem, Berger, & Dey, 2000). For example, Cokley (2002) found that Black American students at HBCU's had higher levels of academic self-concept than those at PWCU's, while an earlier study, Cokley (2000) found no significant difference. Notably, Cokley (2002) further cautions that the culture of the institution may impact the development of academic self-concept among students.

Given the strong link between one's academic self- concept and academic achievement, it is crucial to explore predictors of academic self-concept among Black Americans. It is possible that students with increased levels of cultural mistrust, a mistrust that impacts one's perceptions of his or her education and training, may demonstrate a diminished level of academic self-concept within the educational environment if they do not consider significant individuals, or educators, to be invested in their academic success as suggested by Shavelson (1976). It is therefore not only important to consider the relationship between cultural mistrust and academic self-concept, but to also identify possible protective factors. One such factor may be positive perceptions of educators invested in and caring about student success: student-professor interactions.

Student-Professor Relationships

Student-professor relationships and interactions are defined by the beliefs held by students or professors on the quality of their relationships and interactions (Chickering, 1969; Terenzini & Pascarella, 1980). Positive perceptions of student-professor relationships and interactions are linked to higher self-esteem, critical thinking skills, goal orientation, career

success, and motivation among other factors (Cole, 2011; see Lamport, 1993). Specific aspects of this relationship may have a greater impact than others (Komarraju, Musulkin, & Bhattacharya, 2010) on social psychological and academic factors. Komarraju, Musulkin, and Bhattacharya (2010) found that student-professor interaction, specifically student perceptions of faculty approachability is linked to higher GPA among undergraduate students. Other researchers have demonstrated that feeling connected to and cared for by faculty can have a positive impact on student academic achievement and self-confidence (Anaya & Cole, 2001). In a graduate student sample, students who felt supported, mentored, and encouraged to interact with educators were more satisfied with their academic progress (Maton, Wimms, Grant, Wittig, Rogers, & Vasquez, 2011). When considering ethnic differences, Whaley and Noel (2012) offered that for Black American students, perceptions of faculty caring about or being invested in his or her academic progress could have a greater impact on academic outcomes than for his or her White counterparts. Further, when compared to White American students, research has suggested that Black American learners are more invested in their academic success when they perceive faculty as approachable and caring (Cokley, Rosales, Komarraju, Shan, Pickett, & Patel, 2006). Student-professor interaction is also positively correlated with academic self-concept (Komarraju, Musulkin, & Bhattacharya, 2010; Cokley, 2000). Thus, college students with positive perceptions of their interactions with professors also demonstrate higher levels of academic self-concept. One can extrapolate that positive perceptions of student-professor interaction can protect against the potential negative impact of cultural mistrust.

Mediation versus Moderation

Conceivably, students who are more mistrustful of the educational system and do not have a positive perception of their interactions with professors, may exhibit diminished attitudes,

feelings, and perceptions about his or her self and academic abilities. Therefore, student-professor interaction may mediate the relationship between cultural mistrust and academic self-concept. It may be that mistrustful students with positive perceptions of their interactions with professors demonstrate higher academic self-concept then those students with more negative perceptions of their interactions with professors. Thus, student-professor interaction may also moderate the relationship between cultural mistrust and academic self-concept.

The Current Study

Being suspicious and mistrustful of the educational system may negatively impact Black American students' feelings of adequacy and confidence within the system. Further, this mistrust can have negative effects on the interactions within, and outcomes of, the educational system. The purpose of this study was to investigate to what extent does cultural mistrust and perceptions of student-professor interaction, as measured by faculty approachability, caring attitude, and connection, predict Black American undergraduate students' academic self-concept at a PWCU. The study also investigated whether aspects of student-professor interaction mediate and moderate the effect of cultural mistrust on academic self-concept. Thus, do high perceptions of student-professor interaction predict high academic self-concept among students with increased levels of cultural mistrust? Further, do the effects of cultural mistrust on academic self-concept vary for high and low levels of students' perceptions of interactions with professors? It was expected that increased perceptions of student-professor interaction would protect against the effects of high cultural mistrust on academic self-concept for this population.

Method

This study was conducted in compliance with the ethical standards and procedures outlined by the American Psychological Association and The University of Texas at Austin. Prior to the study, the researcher obtained approval from the Institutional Review Board at the University of Texas at Austin.

Participants

Analyses were based on 133 Black American undergraduate students from an Educational Psychology subject pool. Most (70%) of the participants were female. The mean age of participants was 20.5 years (*SD* = 1.4, range = 17.0–28.0 years). The majority of participants (62%) were upperclassmen and 29% of reported participating in athletic. All participants identified as Black or African American.

Measures

Demographics. Students completed a demographic form to capture information on their racial identification, gender, age, perceived social economic status, average hours a week spent studying and those spent recreationally, classification (year in school), ideal level of education, as well as the education level of their parent(s)/guardian(s).

Cultural mistrust. The Cultural Mistrust Inventory (CMI; Irving & Hudley, 2002) is a 48-item self-report measure used to assess levels of mistrust toward White American society by Black Americans (Terrell & Terrell, 1981; See Appendix A). The CMI assesses mistrust in the areas of education and training, interpersonal relations, business and work, and politics and law. The scale was correlated with the Social Desirability Scale (Jackson, 1970) and Racial Discrimination Index (Terrell & Miller, 1979) and details of psychometric properties and established validity are supported in Terrell and Terrell (1981). The CMI has previously

demonstrated adequate internal consistency among adult populations with Nickerson, Helms, and Terrell (1994) reporting alpha levels of .89 and Bell and Tracey (2006) reporting alpha levels of .94. Likewise, Caldwell and Obasi (2010) used the CMI in the assessment of college students and achieved alpha levels of .79. In the current study, only the Interpersonal Relations and Education and Training subscales of the CMI were used, as they were most relevant to the purpose of the study. Cronbach's alpha in the present study was .82. Each item of the Cultural Mistrust Inventory is on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7). A sample item included "White teachers teach subjects so that it favors Whites". Higher scores indicate a tendency for individuals to be more mistrustful towards White Americans.

Perceptions of faculty approachability. Students' perceptions of faculty approachability were assessed using the Approachability subscale from the Student-Professor Interaction Scale (Cokley, et al., 2006). The Approachability subscale consists of 4-items, on a 7 point Likert Scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). A sample item from the subscale is "I feel comfortable approaching professors to discuss my grades and class work." This subscale has yielded an internal consistency coefficient range of $\alpha = .82$ to .86 in undergraduate populations (Cokley et al., 2006; Komarraju, et al., 2010). Cronbach's alpha for the current study is .88.

Perceptions of faculty caring attitude. To assess students' perceptions of whether professors exhibit a caring attitude, the Caring Attitude subscale from the Student Professor Interaction Scale was used. This subscale consists of 4-items on a 7 point Likert Scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Previous studies have reported good internal consistency among undergraduate students, with a Cronbach's alpha range of .85 to .87 (Cokley,

et al., 2006; Komarraju, et al., 2010). A sample item includes: "I feel that teachers generally care about me." Cronbach's alpha for the current study is .92.

Connectedness. Connectedness refers to feeling a bond with faculty. To measure whether students feel connected to faculty, the Connectedness subscale from the Student-Professor Interaction Scale (Cokley et al., 2006) was used. The Connectedness subscale consists of 4 items on a 7-point Likert scale with responses ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). A sample item from this subscale includes: "I have faculty that I identify with on this campus." Previous studies have reported good internal consistency among undergraduate students, with a Cronbach's alpha range of .83 to .85 (Cokley et al., 2006; Komarraju, et al., 2010). Cronbach's alpha for the current study is .84.

Student-Professor Interaction. A total student-professor interaction score was obtained by calculating the mean score for all three subscales combined. The subscales from the Student - Professor Interaction Scale was strongly correlated with the Academic Self-Concept (Reynolds, 1988) and the Academic Motivation Scale (Vallerand, Pelletier, Blais, Briere, Senecal, & Vallieres, 1992) providing evidence of construct validity. Cronbach's alpha for the current study is .92 for the total student-professor interaction score.

Academic Self-Concept Scale (ASCS). Academic self-concept, or the way a student views his or her academic ability when compared with other students, was measured using the Academic Self-Concept Scale (Reynolds, Ramirez, Magrina, & Allen, 1980). The ASCS is a 40-item scale that uses a Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). The internal consistency is good, with past Cronbach's alphas of .92 being reported with an ethnically heterogeneous sample (Reynolds 1988) and .91 with an African American sample

(Cokley 2003). Cronbach's alpha in the present study was .93. Reynolds (1988) also demonstrated significant correlations between the ASCS and self-esteem (.40) and GPA (.45).

Academic achievement. Academic achievement was measured based on students' reported cumulative academic grade point average (GPA), ranging from .25 to 4.0. Students were asked to report their GPA on a 4.0 scale and again asked to indicate the range of their GPA on a 4.0 scale broken down in increments of .5 to help capture this information from students who were unsure of their current GPA. As with other studies, the current study found a strong correlation between the two scores (.90)

Racial identity. Racial identity was assessed using the Centrality subscale of the Multidimensional Inventory of Black Identity (MIBI; Sellers, Rowley, Chavous, Shelton, & Smith, 1997). The Centrality subscale consists of 8 Likert items with responses ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Sellers and colleagues (1997) reported a Cronbach's alpha for the racial centrality subscale as .77. Sample items from the racial centrality subscale of the MIBI include "My destiny is tied to the destiny of other Black people" and "Being Black is unimportant to my sense of what kind of person I am". Cronbach's alpha in the present study was .82.

Socioeconomic status. To measure socioeconomic status, students were asked to report what they consider their current status to be and given the options of Working Class, Middle Class, Upper Middle Class, and Upper Class. Students were also asked to report parent(s) or guardian(s) level of education, with six choices ranging from no high school diploma to graduate degree. The SES measures were combined and then converted to z- scores for each participant.

Procedures

Recruitment of participants. Students were recruited from the Educational Psychology subject pool of The University of Texas at Austin. Students received an email with a link inviting them to participate in the survey.

Data collection. Data collection occurred via the Internet using Qualtrics. Qualtrics, an online survey software, allows researchers to provide a hyperlink to participants to complete questionnaires. Students were told to complete study materials independently. Students were also informed that although the materials ask for sensitive information regarding their attitudes and feelings, all responses they share would be kept confidential and, therefore, they should respond accurately and honestly.

Results

The purpose of this study was twofold: (1) to examine the impact of cultural mistrust and perceptions of student-professor interaction, (as measured by faculty approachability, caring attitude, and connection), on Black American undergraduate students' academic self-concept; and, (2) to investigate the extent to which perceptions of interaction with faculty both mediate and moderate the effect of cultural mistrust on academic self-concept. To test the hypotheses, data including cultural mistrust ratings, perceptions of student -faculty interaction (measured by faculty approachability, caring attitude, and connectedness), and academic self-concept were analyzed using (hierarchical) sequential multiple regression.

Preliminary Analyses

Given the amount of interaction that professors, mentors, tutors, and university officials have with students who participate in athletics, initial analyses were conducted to determine whether perceptions of student-professor interactions or cultural mistrust significantly differed for students who participate in athletics versus those who do not. Analyses revealed that student athletes ($M = 3.32$, $SD = 1.07$) and non-athletes ($M = 2.91$, $SD = 1.08$), only demonstrated a significance difference in cultural mistrust in the area of education and training ($t[130] = 2.01$, $p = .05$); thus, athletes were more mistrustful of the educational system than non-athletes.

