

Cultural Capital and the Impact on Graduation
for African American Men in Community Colleges

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ABSTRACT

The purpose of this study was to focus on the theoretical framework of cultural capital as a potential catalyst for the graduation rates of African American men in community colleges. Cultural capital is being defined as “institutionalized, i.e., widely shared, high status cultural signals (attitudes, preferences, formal knowledge, behaviors, goods and credentials) used for social and cultural exclusion” (Lareau & Weininger, 2003, p. 587). Unfortunately, cultural capital as a construct has been difficult to measure quantitatively due to varying interpretations of the variable structure (Dika & Singh, 2002; Pishghadam, Noghani, & Zabihi, 2011; Sullivan, 2001). Consequently, researchers have indicated the need to better operationalize cultural capital, to provide better avenues for both replication and extension of the constructs measurement (Noble & Davies, 2009). Therefore, this study first employed exploratory factor analysis (EFA) with the National Education Longitudinal Survey (NELS:88/00) to determine the latent variable structure of a measure of cultural capital in the community college field. Second, a factorial analysis of variance (ANOVA) was conducted based on the new variable structure to determine whether there are differences in the self-reported levels of cultural capital for African American male students as compared to male and female students of other races within community colleges. Third, a binary logistic regression was conducted to determine how well the variables of cultural capital predict graduation for African American men in community colleges. The EFA, utilizing a sample of 3097 participants, extracted six factors indicative of the latent variable structure of cultural capital: (a) parental involvement, (b) habitus, (c) engagement

with parents, (d) educational level of parents, (e) high school extracurricular activities, and (f) awareness of college norms. The resultant variable structure was then used to determine that there were no significant differences between the self-reported levels of cultural capital for African American male students and both male and female students from other races within community colleges. Similarly, the variables of cultural capital were not found to be a significant predictor of graduation for African American males within the community college field. As a result, implications for future research were outlined to include replicating the study with a more current dataset and replicating the study with a four-year student population. Additionally, implications for counselors in community college settings included highlighting an awareness of college norms, encouraging student engagement with parents, increasing parental involvement, and promoting collaboration with high school counselors and college counselors in high school environments.

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Chapter 1

Introduction

Two-year community colleges have emerged as a gateway to higher education, especially for minority and immigrant populations (Valadez, 1993; Wells, 2008). Essentially, community colleges are open access institutions with minimal requirements for enrollment. They are low cost institutions with curricula that permit students to transfer credits towards a four-year institution or to obtain associate degrees for graduation. Additionally, they offer non-credit courses for training in business fields, occupational certificate programs, developmental or remedial education, self-improvement, leisure, and English-language instruction for second language learners (Dowd, 2007). As a result of its open access, varied curricular offerings and educational formats are paramount to the identity and mission of the community college; for minority and immigrant populations; degrees from these institutions afford access to both social and economic opportunities that are generally not available to those without degrees (Dowd; Owens, Lacey, Rawls, & Holbert-Quince, 2010). Lower tuition costs, non-competitive admissions processes, and the lack of standardized tests required for admission make attending these institutions more appealing and accessible for minority students (Dowd; Handel, 2008; Hughes, 2010). However, a focus on accessibility renders community colleges less accountable for student outcomes and success (Bensimon, 2007; Dowd).

Correspondingly, community colleges also can act as gatekeepers based on their monopoly of remedial education for underrepresented groups, which are typically underserved by the four year institutions (Dowd, 2007). African Americans require more remedial education courses than those of their White peers at the community college level (Greene, Marti, & McClenney, 2008) and tend to have lower grades in their remedial coursework as compared to

White students (Greene et al.; Perrakis, 2008; Wood & Turner, 2011). Remedial education courses are non-credit courses required for some students prior to enrolling in college level English, Science, or Math classes (VanOra, 2012). Often, community colleges will award institutional credit for the completion of these courses; however, these credits are typically not transferable to four-year institutions and do not count towards the overall completion of a degree at any institution (Oudenhoven, 2002; VanOra). Community colleges will frequently require students to complete pre-enrollment assessments to determine the students' level of academic preparation for college level courses prior to beginning their formal academic program (Oudenhoven). African American students, working class students of color, and students from lower socioeconomic backgrounds tend to require more remedial education than any other demographic (Dowd; VanOra). These practices limit the amount of underrepresented students from persisting, graduating, and ultimately transferring to four-year institutions based on their inability, and sometimes, lack of motivation to successfully complete the remedial coursework (Dowd; VanOra).