Table 1

Gender Differences in Cultural Mistrust and Student-Professor Interaction

Measure	Means		F[a]	*p*
	Females	Males		
Academic Self-Concept	2.69	2.78	1.45	0.23
	Cultural Mistrust			
Education and Training	2.99	3.19	0.94	0.33
Interpersonal Relationships	3.37	3.47	0.72	0.40
Total Mistrust	3.24	3.38	1.02	0.32
	Participant perceptions			
Caring Attitude[b]	5.36	5.45	0.13	0.72
Approachability[c]	4.77	4.99	0.72	0.40
Connectedness	4.33	4.60	1.94	0.28
Total SPI	4.82	5.02	0.87	0.35

Note. $N = 133$ students.

[a]Test of difference between means ($df = 131$).

The top section of Table 1 presents the mean value for academic self-concept as well as mistrust in the education and training subdomain, the interpersonal relationships subdomain, and total cultural mistrust for females and males. As the table indicates, gender did not yield a statistically significant difference in the level of mistrust in education and training or the interpersonal relationships subdomain, nor in the total level of mistrust. As can be seen in the

bottom section of Table 1, there was no statistically significant difference in total perceptions of student professor interaction, caring attitude, approachability, and connectedness.

Table 2

Classification Differences in Cultural Mistrust and Student-Professor Interaction

Measure	Means		F[a]	*p*
	Under	Upper		
Academic Self-Concept	2.68	2.74	0.74	0.39
	Cultural Mistrust			
Education and Training	3.28	2.92	3.30	0.07
Interpersonal Relationships	3.45	3.37	0.50	0.48
Total Mistrust	3.39	3.22	1.88	0.17
	Participant perceptions			
Caring Attitude[b]	5.55	5.30	1.24	0.27
Approachability[c]	4.98	4.75	0.78	0.38
Connectedness	4.37	4.44	0.08	0.78
Total SPI	4.97	4.83	0.45	0.50

Note. $N = 133$ students.

[a] Analysis of Variance ($df = 131$).

Similarly, as indicated by Table 2, no significant differences were found when examining cultural mistrust or student-professor interaction differences between under and upperclassman.

There was no significant difference in cultural mistrust levels for students who endorsed having experienced racism (M = 3.39, SD = .73), and those who did not (M = 3.21, SD = .68). Further, analyses revealed that students who strongly identified with Black American culture (M = 3.34, SD = .68) and those who did not (M = 2.94, SD = .76), demonstrated a significance difference in his or her overall cultural mistrust (t[131] = -2.32, p = .02) The same difference was found between those higher in racial identity (M = 3.44, SD = .61) and those lower in racial identity (M = 3.11, SD = .64) and his or her level of cultural mistrust in interpersonal relationships (t[131] = 2.18, p = .03). Thus, as one's racial identity increases, he or she exhibits greater mistrust especially in interpersonal interactions than those who do not identify as strongly with Black American culture.

Students with a positive relationship with one or more African American professors reported feeling more connected to professors (M = 4.60, SD = 1.23) than did those who did not (M = 3.73, SD = 1.32), t(114) = 3.28, p = .001. Similarly, students having a positive relationship with one or more African American professors demonstrated higher levels of academic self-concept (M = 2.74, SD = .39) than those students who did not endorse such relationships (M = 2.57, SD = .40), t(114) = 2.11, p = .03.

Mediation Analyses

As predicted, cultural mistrust was negatively correlated with academic self-concept. To test whether aspects of student-professor interaction (approachability, connectedness, and caring attitude) mediated the effect of cultural mistrust on academic self-concept, the impact of the mediator on the relationship between the predictor and outcome variable was examined. According to Field (2013, p. 403), there is evidence of mediation when the strength of the relationship between the predictor and the outcome is reduced when including the mediator in

the regression analysis. Separate analyses were run to avoid issues of multicollinearity for the Education and Training and the Interpersonal Relations subscales due to high correlations between them ($r = .61$, $p = .00$).

In the mediation analyses, the three aspects of student-professor interaction (approachability, connection, and caring attitude) were tested as potential mediators. Each regression analysis was run twice with the two identified predictors.

Figure 1

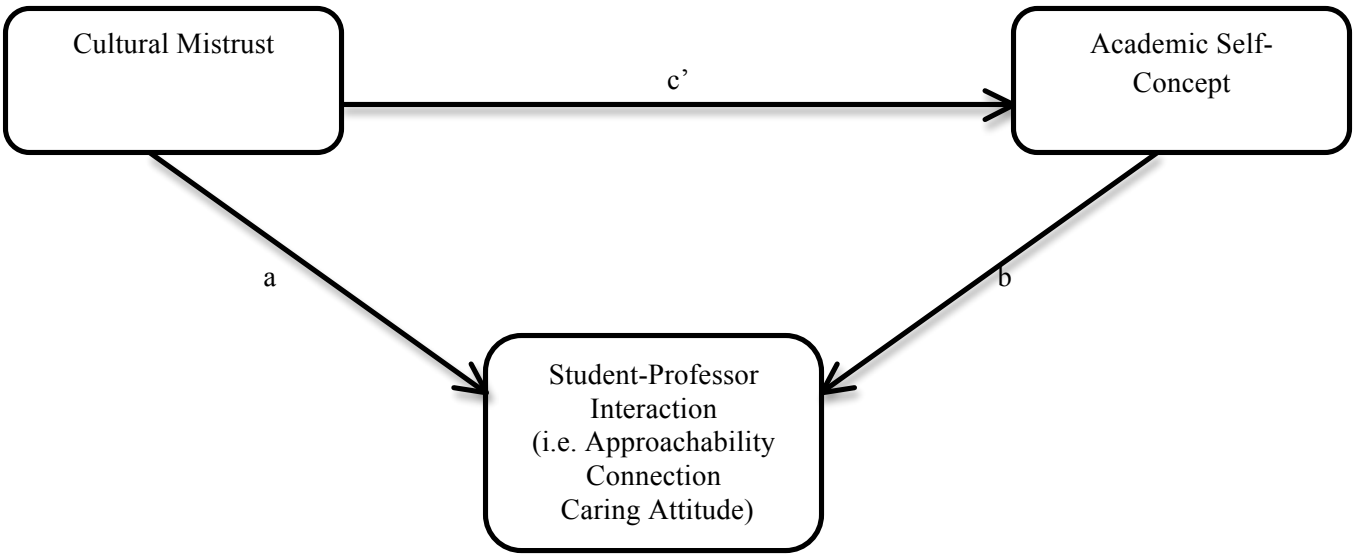


Table 3

Correlation Matrix Among Study Variables

Measure	*M*	*SD*	2	3	4	5	6	7	8	9	10	11
1. Sex[a]	.69	.46	–.07	–.055	–.09	–.08	–.07	–.08	–.03	–.07	–.10	–.11
2. Hours Studying			—	.24**	.02	–.06	.08	.05	.05	.04	.05	.19*
3. GPA	2.76	.68		—	–.10	–.10	–.08	.17	.19*	.17	.07	–.42**
4. Cultural Mistrust	3.29	.70			—	.88***	.91***	–.32***	–.36***	–.37***	–.07	–.29***
5. Education and Training	3.05	1.12				—	.60***	–.29***	–.31***	–.35***	–.07	–.31***
6. Interpersonal Relationships	3.40	.62					—	–.28***	–.33***	–.32***	–.06	–.21*
7. Student-Professor Interaction	4.88	1.15						—	.86***	.86***	.84***	.45***
8. Caring	5.39	1.27							—	.62***	.59***	.37***
9. Approach	4.84	1.44								—	.57***	.44***
10. Connect	4.41	1.32									—	.35***
11. Academic Self-Concept	2.71	.40										—

[a]0 = male; 1 = female

*p < .05. **p < .01. ***p < .001.

Cultural Mistrust and Academic Self Concept. Initial regression analyses established the relationship between the cultural mistrust subscales (education and training and the interpersonal relations) and academic self-concept. Education and training was significantly correlated with academic self-concept (r = -.31, p < .001). Regression analyses also confirmed a correlation between interpersonal relationships and academic self-concept (r = -.21, p = .02).

Table 4

Hierarchical Regressions Examining Student-Professor Interaction as Mediators in the Relation Between Cultural Mistrust in Interpersonal Relationships and Academic Self-Concept

	IV	b	*t*	*p*	Total Adjusted R^2
Step 1	CMIIR	-.13	-2.45	.02	.11
Step 2	CMIIR	-.08	-.90	.37	
	Approach	.12	5.04	.00	.19
Step 2	CMIIR	-.06	-1.12	.26	
	Caring	.11	3.92	.00	.13
Step 2	CMIIR	-.12	-2.35	.02	
	Connected	.10	4.15	.00	.14

Cultural Mistrust and Student-Professor Interaction. Next, regression analyses examined the relation between cultural mistrust and student-professor interaction. Education and training was significantly correlated with approachability (r = -.35, p < .001) and caring attitude (r = -.31, p < .001) but not connectedness (r = -.07, p = .42). Further, Interpersonal Relations was correlated with approachability (r = -.32, p < .001), connectedness (r = -.06, p = .503.), and caring attitude (r = -.33, p < .001).

Student-Professor Interaction as a mediator between the relationship between Cultural Mistrust and Academic Self-Concept. The final set of regressions simultaneously

tested the aspects of student-professor interaction that displayed a significant relationship with the predictor in previous analyses as potential mediators of the relation between cultural mistrust (education and training or interpersonal relationships) and academic self-concept. Regressions using interpersonal relationships as a predictor, shown in Table 4, demonstrated that caring attitude and approachability were significant mediators of the association between interpersonal relationships and academic self-concept (β= .34, $p < .01$; β= .42, $p < .01$; respectively). With either caring attitude or approachability as a mediator, the relationship between cultural mistrust and academic self-concept became insignificant (β= -.10, $p > .26$; β= -.08, $p > .37$), providing evidence of full mediation. With connectedness as a mediator, the association between cultural mistrust in interpersonal relationships and academic self-concept remained significant (β= -.19, $p = .02$), suggesting that connectedness is a partial mediator of this relationship. Sobel tests confirmed that both caring attitude ($z = -3.05$, $p = .002$) and approachability ($z = -3.19$, $p = .001$) mediated the relationship between interpersonal relationships and academic self-concept.

Regressions using education and training as a predictor, shown in Table 5, demonstrated that both caring attitude and approachability also partially mediated the relationship between education and training and academic self-concept (β = .30, $p < .01$; β = .38, $p < .001$; respectively). With either caring attitude or approachability as a mediator, the association between the education and training subscale and academic self-concept remained significant (β = -.22, $p = .009$; β = -.18, $p = .03$), suggestive of a partial mediation. Sobel test further confirmed that the caring attitude ($z = -2.91$, $p = .004$) and approachability ($z = -3.39$, $p < .001$) both partially mediated this relationship.

Table 5

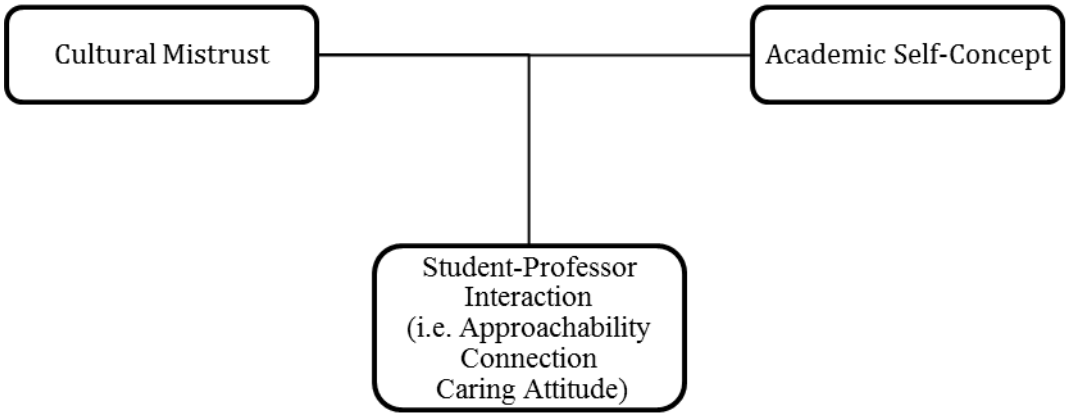
Hierarchical Regressions Examining Student-Professor Interaction as Mediators in the Relation Between Cultural Mistrust in Education and Training and Academic Self-Concept

	IV	**β**	*t*	*p*	Total Adjusted R^2
Step 1	CMIET	-.31	-3.79	.00	.09
Step 2	CMIET Approach	-.18 .38	-2.21 4.58	.03 .00	.12
Step 2	CMIET Caring	-.22 .30	-2.64 3.60	.01 .00	.17
Step 2	CMIET Connected	-.29 .33	-3.72 4.15	.00 .00	.19

Moderation Analyses

Two separate regression analyses were conducted for the dependent variable (academic self-concept) using either education and training, or interpersonal relations as the predictor. Student's GPA and hours spent studying were entered as controls in the first step. Either Education and training, or interpersonal relations and an aspect of student-professor interaction were added in the second step. In the final step, the interaction term cultural mistrust X aspect of student-professor interaction was added in the third step.

Figure 2



Caring attitude as a moderator of cultural mistrust and academic self-concept. The first set of regressions explored the role of perceived faculty caring attitudes as a moderator of the relationship between both of the cultural mistrust subscales and academic self-concept. Results of these analyses (Table 6) indicated that caring attitude did not significantly moderate the relationship between the education and training nor the interpersonal relationships subscales and academic self-concept (b = -.01, p = .64; b = -.05, p = .25 respectively).

Table 6

Moderation analyses with caring attitude as the moderator of cultural mistrust and academic self-concept

	β	Intercept	R^2	ΔR^2	*F*	*p*
CMIIR						
Step 1		1.99	.18	.18	13.11	
GPA	.39					.00
Studying	.10					.26
Step 2		1.78	.30	.12	9.62	
GPA	.33					.00
Studying	.08					.32
CMIIR	-.10					.26
Caring	.30					.00
Step 3		.71	.31	.01	1.33	
GPA	.33					.00
Studying	.07					.42
CMIIR	.37					.37
Caring	.87					.08
Interaction	-.59					.25
CMIET						
Step 1		1.99	.18	.18	13.11	
GPA	.39					.00
Studying	.10					.26
Step 2		1.86	.33	.14	12.22	
GPA	.33					.00
Studying	.06					.48
CMIET	-.20					.02
Caring	.27					.00
Step 3		1.65	.33	.00	.22	
GPA	.34					.00
Studying	.05					.53
CMIET	-.03					.94
Caring	.38					.12
Interaction	-.17					.64

Approachability as a moderator of cultural mistrust and academic self-concept. The next set of regressions explored the role of approachability as a moderator of the relation between both education and training or interpersonal relationships and academic self-concept. Results (presented in Table 7) indicated that approachability was not a significant moderator of the relation between neither the education and training nor the interpersonal relationships subscale and academic self-concept (b = .10, p = .63; b = -.02, p = .60).

Table 7

Moderation analyses with approachability as the moderator of cultural mistrust and academic self concept

	β	Intercept	R^2	ΔR^2	*F*	*p*
CMIIR						
Step 1		1.99	.18	.18	13.11	
GPA	.39					.00
Studying	.10					.26
Step 2		1.77	.35	.16	14.37	
GPA	.32					.00
Studying	.10					.20
CMIIR	-.08					.32
Approachability	.38					.00
Step 3		1.43	.35	.00	.27	
GPA	.32					.00
Studying	.10					.22
CMIIR	.07					.82
Approachability	.61					.18
Interaction	-.23					.60
CMIET						
Step 1		1.99	.18	.18	13.11	
GPA	.39					.00
Studying	.10					.26
Step 2		1.83	.36	.18	16.27	
GPA	.32					.00
Studying	.08					.31
CMIET	-.16					.05
Approachability	.35					.00
Step 3		1.96	.37	.00	.24	
GPA	.33					.00
Studying	.08					.29
CMIET	-.28					.28
Approachability	.24					.28
Interaction	.13					.63

Connectedness as a moderator of cultural mistrust and academic self-concept. The final set of regressions explored the role of perceived connectedness as a moderator of the relation between both education and training and interpersonal relationship and academic self-concept. Results of these regressions (Table 8) demonstrated that connectedness was not a significant moderator of the relations between either education and training (b = .02, *p* = .40) or interpersonal relations (b = .02, *p* = .58) and academic self-concept.

Table 8

Moderation analyses with connectedness as the moderator of cultural mistrust and academic self concept

	β	Intercept	R^2	ΔR^2	*F*	*p*
CMIIR						
Step 1		1.99	.18	.18	13.11	
GPA	.39					.00
Studying	.10					.26
Step 2		2.01	.33	.15	12.81	
GPA	.36					.00
Studying	.10					.22
CMIIR	-.18					.02
Connected	.33					.00
Step 3		2.35	.33	.00	.31	
GPA	.35					.00
Studying	.10					.20
CMIIR	-.33					.24
Connected	.09					.85
Interaction	.28					.58
CMIET						
Step 1		1.99	.18	.18	13.11	
GPA	.39					.00
Studying	.10					.26
Step 2		1.95	.37	.19	16.89	
GPA	.35					.00
Studying	.06					.45
CMIET	-.26					.00
Connected	.33					.00
Step 3		2.16	.37	.00	.72	
GPA	.35					.00
Studying	.07					.39
CMIET	-.47					.07
Connected	.17					.43
Interaction	-.26					.40

Discussion

Researchers have speculated that cultural mistrust may negatively impact Black Americans' perceptions of White institutions and White Americans (Terrell & Terrell, 1981). The educational system is potentially the most crucial area impacted. Increased levels of cultural mistrust have been negatively correlated with academic self-concept (Caldwell & Obasi, 2010), which has been directly linked to educational outcomes and attitudes (Chen, Yeh, Hwang, & Lin, 2013; McInerney, Cheng, Mok, & Lam, 2012; Cokley, McClain, Jones, & Johnson, 2011). It is, therefore, important to further examine the relationship between cultural mistrust and academic self-concept for Black American students.

Although suspected to impact interpersonal relationships and interactions, few studies have investigated the link between levels of cultural mistrust and interpersonal connections, especially in an academic setting. Furthermore, no study has examined how student-professor relationships moderate the relationship between cultural mistrust and academic self-concept. Thus, this study sought to explore the impact that students' perceptions of his or her interactions with professors may have on the relationship between cultural mistrust and academic self-concept in a group of Black American undergraduate students at a predominantly white university.

As expected, higher levels of cultural mistrust in the domains of education and training and interpersonal relationships were negatively correlated with academic self-concept. This is consistent with findings from previous studies with Black American undergraduates (Irving & Hudley, 2010). Perhaps students that are more mistrustful of the educational system and individuals associated with it, feel that he or she will not perform as well despite their best effort.

Higher levels of mistrust in the education and training domain were negatively correlated with students' perceptions of professors' caring attitude and approachability. Thus, when compared to students with lower levels of cultural mistrustful, those students who were more mistrustful perceived professors to be less approachable and unconcerned the student's educational outcomes. Importantly, the current study also found that higher levels of mistrust in interpersonal relationships are negatively linked to students' perceptions of faculty's caring attitude, approachability, and connectedness. This is a crucial finding, as it not only supports what was previously theorized by researchers Terrell and Terrell (1981) in regards to mistrust and interpersonal relationships, but also lends to the notion that Black Americans may not fully identify with and feel supported by the educational system (Steele, 1997).

Student professor interaction was a significant predictor of academic self-concept. This is consistent with previous research findings that demonstrated that students who felt cared for, connected to, and as if professors were approachable possessed increased levels of academic self-concept (Cokley, 2002).

Overall, the present study provided additional information about the influence that perceptions of interactions with professors in higher education can have on the relationship between cultural mistrust and academic self-concept. Findings suggest that mistrust within the educational system and interpersonal relationships may indirectly have a negative effect on student's academic self-concept if he or she does not perceive faculty to be approachable, caring, or feel connected to them. More specifically, when students' perception of professors caring for him or her and being approachable were positive, cultural mistrust no longer had a significant negative impact on academic self-concept. The negative effect of mistrust for the educational system on academic self-concept, functions through the mechanisms of perceived faculty caring

and approachability. Thus, feeling cared for and as if one can approach faculty, protects against the negative effect of cultural mistrust on one's academic self-concept. From this, one can speculate that having these positive perceptions interactions with and perceptions of professor's attitudes, for African American students in predominately white settings, can improve academic outcomes.

Limitations

There were limitations to this study. First, one potential limitation of the current study is that students were recruited and asked to participate in the study as part of a department wide subject pool requirement as opposed to taking it voluntarily. It may be that some students were not truthful in their responses and this slightly skewed the results. Future studies should consider gathering voluntary data to prevent students from potentially giving false responses. Likewise this study captured perceptions as a whole while not taking into account individual experiences and a specific professor. It is possible that the results of this study may have been different if students were asked to consider specific professors when completing the survey. Results of the study could have been more robust had students elaborated on their perceptions, teasing apart whether these were influenced by current or personal historical events or an engrained mindset. The design of this study did not allow for exploration among different college campuses. It may be that Black American students at Historically Black Colleges and Universities will have different perceptions of their relationships and interactions with professors and this will yield different outcomes. Researchers should take this into account and investigate potential group differences unique to college campus. In the current study, the host institution was comprised of only four percent of students identifying as Black or African American. With the exception of few, small black organizations and groups, there is very little African American culture infused

into the campus identity and climate. Being at a predominantly White university may contribute to students in the current study not feeling as connected and perhaps this can be explored further in future research. While the concept of cultural mistrust tends to focus on the relationship between Black and White Americans, it may be intriguing to explore this concept with other ethnic groups that may struggle within the American educational system. Future studies should consider investigating cultural mistrust with different ethnic groups and address potential group differences and outcomes. The current study assessed attitudes and feelings of undergraduate students. Given the findings of the current study and the impact of cultural mistrust, it is critical to investigate these effects with younger populations. The percentage of Black Americans enrolling in institutions of higher education is far below that of their white peers. Perhaps addressing some of these issues early on will help to not only keep Black Americans in school, but also increase the percentage of those seeking degrees of higher education. Further, twenty nine percent of the sample in the current study was comprised of student athletes. Student athletes typically have far more contact with university personnel and yielded higher levels of mistrust for the educational system than non-athletes. Future studies may seek to control for the number of athletes or further investigate differences that may exist between athletes and non-athletes, as it may be a potential moderator. Lastly, there may be limitations with the scales. The original cultural mistrust scale was created more than 30 years ago. Racial tension during this time was shifting due to several significant historical events. It is possible that cultural mistrust can now be conceptualized differently. Cultural mistrust may present differently and manifest in different facets of life. Future research should focus on reconstructing a cultural mistrust scale that is modern and emphasizes the current state of racial tension in America.

Implications

Nonetheless, this study has crucial implications for education and planning. This study was the first to address the impact that cultural mistrust can have on interpersonal relationships and interactions within an academic setting. Therefore, it may be helpful for professors to increase interaction and emotional support offered to Black students. Doing so may increase students' perceptions of faculty caring attitudes and further make faculty seem more open and approachable, indirectly affecting academic self-concept and grade point average. Given the low percentage of African American enrolled in many public institutions that are predominately white, having process groups and a strong community that promotes campus involvement and connection could lead to students having an increased sense of belonging and as if they are valued among their campus. Lastly, given the impact that being connected to an African American professor had on students feelings on mistrust in this setting, mentorship programs and campus organizations that lend to connecting students with African American professors may further academic progress and connection. For some students, seeing a person of color in a faculty position may improve perceptions and outcomes of the educational institution. Mentorship programs can go beyond the students enrolled in higher education institutions, but also provide mentoring to African Americans to fill faculty positions in colleges and universities. Doing so may indirectly decrease mistrust for the educational system.

Appendix A:

Literature Review

Theoretical Framework

Cultural Ecological Theory. John Ogbu's cultural ecological theory is an adaptation of a more general cultural ecological framework that addresses the influence of environmental, societal, and historical experiences on the socialization, development, and behavior of human beings (Bronfenbrenner, 1993). Ogbu's theory emphasizes a systemic approach to minority education, considering not only dynamics in minority communities, but also influential factors from school and society at large. Essentially, Ogbu theorized that historical and cultural factors that define a group's experience might have the greatest impact on the differences in academic achievement and academic failure between minority groups (Ogbu, 1981). According to Ogbu, this explains why African Americans may face greater educational adversities than other minority groups.

Historically, African Americans were undereducated or denied access to the educational system. Additionally, the educational system in some instances has been used to reinforce messages of the inferiority of African Americans when compared to other groups, especially European Americans. As part of his theory, Ogbu offers that like many other minority groups, African Americans adapt to the mainstream American culture, largely grounded in European American values, based on environmental, societal, and historical feedback. Instances of prejudice and discrimination, negative media messages that depict African Americans commonly as drug users, pushers, wife beaters, and rarely professionals, as well as a rich history of slavery, may impact the view that African Americans may have of themselves and their racial group.

Ogbu argues that for some minorities it is important to acclimate to mainstream American society in order to succeed and survive. For others, he contends, it is necessary to

reject or refuse the values mainstream society represent and put forth. As part of this adaptation, African Americans have become hyper-vigilant and mistrustful of European Americans and their intentions. Given the previous intentions of the educational system, it seems that this may have lead to a devaluing and being mistrustful of the educational system.

Conceptualization of Cultural Mistrust. Cultural mistrust has been defined as the tendency for African Americans to be mistrustful of European Americans in personal, social, or institutional contexts (Caldwell & Obasi, 2010, Irving & Hudley, 2008; Terrell & Terrell, 1981; Terrell, Taylor, Menzise, & Barrett, 2009; Whaley, 2001). Feelings of mistrust toward European Americans and perceived European American institutions can exist within Native American, Mexican American, and other ethnic minority groups (Ogbu, 1992); yet, the concept of cultural mistrust has been primarily examined among the African American population (Whaley, 2001). Consensus among researchers is that negative historical events as well as direct and indirect maltreatment by European Americans explain the development of mistrust in African Americans (Grier & Cobbs, 1968; Landrine & Klonoff, 1994; Ogbu, 1991; 1992; Terrell & Terrell, 1981). Cultural mistrust is thereby considered an attitudinal response to a history of oppression (Ogbu, 1991; 1992) and is still prevalent as a result of large-scale *cultural trauma* and *cultural paranoia* (Alexander, 2004; Eyerman, 2001; Sen & Chowdhury, 2006).

Cultural trauma. People of African descent have faced maltreatment, deception, and dehumanization throughout their presence in the Americas, specifically North America (Bennet 1966; Meriham, 1970). Eyerman (2001) suggested that, as a result, African Americans exhibit characteristics of cultural trauma, a condition similar to post-traumatic stress disorder. However, unlike post-traumatic stress disorder, in which an individual is directly affected by or related to a traumatic event, cultural trauma can be indirect and largely based on a collective memory shared

by a culture or group of people that subscribe to a similar identity (Eyerman, 2001). Because members of a group define a cultural identity, subsequent generations that are not directly involved with the experience, yet share the same defined identity may still be impacted by the specific event. Individuals may revisit, reconstruct, and interpret collective memories of the event according to the social needs and means of the group at the present time. Groups may perceive instances similar to the event as a continuation of historical "attacks" by the dominant group, which reinforces the need to be mistrustful or suspicious of them (Alexander, 2004; Eyerman, 2001).

Cultural Paranoia. Some argue that mistrust for European Americans is a psychological phenomenon and describe it as "healthy cultural paranoia" (Grier & Cobbs, 1968; Newhill, 1990). Nonclinical paranoia, or healthy cultural paranoia, has been defined as an adaptive mechanism, both self-protective and defensive, that is characterized by a lack of trust for others, suspicion of their motives, and caution when interacting with them. This form of paranoia is thought to aid in coping with discrimination and prejudices throughout life for African Americans (Mirowsky, 1985; Newhill, 1990; Sen & Chowdhury, 2006). Similarly to cultural trauma, cultural paranoia is collective in nature and stems from a history of maltreatment by some European Americans (Grier & Cobbs, 1968; Newhill, 1990).

Fundamental to the perpetuation of cultural trauma, paranoia, and mistrust is the concept of a shared or collective identity among individuals of African descent and the development of a cultural identity. Cultural identity is referred to in the literature as part of the "we" process formation and is developed through one's increasing sense of belonging to a particular cultural group with comparable background features to one's own (Banks, 2004). It is conceptualized as concerning one's racial identity and the two terms are often used interchangeably.

Subscribing to a collective cultural identity, although removed from the initial trauma, allows for individuals to remain influenced by it as it is seen as part of their history and is influenced by injustices done to them. Phelps, Taylor, and Gerard (2001), in a population consisting of West Indian, African, and African American undergraduate students, and Biafora, Warheit, Taylor, Zimmerman, and Vega (1993) in a population of African American and Haitian immigrant 6th and 7th grade boys found feelings of cultural mistrust to be positively correlated with racial identity. These results support the notion that the more an individual identifies with the African American cultural identity the greater their mistrust for European Americans. These studies also suggest that to fully understand the impact of cultural mistrust on any outcome, research must take into account one's level of racial identity and the variations that exist.

Further, some argue that cultural mistrust is a fundamental feature of an oppositional identity, a concept highlighted in the work of John Ogbu (1978; 1981; 1991). Oppositional identity refers to an identity or cultural frame of reference that exists in opposition to the practices and preferences of the dominant culture. Such an identity develops when individuals of a cultural group see their status as a collective or permanent feature of race (Mehan, Hubbard, Villanueva, & Lintz, 1994). According to this view, discrimination is not due to individual characteristics, educational attainment, or economic status, but rather is attributed to racial characteristics that cannot be changed. Racial discrimination, prejudice, and oppression are ingrained in the history and culture of African Americans, and some argue that an oppositional identity is a likely outcome (Thompson, Nevelle, Weathers, Postin, & Atkinson, 1990).

It can be argued that African Americans who have developed an oppositional identity will not trust that the members and institutions of the dominant culture will treat them fairly. The criminal justice system, work force and business sector, medical and mental health systems, and

educational system are institutions in which racial discrimination and treatment have been prominent for African Americans throughout history. Because of historical racial discrimination and evidence of current differences that can be viewed as discrimination within these institutions, mistrust for the dominant culture is further substantiated. Within the past 20 years there have been several high profile cases involving African Americans who were beaten or murdered by the police, thereby reinforcing the reality of a long history of brutality towards African Americans. Additionally, there are a disproportionate number of African Americans on death row (U.S. Department of Justice, 2010). Within the work force, African Americans in the United States have historically faced (and still face) wage disparities, underrepresentation in managerial positions, and limited opportunities for promotion, commonly referred to as the "glass ceiling" (Wilson, Tienda, and Wu, 1995). Currently, when compared to European Americans, a larger percent of the African Americans face unemployment (Bureau of Labor Statistics, 2010). The well-known Tuskegee Syphilis Experiment (1932-1972) highlights the discrimination and maltreatment of African Americans in the healthcare field. Yet, perhaps the most unfortunate area in which racial discrimination has and continues to negatively affect the African American population is within schools, or educational system. Since the trans-Atlantic slave trade and throughout history, African Americans have either been denied or provided limited access to a quality education (Kozol, 1991; Ogbu, 1978; 1981), reflective of the discrimination historically faced by this group in the United States. As a result, African Americans with an oppositional identity are inclined not to trust or believe that the educational system in America will properly educate African American students. Because experiences in the school system and their outcomes greatly shape and affect interactions and outcomes in other important areas (i.e.,

opportunities for higher education and gainful employment), it is critical to examine the impact of cultural factors, especially mistrust, on the academic success of African Americans.

Cultural Mistrust and Education. Because it is often seen as a psychological phenomenon, research on cultural mistrust has primarily focused on its effects on African American mental health, specifically the counseling process and outcomes in therapy (e.g. see Whaley, 2001). Researchers have not only found that African Americans with higher levels of cultural mistrust prefer African American counselors (Townes, Chavez-Korell, & Cunningham; 2009), but also those paired with a European American therapist are likely to have more negative views and expectations of European American counselors (Nickerson, Helms, & Terrell, 1994; Poston, Craine, & Atkinson, 1994; Watkins, Terrell, Miller, & Terrell, 1989), terminate treatment prematurely (Terrell & Terrell, 1984), and be apprehensive or feel uncomfortable about disclosing personal information (Ridley, 1984). More recently, Whaley (2001) found that, in an inpatient setting, cultural mistrust was negatively correlated with attitudes towards European Americans and he suggests that therapeutic contexts elicit feelings of mistrust towards European Americans. Whiles some have argued that cultural mistrust allows for African Americans to be protective of their psychological well-being in regards to their interactions with European Americans, the degree to which it influences maladaptive or adaptive effects for African Americans remains unclear.

Fewer studies have focused on cultural mistrust and its influence on education and academic outcomes. When compared to European American, West Indian (Caribbean), and African students, African American students have reported greater levels of cultural mistrust in the areas of education and training, as well as interpersonal relations (Phelps, et. al., 2001; Thompson et. al., 1994). Mistrust of the school system has been attributed to stemming from

educational oppression, resulting in a lack of opportunities, which further impacts educational access and resources for African Americans (Ogbu, 1978, 1981, 1991; Turner, Singleton, Musick, 1984). Studies in this area, although sparse, have yielded critical implications for the education of African American students.

Research on social psychological factors related to cultural mistrust and education has also demonstrated a number of negative outcomes. Published studies have found cultural mistrust to impact a number of behavioral variables. Higher levels of cultural mistrust have been associated with increased incidents of anti-social behaviors, delinquency or a willingness to violate social norms and laws, negative attitudes toward law enforcement, and high school dropout rates among African American high school students (Biafora, Warheit, Taylor, Zimmerman, & Vega, 1993; Taylor, Biafora, & Warheit, 1994; Whaley, 2001; Whaley & Smyer, 1998). Additionally, African American students with high levels of mistrust tend to underperform on standardized and intelligence tests that are administered by a European American examiner, as opposed to an African American examiner (Terrell & Terrell, 1983; Terrell, Terrell, & Taylor, 1981). Terrell and Terrell (1983) suggest that these students may feel that such assessments were created to make them look bad, or that they are not as intelligent or smart as their European American peers and this is reinforced when noting the examiner is European American. For students who are mistrustful of assessment process and the use of assessment results, it is possible that they will not try as hard, thus contributing to their underachievement in the African American populations and their over-representation in special education classes.

Differences have also been found in level of cultural mistrust and future expectations for African American students (Irving & Hudley, 2005, 2008; Terrell, Terrell, & Miller, 1993).

Students with high cultural mistrust levels have been found to have lower expected benefits of academic achievement (Irving & Hudley, 2008). Terrell et al. (1993) found the same inverse relations between cultural mistrust and occupational expectations in a sample of seventh to ninth grade students. In that study, students with greater levels of mistrust for European Americans expected to obtain lower paying occupations. Such findings also suggest that African American students may not seek out educational or jobs opportunities that they believe are not intended for them. In addition, this may also be an indication that African Americans believe they cannot expect equal educational services or access to opportunities in the United States. This belief further creates lowered expectations for the benefits of educational achievement, as well as a devaluation of striving for achievement among African American students (Ogbu, 1991).

A negative association between cultural mistrust and academic achievement has also been demonstrated. Irving and Hudley (2008) found an inverse relationship among cultural mistrust and grade point average (GPA) in a sample of African American undergraduates. Such a finding can suggest either higher levels of cultural mistrust may negatively impact the academic success of students or achieving at a lower academic level may increase mistrust in African American students. This sample, however, consisted of only male students and does not speak to whether similar effects are probable among African American females.

Research on cultural mistrust and its impact on factors influencing academic success has highlighted that a negative relationship exists for many educational outcomes. Still, there are limitations in the current literature and research. Prominent studies have been conducted with only male populations. Of those that have been completed with both males and females, they either failed to report an impact on GPA or were conducted with only high school or middle school students, and not among undergraduates. Further, fewer studies investigated the impact

that cultural mistrust has on academic self-concept. Given the link between academic achievement and academic self-concept, a logical next step is to confirm the impact of cultural mistrust on academic self-concept for undergraduate students. Additionally, being mistrustful of the educational system may also have a negative impact on interpersonal relationships, importantly the student-professor relationship. Perhaps, however, having positive perceptions of interactions with professors can lend to a decreased negative effect of cultural mistrust on academic self-concept. Thus, given the negative impact cultural mistrust can have on academic outcomes and interpersonal relationships, as well as the lack of African Americans completing their undergraduate studies, it is important that researchers further investigate this intersection among undergraduates.

Student-Professor Interaction. The interactions between students and teachers at various academic levels have been widely researched and surveyed over the past five decades (Astin, 1977; Cole, 2011; Lamport, 1993; Pascarella & Terenzini, 1977). Broadly defined, this relationship refers to the interchanges that students have with their professors both in- and outside of the classroom (Chickering, 1969). Research in this area has covered a range of descriptors including: student-teacher relationships, student-teacher interaction, student-faculty relationships, student-professor interaction, mentoring, and numerous other variations. Based on the literature, these terms can and, in some instances, have been used interchangeably (Lamport, 1993) and it can be argued that this line of inquiry encompasses the notion of mentoring.

Similarly to the concept of student-professor interaction, the academic mentoring relationship can be spurious in that the learner or mentee does not have to be a student enrolled in a particular professor's class to form a mentoring relationship with them (Lamport, 1993). However, unlike the student-professor interaction theory, mentoring may refer to the path to a

position done in preparation for the individual to take on that role in the near future. Rarely does a mentoring relationship allow for omitting sequential steps and, therefore, obvious examples of this relationship are the undergraduate-graduate, freshman-senior, and, commonly, the graduate student-professor mentoring relationship. Additionally, mentoring is commonly considered a long-term relationship (a year, throughout the training program, etc.) in which the mentor is a leader, director, and role model to the student. Although aspects of the mentoring relationship and the interactions between students and teachers overlap, for this study, the dynamic between students and teachers will be referred to as student-professor interaction and omit the concept of engaging in long term relationships with a specific individual. Further, the concept of student-professor interaction in this study will focus solely on undergraduate students' perceptions of their exchanges with professors at institutions of higher education.

Interaction between students and professors at the colligate level was initially examined in an effort to understand college student persistence and dropout prevention (Pascaraella & Terenzini, 1977; Spady, 1970; 1971; Tinto, 1975). Chickering (1969) hypothesized that the interactions and relationships students have with faculty at the undergraduate level is critical to academic outcomes and success. Since this foundational work, several theoretical perspectives have been presented in an effort to conceptualize the importance of this interaction.

Theoretical Conceptualizations of Student-Professor Interaction. The current understanding of student-professor interaction is grounded in several important theoretical perspectives. The origins of foundational factors that contribute to the development and maintenance of these interactions are thought to have groundings in attachment, group membership, and social psychological theories (McNeely, Whitlock, & Libbey, 2010). Each

framework offers differing views of how interactions with professors are conceptualized and foster positive outcomes for students.

Attachment. An attachment theoretical framework can be used to examine students' interactions with adult figures within the school, namely professors (Barber & Schluterman, 2008). Fundamentally, attachment theory posits that when parental figures express affection and caring, individuals are more likely to fulfill core developmental needs related to security and confidence and to seek help when needed from reliable and trusted sources (Bowlby, 1969). This bond with parental figures influences behaviors and self-perceptions that are used as an internal model for individuals as they develop and maintain relationships with others throughout life (Allen & Land, 1999). On the other hand, individuals who fail to have strong attachments to parental or adult figures develop poorer self-concepts and skills in accessing supportive, or nurturing relationships (Bowlby, 1969). Barber and Olsen (1997) maintain that attachment to adult figures in schools and institutions of higher education is, in some ways, merely an extension of these early parent relationships. Ideally, schools provide an arena for students to build on and enhance earlier positive attachments to adults or compensate for poor parent attachments through connection with positive adult role models. From a student-professor interaction lens, it may be that when students perceive professors as caring about and invested in them, they develop a sense of confidence and security and mimic behaviors that are influential to academic and career success. It is plausible that interactions between students and professors are impactful upon academic outcomes, especially if the relationship is seen as positive and reinforcing.

Another theory that contributes to the conceptualization of how students connect to the individuals within their school is symbolic interaction theory. From this perspective, it is thought

that students construct a view of themselves based on how they perceive others as viewing them (Cooley, 1902). Symbolic interaction theory maintains that students are more likely to consider themselves as competent, likable, and trustworthy when they believe that their teachers and peers care about them and their educational and social success. Stryker and Stratham (1985) argued that, in contrast, when students perceive their teacher and peers to negatively evaluate them, they are more likely to create negative self-images and project negative behaviors and expectations back onto the world. For African American students who feel that their professors, or the educational system at large, do not value them or their success, adverse behaviors may be the product. This is related to the concept of oppositional identity put forth by John Ogbu and suggests that adversarial behaviors could be manifested in disengagement or withdrawal.

Group Membership. Theories such as social development theory and social learning theory provide a framework for the role of group membership on the connection students have with individuals associated with school and the school culture itself. According to social development theory, strong bonds to social institutions, such as schools, raise the cost of oppositional behaviors and poor academic success, and thus promote conventional behaviors (Hirschi, 1969). In this model, it is assumed that students will behave, academically, and perform in a socially accepted manner within the school system because of the norms set forth and displayed by others in the system. Researchers have defined a strong bond as consisting of an attachment to individuals within, involvement with, and commitment to the institution and it's values often conveyed by professors (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004). Students who adopt and internalize these elements are likely to exhibit behaviors perceived as positive and desirable (academic success), opposed to behaviors perceived as negative and undesirable (i.e. dropping out) by the group (McNeely et al., 2010). Similarly to attachment

theory, this framework further supports the notion that being connected to an adult figure, or professor, can promote positive student outcomes. Some might argue that for African Americans these frameworks are not plausible as they may already be reluctant to immerse themselves in an institution that may represent values, ideas, and notions that are incongruent with their own. Further, forming a bond with faculty members associated with such institutions may prove even more challenging.

Bandura's (1977) social learning theory suggests that individuals will adopt the behaviors and attitudes of the people they value. Relative to school, this theory implies that students are likely to imitate behaviors and accept values they perceive as most important to others when they have meaningful relationship with individuals within the school and feel like they belong. Thus, supportive relationships will promote healthy development and learning indirectly, as students are likely to become more engaged in their educational environment as a result of these relationships (McNeely et al., 2010). This theory as it relates to interaction with professors for African American students suggests that they may accept attitudes and behaviors similar to respected professors they admire. Additionally, this may increase feelings of being cared about and decrease feelings of mistrust for the educational system.

Astin (1993) maintains that the college environment has the greatest impact on a student's academic achievement when controlling for background factors. In his inputs-environments-outputs (I-E-O) theory, he proposes that the best way to analyze student's growth and changes is evaluate the gains they made from entry into college to beyond graduation. An analysis of the output minus the input would highlight the potential environmental effects when accounting for individual differences and personal events. This leads to his notion that the

environment has the greatest impact on whether outcomes are positive or negative and students are satisfied with the psychological and educational gains they have made.

Taken together, these theories suggest that environment can play a critical role in college success. In addition, important features of student-professor interaction are feeling welcomed, connected, and cared about, as well as professors being invested in their academic gains. Each theory also shares the general premise that a connection to a professor is beyond the typical in class teaching interaction, but perhaps an avenue to which students are able to construct feelings of safety and comfort. However, these theories have a more generalist view and perhaps incorporating the adaptation piece of Ogbu's Cultural Ecological Theory is warranted. Considering a cultural ecological framework to conceptualize the effects of cultural mistrust, relative to student-professor interaction, it is conceivable that students may adapt to the climate and culture of the university given the environmental and social influences. In this context, students may bond with the college environment, adapt the culture to better mesh with their own, and attempt to fill expectations of professors. When they are unable to do so, it may be that students withdraw to an oppositional identity, or disengage from academics. Further it may be that having a positive interaction with professors can impact students' view of the university setting and the educational system and indirectly decrease the impact of cultural mistrust on academic outcomes, importantly academic achievement.

To better understand the general impact of student-professor interaction on student outcomes, researchers have divided these interactions into two categories: formal and informal.

Formal versus Informal Interactions. Formal interactions with professors are defined as the exchanges that students have with teachers in an academic context (Jacobi, 1991). This could be through a class meeting, a one-on-one feedback meeting to discuss academic progress

and concerns, a group research meeting, among a host of other instances in which the purpose of the interaction is academic related. Although research in this area suggests that the content discussed can be helpful to student's academic gains (Kuh & Hu, 2001), some argue that informal interactions often have the greatest impact on student outcomes (Lambert, Terenzini, & Lattuca, 2007; Lamport, 1993; Thompson, 2001).

Informal interactions are characterized as interactions that take place between students and teachers that may be non-academic related, such as meeting to discuss concerns other than those related to a course, checking in on mental health issues/stressors, career advise or guidance, and group socials among other examples. Woodside, Wong, and Weist, 1999 have found that students appreciate informal interactions with professors as they allow for them to interact in a way that does not create a power dynamic or struggle. To this end, the range of informal interactions has also been investigated. For example, Ei and Bowen (2002) found that students thought informal interactions, such as having lunch with a professor or joining them with a group of students for a gathering is acceptable, yet it is not acceptable to have a romantic interaction, or go to a professor's home alone. It may be that interactions deemed as unacceptable can have a negative impact on student's academic outcomes as they may create discomfort. Research has shown that feeling uneasy with a professor can have a negative impact on academic outcomes (Cox & Orehovec, 2007).

Previous research has demonstrated encouraging outcomes for undergraduate students who have positive perceptions of interactions with their professors in the areas of social psychological and academic outcomes (Cole, 2007; Endo & Harpel, 1982; Lamport, 1993). Researchers have noted the correlates between these two areas and in some instances control for these in studies.

Effects of Student-Professor Interaction. Interactions that students have with their professors can have a grave impact on their psychological well-being (Sax, Bryant, & Harper, 2005). For example, researchers have noted significant correlations between student-professor interaction at the undergraduate level and decreased dropout rates and symptoms of depression, as well as increased feelings of self-esteem, retention rates, motivation, positive educational experiences, college satisfaction, and higher career aspirations among others (Astin, 1993; Chickering, 1969; Endo & Harpel, 1982; Pascarella & Terinzini, 2005; Rosenthal, Folse, Alleman, Boudreaux, Soper, Von Bergen, Clarence, 2000; Sax, Bryant, & Harper, 2005; Umbach & Wawrzynski, 2005). Additionally, research on the effects of student-professor interaction has demonstrated that interaction with faculty can have a positive effect on student's academic achievement (Astin, 1993; Cole, 2011; Dixon, 2003; Komarraju, Musulkin, & Bhattacharya, 2010; Pascarella & Terenzini, 1991).

Anaya and Cole (2001) found that interacting with professors was positively correlated with educational goals in a sample of Latino/a American students. These findings are consistent with Lambert, Terinzini, and Lattuca (2007) who found that undergraduate students' perceptions of faculty interactions are positively correlated with academic values and achievement. These findings support the notion that having frequent, positive perception of interactions with faculty is positively correlated with educational gains.

In an effort to understand why interactions with professors can have such a positive effect on student learning outcomes, Komarraju, Musulkin, and Bhattacharya (2010) examined the impact of eight distinct aspects of student-professor interaction on students' academic self-concept, motivation, and academic achievement. Findings of their study suggested that perceiving professors as approachable, or friendly and open to discussion, has the greatest impact

on academic achievement and academic self-concept. This, combined with key concepts from theoretical foundations of student-professor interaction, suggests that undergraduate students perceptions of approachability, feeling cared about by, and connectedness to faculty may have the greatest impact on their academic achievement.

Few studies have examined how interactions between students and professors can have differing effects across ethnic groups (Cole, 2011; Lundberg & Schreiner, 2004) and no study has examined the impact of student-professor interactions in racial and ethnic incongruent pairs. Cole (2011) highlighted that many studies examining the impact of student-professor interaction fail to disaggregate data or have such a small sample size that adequate analyses are difficult. As a result, studies often use race and ethnicity as a control variable opposed to emphasizing potential differences. Studies that have attempted to examine race and ethnic differences have yielded noteworthy findings. In a sample of undergraduates, Lundberg and Schreiner (2004) demonstrated that for all racial and ethnic groups assessed, quality of interactions with professors significantly predicted learning. Additionally, for African American and Native American students, talking with faculty about personal concerns significantly impacted learning more so than their counterparts. These findings are consistent with those of Cole (2011) who found that interactions with faculty influenced the GPA of African Americans more so than other ethnic groups. Lundberg and Schreiner (2004) also found that working harder because of instructor feedback had a robust impact on African American student's learning outcomes; however, working to meet faculty general expectations was not a predictor of improved learning outcomes. These findings suggest that feedback from professors can be key in motivating African American students and facilitating academic gains. In contrast, Cole (2011) found that interactions with professors regarding advice and feedback on academic work had a negative impact on minority

students GPA. Cohen, Steele, and Ross (1999) found similar results. They further demonstrated that African American students responded more favorably to feedback when a statement of higher expectations supported it or that they are capable of producing higher quality work. For African American students that may exhibit increased levels of cultural mistrust, negative feedback without a statement of expectations may merely reinforce negative perceptions about the educational system and professors. Further, researchers have noted that minority students express less guidance and support than their European American peers (Hurtado, 1994). Likewise, Lundberg and Schreiner (2004) noted that although African Americans reported increased instances of interaction with faculty, they rated these interactions more negative than other ethnic groups.

Research on student-professor interactions specifically for African Americans is limited and unclear. Therefore, it is important to clarify how perceptions of these interactions may impact academic outcomes for this group.

It may be that mistrust for the academic setting and European Americans is negatively impacting African Americans view of and desire to seek out interactions with professors. Several studies have suggested that African Americans feel alienated in institutions of higher education, especially those with low African American student enrollment (Cole & Jackson, 2005; Nettles, 1991). Additionally, researchers have reported that instances of racism and discrimination have a negative impact on African Americans students feeling of safety. Notably, occasions in which professors fail to address racial or ethnic issues have a negative impact on students' perceptions of safety, comfort, and sense of belonging (Cole, 2011). All of these instances may impact African American students willingness to seek out interactions with professors, as they perceive professors to be unsafe, unapproachable, and indifferent about their academic success (Allen,

1992; Kraft, 1991). However, perhaps if professors facilitated interactions with African Americans, this may help to demonstrate a sense of caring and investment in their academic success.

In summation, research shows that student-professor interaction can have positive affects on student's outcomes. Specifically, faculty approachability, caring attitude, and connection are greatly linked to theoretical foundations of student-professor interaction and may provide a basis for why these interactions have such positive effects. From a cultural ecological perspective, for some students an institutions' environmental, societal, and historical aspects lends to the development and maintenance of African Americans being mistrustful in the educational system. It may be that for African American undergraduate students, cultural mistrust not only negatively impacts their academic achievement, but also rare and poorly viewed interactions with professors allow for the continuation of negative academics outcomes. Although researchers have suggested there are positive benefits of student-professor interaction, especially frequent interactions with faculty (approachable), feeling cared about, and connected to or invested in by professors, no study has directly investigated this link specifically for African American students. More importantly, studies have not investigated how these relationships may diminish the impact of cultural mistrust on academic achievement. It may be that having positive perceptions of faculty approachability, feeling cared about, and connected to a faculty member allows for African American students to adapt their view of the education system and decrease the negative factors related to cultural mistrust.

Appendix B

Study Cover Letter

You are invited to participate in a survey, entitled "The Moderating Role of Student-Professor Interaction in the Relationship Between Cultural Mistrust and Academic Self-Concept." The study is being conducted by Brettjet L. Cody, School Psychology, Department of Educational Psychology of The University of Texas at Austin, 1 University Station D5800, Austin, TX 78712, (512) 964-7521, bcody@utexas.edu.

The purpose of this study is to investigate how cultural factors and student-teacher relations impact academic self-concept with college students in order to better understand how educators may intervene to help improve the academic outcomes of students.

Participants must be 18 years or older to participate in this study. I estimate that it will take approximately 30 minutes of your time to complete the questionnaire. You are free to contact the investigator at the above address and phone number to discuss the survey.

Risks to participants are considered minimal. There will be no costs for participating, nor will you benefit from participating. The primary investigator will be the only individual with access to the data.

Students participating in the Educational Psychology subject pool will receive the designated research credit for their participation.

Your participation in this survey is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time without penalty. If you wish to withdraw from the study or have any questions, contact the investigator listed above.

If you have any questions or would like me to email another person from your institution or update your email address, please call Brettjet L. Cody at (512) 964-7521 or send an email to bcody@utexas.edu. You may also request a hard copy of the survey from the contact information above.

To complete the survey, click on the link below:
https://utaustined.qualtrics.com/SE/?SID=SV_3n3MO93S0m4D0vG

This study has been processed by the Office of Research Support. If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish - the Office of Research Support by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

IRB Approval Number:

If you agree to participate please press the arrow button at the bottom right of the screen otherwise use the X at the upper right corner to close this window and disconnect.

Thank you.

Appendix C:

Recruitment Statement

The academic achievement of African American students remains one of the most discussed and studied phenomena in education. African American students have a range of attitudes and cultural factors that may impact their academic achievement and interactions with teachers/professors. I am asking for your help in recruiting African American undergraduate students to participate in a research study. Interested participants should go to the following web site to read more about the study:

https://utaustined.qualtrics.com/SE/?SID=SV_3n3MO93S0m4D0vG

This study will take approximately 30 minutes. I hope to provide further clarification of how cultural factors and attitudes impact the academic achievement of African American college students in an effort to better understand how educators may intervene to help improve the academic outcomes of students who underachieve. All participants are eligible to receive a summary of the study results by e-mail once the study is complete.

Thank you for your help in identifying potential participants in this study.

Principal Investigator:

Brettjet Lyn Cody
Department of Educational Psychology, School Psychology
University of Texas at Austin
Phone: (512) 964-7521
bcody@utexas.edu

Appendix D:

Debriefing Form

You have just participated in a study designed to better understand the impact of student-professor interaction on the relationship between mistrust and academic achievement for college students.

It is my hypothesis having a strong bond to faculty will improve academic outcomes for students that are mistrustful of the educational system. This study aims to gather empirical data to test this hypothesis.

To receive course credit for this study, email Brettjet L. Cody at ms.brettjet.l.cody@utexas.edu and include your name and UT EID. If you are interested in learning more about this research study, feel free to contact Ms. Cody at the above email address. If you would like further counseling services related to you participation in this study, you can call the 24-hour Counseling Line (512) 471-2255

I understand that you may want to take extra precautions to ensure no one else can access your responses to the survey. Below are two methods that will help keep anyone else from accessing your survey answers.

Suggestions on how to further PROTECT YOUR CONFIDENTIALITY:

> After completing the survey, be sure to close the browser window. This will ensure that other individuals will not have access to your survey responses by pressing the "back" button.
>
> Be sure to delete temporary internet files. This will ensure that other individuals will not be able to access your survey responses if subsequent participants were to open the webpage (using the same computer) to complete the survey.

Thank you for your participation in this important research.

Brettjet

Appendix E:

Demographic Form

Instructions: Read the items below and (a) circle the letter that best describes you, or (b) write in the information that reflects you.

1. Racial/cultural/national identification
    a. African American/Black
    b. Hispanic/Latino/a American (Specify ethnic group: _____)
    c. Anglo/European American/White
    d. Asian American
    e. Biracial (Specify: _____)
    f. Other (Specify: _____)
2. Sex:
    a. Male
    b. Female
    c. Transgender
3. Age: _____
4. Classification
    a. Freshman
    b. Sophomore
    c. Junior
    d. Senior
5. Approximately how many hours a week do you spend *studying*?
    a. 1-5 hours
    b. 6-10 hours
    c. 11-15 hours
    d. 16-20 hours
    e. Over 20 hours
6. Approximately how many hours a week do you spend *recreationally*? (e.g., watching t.v., playing video games, on the phone/texting, FaceBook)
    a. 1-5 hours
    b. 6-10 hours
    c. 11-15 hours
    d. 16-20 hours
7. College cumulative grade point average _____
8. What is the highest level of education your mother (or guardian) obtained?
    a. High School Diploma
    b. GED
    c. Associate's Degree
    d. Bachelor's Degree
    e. Master's Degree\
    f. Doctoral/Professional Degree
9. What is the highest level of education your father (or guardian) obtained?
    a. High School Diploma

b. GED
c. Associate's Degree
d. Bachelor's Degree
e. Master's Degree
f. Doctoral/Professional Degree

10. What is the highest level of education you would like to complete?
    a. Associate's Degree
    b. Bachelor's Degree
    c. Master's Degree
    d. Doctoral/Professional Degree
11. What do you consider your current social economic status to be?_____
12. College grade point average
    a. GPA < 1.99
    b. GPA between 2.0 and 2.49
    c. GPA between 2.5 and 2.99
    d. GPA between 3.0 and 3.49
    e. GPA between > 3.5
13. Do you participate in Athletics?
    a. Yes
    b. No
14. How many African American Professors have you had since entering college?
15. I have a positive relationship with one or more professors of African decent?
    a. True
    b. False
16. I feel connected to the Black community
    a. True
    b. False
17. Have you ever experienced any instances of racism or prejudice? Please briefly detail below the issue, action that you took, result, and what you might have learned from it

Appendix F:

Measures

Student-professor Interaction Scale (SPIS)

Instructions: Listed below are a number of items concerning how you perceive your interactions with professors. Read each item and indicate to what degree it reflects how you feel most of the time, using the 7-point scale below. Base your responses on your interactions with college professors.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree

	SD			N			SA
1. I feel that one or more teachers are supportive of me.	1	2	3	4	5	6	7
2. I believe that there is at least one teacher who cares about my well-being.	1	2	3	4	5	6	7
3. I believe there is a teacher who is concerned about my future.	1	2	3	4	5	6	7
4. I feel that teachers generally care about me.	1	2	3	4	5	6	7
5. I am comfortable approaching teachers.	1	2	3	4	5	6	7
6. I feel comfortable approaching teachers to discuss my grades and class work.	1	2	3	4	5	6	7
7. I feel comfortable asking teachers questions about concepts that are not clear.	1	2	3	4	5	6	7
8. I have not felt intimidated by my teachers	1	2	3	4	5	6	7
9. I have faculty that I can identify with on campus.	1	2	3	4	5	6	7
10. I feel connected with faculty.	1	2	3	4	5	6	7
11. I feel a bond with one or more faculty.	1	2	3	4	5	6	7
12. Faculty demonstrate familiarity with my culture.	1	2	3	4	5	6	7

Cultural Mistrust Inventory
(Interpersonal Relations and Educational and Training Subscales)

On the following questions please mark one of the answers as most closely representing your own feeling. Remember, there are no right or wrong answers, only what you think.

Strongly Disagree	Agree	Disagree	Strongly Agree
1	2	3	4

	SD	D	A	SA
1. White teachers teach subjects so that it favors whites.	1	2	3	4
2. White teachers are more likely to present materials in class on purpose to make Blacks look inferior.	1	2	3	4
3. White policemen will change a story to make Blacks appear guilty.	1	2	3	4
4. White politicians can be relied on to keep the promises they make to Blacks.	1	2	3	4
5. A Black person can not trust a white judge to give them a fair trial.	1	2	3	4
6. Whites pass laws on purpose to block the progress of Blacks.	1	2	3	4
7. It is best for blacks to be on their guard when among Whites.	1	2	3	4
8. Whites are as trustworthy as members of any other ethnic group.	1	2	3	4
9. Whites can't be trusted to do what they say in business.	1	2	3	4
10. Whites who establish businesses in Black communities so that they can take advantage of Blacks..	1	2	3	4

Multidimensional Inventory Of Black Identity

Read each item and indicate to what degree it reflects your own thoughts and feelings, using the 7-point scale below. There are no right or wrong answers. Try to be as honest as you can.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Disagree	Unsure	Agree	Moderately Agree	Strongly Agree

	SD						SA
1. Overall, being Black has very little to do with how I feel about myself.	1	2	3	4	5	6	7
2. In general, being Black is an important part of my self-image.	1	2	3	4	5	6	7
3. My destiny is tied to the destiny of other Black people.	1	2	3	4	5	6	7
4. Being Black is unimportant to my sense of what kind of person I am.	1	2	3	4	5	6	7
5. I have a strong sense of belonging to Black people.	1	2	3	4	5	6	7
6. I have a strong attachment to other Black people.	1	2	3	4	5	6	7
7. Being Black is an important reflection of who I am.	1	2	3	4	5	6	7
8. Being Black is not a major factor in my social relationships.	1	2	3	4	5	6	7

Cross Racial Identity Scale (Pre-Encounter Mis-Education)

Instructions: Read each item and indicate to what degree it reflects your own thoughts and feelings, using the 7-point scale below. There are no right or wrong answers. Base your responses on your opinion at the present time. To ensure that your answers can be used, please respond to the statements as written, and place your numerical response on the line provided to the left of each question.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Neither Agree nor Disagree	5 Somewhat Agree	6 Agree	7 Strongly Agree

	SD						SA
1. Too many Blacks "glamorize" the drug trade and fail to see opportunities that don't involve crime.	1	2	3	4	5	6	7
2. Blacks place more emphasis on having a good time than on hard work.	1	2	3	4	5	6	7
3. Many African Americans are too lazy to see opportunities that are right in front of them	1	2	3	4	5	6	7
4. African Americans are too quick to turn to crime to solve their problems.	1	2	3	4	5	6	7
5. Blacks place too much importance on racial protest and not enough on hard work and education.	1	2	3	4	5	6	7

References

Aiken, L. S., and S. G. West (1991). Multiple regression: Testing and interpreting interactions. Newbury Park: Sage Publications.

Allen, W. R. (1992) The color of success: African American college student outcomes at predominantly White and historically Black public colleges and universities, *Harvard Educational Review*, 62(1) 26-44.

Allen, J. P., & Land, D. (1999). Attachment in adolescence. In J. Cassidy, & P. R. Shaver (Eds.), Handbook of attachment theory and research (319-335). New York: Guilford.

Alexander, J.C. (2004). Toward a theory of cultural trauma. In J. C. Alexander, R. Eyerman , B. Giesen, N. J. Smelser, & P. Sztompka (Eds.), Cultural trauma and collective identity (pp. 1-30). Berkeley : University of California Press.

Anaya, G., & Cole, D. G. (2001). Latina/o student achievement: Exploring the influence of student-faculty interactions on college grades. *Journal of college student development*, *42*(1), 3-14.

Andrews, J. A. Hops, H., & Duncan, S. C. (1997). Adolescent modeling of parent substance use: The moderating effect of the relationship with the parent. *Journal of Family Psychology*, 11(3). 259-270.

Astin, A. W. (1977) Four critical years: Effects of college on beliefs, attitudes, and knowledge. San Francisco: Jossey-Bass.

Bandura, A. (1977). Social learning theory. New York: General Learning Press.

Banks, J. A. (2004). Teaching for social justice, diversity, and citizenship in a global world. *The Educational Forum*, 68(4), 295-305.

Barber, B. K. & Olsen, J. A. (1997) Socialization in context: Connection, regulation, and autonomy in the family, school and neighborhood, and with peers. *Journal of Adolescent Research*, 12, 287–315.

Barber, B. K. & Schluterman, J. M. (2008). Connectedness in the lives of children and adolescents: A call greater conceptual clarity. *Journal of Adolescent Health*, 43(3), 209-216.

Bell, T. J., & Tracey, T. J. (2006). The relation of cultural mistrust and psychological health. *Journal of Multicultural Counseling and Development*, *34* (1), 2-14.

Bennett, L. (1966). Before the Mayflower: A history of the Negro in America, 1619-1964. Penguin Books, Baltimore.

Berger, J. B., & Milem, J. F. (2000). Exploring the impact of historically Black colleges in promoting the development of undergraduates' self-concept. *Journal of College Student Development*, 41, 381-394.

Biafora, F., Warheit, G., Taylor, D., Zimmerman, R., & Vega, W, (1993). Racial mistrust and deviant behaviors among ethnically diverse black adolescent boys. *Journal of Applied Social Psychology*, 23, 891-910.

Bowlby, J. (1969). Attachment: Attachment and loss. New York: Basic Books.

Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In R. H. Wozniak & K. Fischer (Eds.), Development in context: Acting and thinking in specific environments (pp. 3-46). Hillsdale, NJ: Erlbaum.

Caldas, S. J., & Bankston, C. (1997). Effect of school population socioeconomic status on individual academic achievement. *Journal of Educational Research*, 90(5), 269–277.

Caldwell, T. & Obasi, E. M. (2010). Academic performance in African American undergraduates: Effects of cultural mistrust, educational value, and achievement motivation. *Journal of Career Development*, 1, 1-22.

Catalano, R.F., Haggerty, K. P., Oesterle, S., Fleming, C. B., & Hawkins, J.D. (2004). The importance of bonding to school for healthy development: Findings from the social development research group. *Journal of School Health*, 74(4), 252-261.

Chen, S., Yeh, Y., Hwang, F., & Lin, S. J. (2013). The relationship between academic self-concept and achievement: A multicohort–multioccasion study. *Learning And Individual Differences*, *23*172-178.

Chickering, A. W. (1969). Education and identity. San Fransisco: Jossey-Bass. students' intellectual self-concepts. *Journal of Higher Education*, 34(2), 259-282.

Cokley, K. (1999). Reconceptualizing the impact of college racial composition on African American students' racial identity. *Journal of College Student Development*, 40, 235-246.

Cokley, K. (2000). An investigation of academic self-concept and its relationship to academic achievement in African American college students. *Journal of Black Psychology*, 26, 148-164.

Cokley, K. (2001). Gender differences among African American students in the impact of racial identity on academic psychosocial development. *Journal of College Student Development*, 42, 480-487.

Cokley, K. (2002). The Impact of college racial composition on African American students' academic self-concept: A Replication and extension. *Journal of Negro Education*, 34(2), 288-296.

Cokley, K., McClain, S., Jones, M., & Johnson, S. (2011). A preliminary investigation of Academic disidentification, racial identity, and academic achievement among African American adolescents. *The High School Journal*, *95*(2), 54-68.

Cokley, K., Rosales, R., Komarraju, M., Shen, F., Pickett, R. & Patel, N. (2006). Assessing the quality of student–faculty interactions. *Journal of the Professoriate*, 1 (2) 53-67.

Cole, D. (2007). Do interracial interactions matter? An examination of student-faculty contact and intellectual self-concept. *Journal of Higher Education*, 78 (3), 248-272.

Cole, D. (2011). Debunking anti-intellectualism: An examination of African American college

Cooley, C. H. (1902). Human nature and the social order. New York: Scribner's.

Cox, B. E., & Orehovec, E. (2007). Faculty-student interaction outside the classroom: A typology from a residential college. *Review of Higher Education*, 30(4), 343-362.

Duncan, O. D. (1961). A Socioeconomic Index for all Occupations. In J. Reiss, Jr. (Ed.), Occupations and Social Status (pp. 109–138). New York: Free Press of Glencoe.

Ei, S., & Bowen, A. (2002). College students' perceptions of student–instructor relationships. *Ethics and Behavior,* 12(2), 177-190.

Endo, J. J,. & Harpel, R. L. (1982). The effect of student-faculty interaction on students educational outcomes. *Research in Higher Education*, 6 (3), 309-331.

Eyerman, R. (2001). Cultural trauma: Slavery and the formation of African American Identity. New York, NY: Cambridge University Press.

Fashola, O. S. (Ed.). (2005). Educating African-American males: Voices from the field. Thousand Oaks, CA: Corwin Press.

Graham, S., Taylor, A., & Hudley, C. (1998). Exploring achievement among ethnic minority early adolescents. *Journal of Educational Psychology*, 90, 606–620.

Grier, W. H. & Cobbs, P. M. (1968) Black Rage, New York: Bantam Books.

Gutman, L. M., & McLoyd, V. C. (2000). Parents' management of their children's education within the home, at school, and in the community: An examination of African American families living in poverty. *Urban Review*, 32, 1-24.

Hill, N. E., Castellino, D. R., Lansford, J. E., Nowlin, P., Dodge, K. A., Bates, J. E., & Pettie, G. S. (2004). Parent academic involvement as related to school behavior, achievement, and aspirations: Demographic variations across adolescence. *Child Development*, 75, 1491–1509.

Hirschi, T. (1969). Causes of delinquency. Berkeley: University of California Press

Irving, M. A. (2002). Oppositional identity and academic achievement among African American males. *Dissertation Abstracts International*, 63(06), 2129. (UMI No. AAT 3055998).

Irving, M. A., & Hudley, C. (2005). Cultural mistrust, academic out- come expectations and outcome value among African American males. *Urban Education*, 40, 476–496.

Irving, M. A., & Hudley, C. (2008). Cultural identification and academic achievement among African American males. *Journal of Advanced Academics*, 19, 676-698.

Isiksal, M. (2010). A comparative study on undergraduate students' academic motivation and academic self-concept. *The Spanish Journal Of Psychology*, *13*(2), 572-585.

Isom, D. A., (2007). Performance, resistance, caring: Racialized gender identity in African American boys. *Urban Review*, 39, 405-423.

Jackson, D. N. (1970). A sequential system for personality scale development. In C. D.Spielberger (Ed.) , *Current topics in clinical and community psychology* (*Vol. 2*, (pp. 61– 96). New York: Academic Press.

Jacobi, M. (1991) Mentoring and academic Success: A literature review. *Review of Educational Research*, 61(4). 505-532.

Jeynes, W. H. (2003). A meta-analysis--The effects of parental involvement on minority children's academic achievement. *Education and Urban Society*, 35, 202-218.

Keith, T. Z. (2006). Multiple regression and beyond. Boston, MA: Allyn and Bacon.

Komarraju, M., S. Musulkin, & G. Bhattacharya. 2010. Role of student–faculty interactions in developing college students' academic self- concept, motivation, and achievement. *Journal of College Student Development,* 51(3): 332–342.

Kozol, J. (1991). Savage inequalities. New York, NY: Crown Publishers.

Kuh, G., & S. Hu. 2001. The effects of student-faculty interaction in the 1990s. *The Review of Higher Education,* 24(3): 309–332.

Lambert, A. D., Terenzini, P. T., & Lattuca, L. R. (2007). More than meets the eye: Curricular and programmatic effects on student learning. *Research in Higher Education*, 48 (2), 141-168.

Lamport, M.A. (1993) Student-faculty informal interaction and the effect of college student outcomes: A review of the literature. *Adolescence*, 28 (112). 971-990.

Landrine, H. & Klonoff, E. A. (1994). Cultural diversity in causal attributions for illness. *Journal of Behavioral Medicine*, 17(2), 181-193.

Lent, R. W., Brown, S. D., & Gore Jr, P. A. (1997). Discriminant and predictive validity of academic self-concept, academic self-efficacy, and mathematics-specific self-efficacy. *Journal of Counseling Psychology*, *44*(3), 307.

Leventhal, T., & Brooks-Gunn, J. (2004). A randomized study of neighborhood effects on low-income children's educational outcomes. *Developmental Psychology*, 40, 488 –507.

Lundberg, C. A. & Schreiner, L. A. (2004). Quality and frequency of faculty-student interaction as predictors of learning: An analysis of race/ethnicity. *Journal of College Student Development*, 45 (5), 549-565.

Marsh, H. W. & Seaton, M. (2012). Academic self-concept. *International Guide to Student Achievement*, 62.

Maton, K. I., Wimms, H. E., Grant, S. K., Wittig, M. A., Rogers, M. R., & Vasquez, M. J. (2011). Experiences and perspectives of African American, Latina/o, Asian American, and European American psychology graduate students: A national study. *Cultural Diversity and Ethnic Minority Psychology*, *17,* (1), 68.

McInerney, D. M., Cheng, R., Mok, M., & Lam, A. (2012). Academic self-concept and learning strategies: Direction of effect on student academic achievement. *Journal Of Advanced Academics*,*23*(3), 249-269.

McNeely, C.A., Whitlock, J. & Libbey, H. (2010). School connectedness and adolescent well being. In Christianson, S. and A. L. Reschly (eds.), Handbook on School-Family Partnerships. New York: Lawrence Earlbaum Associates, Inc.

Mehan, H., Hubbard, L., Villanueva, I., & Lintz, A. (1996). Constructing school success: The consequences of untracking low-achieving students. Cambridge, UK: Cambridge University Press.

Meriham, G. S. (1970). The Negro and the Nation: The history of American slavery and enfranchisement. New York, NY: Haskell House.

Milem, J. F., Berger, J. B., & Dey, E. L. (2000). Faculty time allocation: A study of change over twenty years. *Journal of Higher Education*, 454-475.

Mirowsky, J. (1985). Disorder and its context: paranoid beliefs as thematic elements of thought problems, hallucinations, and delusions under threatening social conditions. *Research in Community and Mental Health*, 5, 185-204.

Newhill, C. E. (1990). The role of culture in the development of paranoid symptomology. *American Journal of Orthopsychiatry*, 60, 176-185.

Nickerson, K., Helms, J., & Terrell, F. (1994). Cultural mistrust, opinions about mental illness, and Black students' attitudes toward seeking professional psychological help from White counselors. *Journal of Counseling Psychology*, 41, 378–385.

Ogbu, J. (1978). Minority Education and Caste: The American System in Cross-Cultural Perspective. San Diego, CA: Academic Press.

Ogbu J. (1981). Origins of Human Competence: A Cultural-Ecological Perspective. *Child Development*, 52, 413-429.

Ogbu, J. (1991). Minority coping responses and school experience. *Journal of Psychohistory*, 18, 433–456.

Ogbu, J. (1992). Understanding Cultural Diversity and Learning. *Educational Researcher*, 21, 5-14.

Ogbu, J., & Simons, H. (1998). Voluntary and Involuntary Minorities: A Cultural-Ecological Theory of School Performance with Some Implications for Education. *Anthropology & Education Quarterly*, 29, 155-188.

Osborne, J. W. (2001). Testing stereotype threat: Does anxiety explain race and sex differences in achievement?. *Contemporary Educational Psychology*,*26*(3), 291-310.

Pascarella, E. T., & Terenzini, P. T. (1977). Patterns of student-faculty information interaction beyond the classroom and voluntary freshman attrition. *Journal of Higher Education*, 48, 540-552.

Pascarella, E. T. 1980. Student-faculty informal contact and college outcomes. *Review of Educational Research*, 50(4): 545–595.

Pascarella, E., & P. Terenzini. 1979. Student-faculty informal contact and college persistence: A further investigation. *The Journal of Educational Research,* 72(4): 214–218.

Phelps, R. E., Taylor, J. D., & Gerard, P. A. (2001). Cultural mistrust, ethnic identity, racial identity, and self-esteem among ethnically diverse black university students. *Journal of Counseling and Development*, 79, 209-216.

Poston. W. S., Craine, M., & Atkinson, D. R. (1991) Counselor dissimilarity confrontation, client cultural mistrust, and willingness to self-disclose. *Journal of Multicultural Counseling and Development*, 19(2), 65-73.

Reynolds, W M. (1988). Measurement of academic self-concept in college students. *Journal of Personality Assessment*, 52, 223-240.

Reynolds, W. M., Ramirez, M. P., Magrina, A., & Allen, J. E. (1980). Initial development and validation of the academic self-concept scale. *Educational and Psychological Measurement*, 40, 1013-1016.

Rosenthal, G.T., Folse, E. J., Alleman, N.W., Boudreaux, D., Soper, B., & Von Bergan, C. (2000). The one-to one survey: Traditional verses nontraditional student satisfaction with professors during the one-to-one contacts. *College Student Journal*, 34, 315-320.

Sanders, M. G. (1997). Overcoming obstacles: Academic achievement as a response to racism and discrimination. *Journal of Negro Education*, 83-93.

Sen, P, & Chowdhury, A.N. (2006). Culture, Ethnicity, and Paranoia. *Current Psychiatry Reports*, 8, 174-178.

Sellers, R. M., Chavous, T. M., & Cooke, D. Y. (1998). Racial ideology and racial centrality as predictors of African American college students' academic performance. *Journal of Black Psychology*, 24 (1), 8-27.

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of educational research*, *46*(3), 407-441.

Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhart (Ed.), Sociological methodology 1982 (pp.290-312). San Francisco: Jossey-Bass.

Spady, W. G. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, 1, 64-85.

Spady, W.G. (1971). Dropouts from higher education: Toward an empirical model. *Interchange*, 2, 38-62.

Stryker, S., & Stratham, A. (1985). Symbolic interaction and role theory. In G. Lindzey & E. Aronson (Eds.) The Handbook of Social Psychology, Vol.1. Theory and method (pp. 311-378). New York: Random House.

Swanson, D. P., Cunningham, M., & Spencer, M. B. (2003). Black boys' structural conditions, achievement patterns, normative needs, and "opportunities." *Urban Education*, 38, 608 – 633.

Taylor, D., Biafora, F., & G. Warheit (1994). Racial mistrust and disposition to deviance among African American, Haitian, and Other Caribbean Island adolescent boys. *Law and Human Behavior*, 18 (3), 291-303.

Taylor, A., Graham, S., & Hudley, C. (1997, April). Falling stars: The valuing of academic achievement among African American, Latino, and White adolescents. Paper presented at the biennial meeting of the Society for Research in Child Development, Washington, DC.

Terenzini, P. T., & Pascarella, E. T. (1980). Student/Faculty Relationships and Freshman Year Educational Outcomes: A Further Investigation. *Journal of College Student Personnel*, *21*(6), 521-28.

Terrell, F., & Miller, F. S. (1979). Effects of racial discrimination upon the interpersonal trust level of black college students. Paper presented at the *Southwestern Psychological Association meeting*, San Antonio, Texas, April.

Terrell, F. & Terrell S. (1981). An Inventory to measure cultural mistrust among Blacks. *Western Journal of Black Studies*, 5(3), 180-184.

Terrell, F. & Terrell, S. L. (1983). The relationship between race of examiner, cultural mistrust, and the intelligence test performance of black children. *Psychology in the Schools*, 20, 367-369.

Terrell, F., Terrell, S. L., & Miller, F. (1993). Level of cultural mistrust as function of educational and occupational expectations among Black students. *Adolescence*, 28, 572–578.

Terrell F., Terrell, S., & Taylor, J. (1981). Effects of race of examiner and cultural mistrust on the WAIS performance of Black students. *Journal of Consulting and Clinical Psychology*. 49, 750-751.

Terrell, F., Taylor, J., Menzise, J., & Barrett, R. K., (2009). Cultural Mistrust: A core component of African-American Consciousness. Invited chapter In: Neville, H.A., Tynes, B.M. &

Utsey, S.O. Handbook of African-American psychology. Sage Publishing. New York, 299-310.

Thompson, M. 2001. Informal student-faculty interaction: Its relationship to educational gains in science and mathematics among community college students. *Community College Review*, 29(1): 35–57.

Thompson, C. E., Neville, H., Weathers, P. L., Poston, W. C., & Atkinson, D. R. (1990). Cultural mistrust and racism reaction among African-American students. *Journal of College Student Development*, 31, 162-168.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89-125.

Townes DL, Chavez-Korell S, Cunningham NJ. (2009). Reexamining the relationships between racial identity, cultural mistrust, help-seeking attitudes, and preference for a Black Counselor. *Journal of Counseling Psychology*, 56(2), 330–336.

Turner, J. H., Singleton, R. Jr., Musick, D. (1984). Oppression: A Socio-history of black-white relations in America. Chicago: Nelson-Hall.

Umbach, P., & M. Wawrzynski. 2005. Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education,* 46(2): 153–184.

U.S. Department of Education, National Center for Education Statistics. (2007). The Condition of Education 2007, NCES 2004.Washington, DC: Government Printing Office.

Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senecal, C., & Vallieres, E. F. (1992). The academic motivation scale: A measure of intrinsic, extrinsic; and amotivation in education. *Educational and Psychological Measurement*, 52, 1003-1017.

Warikoo, N. and P. Carter. (2009). "Cultural Explanations for Racial and Ethnic Stratification in Academic Achievement: A Call for a New and Improved Theory". *Review of Educational Research*, 79(1): 366-394.

Watkins, C. E., Jr., Terrell, F., Miller, F.S., & Terrell, S. L. (1989). Cultural mistrust and its effects on expectational variables in black client-white counselor relationships. *Journal of Counseling Psychology*, 36, 447-450.

Whaley, A. L. (2001). Cultural mistrust and mental health services for African Americans: A review and Meta-analysis. *Counseling Psychology*, 29, 513-531.

Whaley, A., & Noel, L. (2012). Cultural compatibility theories of academic achievement among African American youth: A review and synthesis. *Journal of Negro Education, 81*(1), 25-38.

Whaley, A. L., & Smyer, D. A. (1998). Self-evaluation processes of African American youth in a high school completion program. *The Journal of Psychology*, 132, 317- 328.

Wilson, F. D., Tienda, M., & Wu. L. (1995). Race and unemployment: labor market experiences of black and white men, 1968-1988. *Work and Occupations*, 22 (3) 245-71.

Woodside, B. M.. Wong, E. H., & Weist, D. J. (1999). The effect of faculty-student interaction on college students' academic achievement and self-concept. *Education*, 119, 730-733.