Subsequently, disparities among college enrollment and degree attainment between the various racial, ethnic, and gender demographics are well documented issues within the United States (U.S. Department of Education, 2010; Greene et al., 2008). According to Ross et al. (2012), enrollment in postsecondary institutions is generally higher for females compared to males in all demographics. Females constitute 47% of community college enrollment compared to 39% of male enrollment. Comparatively, enrollment rates are lower for students from low socioeconomic backgrounds and various racial/ethnic groups than for Whites. For example, White males enroll in postsecondary institutions at a rate of 43% with African American males enrolling at only 31%. Likewise, females have higher postsecondary enrollment rates

immediately following high school graduation compared to their male counterparts. Females enroll at 74% with males enrolling at only 67%. This statistic is especially important since students who pursue postsecondary enrollment directly following high school have higher rates of persistence and graduation (Ross et al., 2012).

Equally, African Americans continue to lag behind their White counterparts with respect to actual degree completion (Owens et al., 2010; U.S. Department of Education, 2010). As with the enrollment percentages, female students exhibit overall higher graduation rates as compared to their male counterparts in all demographics, with females graduating at 61% and males graduating at 56% (Ross et al., 2012). Similarly, females show higher rates of persistence through degree attainment than males of all demographics with the female rates being 72% and males being 64%. However, African Americans graduate at levels significantly lower than Whites, with African Americans graduating at 51% and Whites graduating at 73%. Unfortunately, of particular note, African American males demonstrate the highest level of postsecondary dropout of any demographic at 45% (Ross et al.).

Many, though certainly not all African American male college students, are demonstrating clear difficulties in their ability to complete postsecondary education (Ross et al., 2012), generating a need to determine measureable indicators of success in postsecondary education environments. The extent to which those indicators are present for African American men may provide information about whether such indicators have a significant impact on the graduation rates for African American men. Therefore, the remainder of this chapter will explore some of the factors that have impacted the graduation rates of African American men in community colleges, to include the defining of cultural capital. The purpose of the study, statement of the problem, and significance of the study will be outlined to direct the rationale for

the study. Finally, the chapter will conclude with a summary of chapter one and a definition of terms to highlight major concepts being explored within the study.

Purpose of the Study

Studies have shown that African Americans frequently trail behind their White counterparts as it pertains to academic performance and overall preparation for college (Greene et al., 2008; Owens et al., 2010). Being prepared for college, such that it yields increased academic success, could be defined as college readiness. Conley (2008) argues that college readiness is a process that develops and evolves over time. This process begins with enrollment and continues throughout the matriculation of their program. A student is ready for college when one is knowledgeable of both college norms and structure and how these may manifest in both academic and social environments (Conley, 2008). Students need to be strong academically and know how to navigate the system. They are expected to advocate for themselves and request assistance when needed. Students must seek out those that are qualified to assist them and trust that they will be given accurate information. When in doubt, they must ask questions and be proactive about their own academic success (Conley). Interestingly, all of these behaviors have been postulated as forms of both social and cultural capital (Bryan, Moore-Thomas, Day-Vines, & Holcomb, 2011; Dumais & Ward, 2010; Leese, 2010; Ovink & Veazey, 2011; Torres, 2009; Yan, 1999). However, due to the overall vagueness of cultural capital as a construct, it continues to be operationalized in various ways by various researchers (Dumais & Ward; Pishghadam, et al., 2011; Sullivan, 2001). Therefore, for the purpose of this study, cultural capital was measured using the Lareau and Weininger (2003) definition, which has been heralded as one of the most notable definitions of the construct for educational research (Winkle-Wagner, 2010).

Cultural capital is “institutionalized, i.e., widely shared, high status cultural signals (attitudes, preferences, formal knowledge, behaviors, goods and credentials) used for social and cultural exclusion” (Lareau & Weininger, 2003, p. 587). Cultural capital can be used to explain the disproportion between the graduation rates of African American men and all other demographics (Dumais & Ward, 2010; Lareau, 2003; Leese, 2010; Ovink & Veazey, 2011; Torres, 2009). Decreased levels of cultural capital, as evidenced by (a) a lack of knowledge regarding the language and expectations of college, (b) inherent feelings of not belonging in college, and (c) unawareness of the requisite ways of communicating in college, contribute to the academic disparities amongst underrepresented groups in higher education (Dumais & Ward; Leese; Nora, 2004; Ovink & Veazey; Zarycki, 2007). All of which add to the nearly insurmountable disadvantages severely impacting the ability for African American men to graduate in higher education (Lareau; Pascarella, Wolniak, Pierson, & Terenzini, 2003; Hertel).

Unfortunately, African Americans are frequently first generation college attendees and enter college on the lower end of the socioeconomic spectrum (Greene et al., 2008; Owens et al., 2010). Being a first generation college student, as defined as the first in their family to attend college, is a major factor impacting the low graduation rates of African American men in higher education (Hertel, 2002; Owens et al.). Pascarella et al. (2003) note the lack of knowledge regarding basic college information, deficits in family income and support, discrepancies in family degree expectations and plans, as well as, limited prior secondary school preparation all impact the first generation college student’s academic progress. Similarly, as first generation college students, African American men often have great difficulty adjusting to the college environment due to feeling a lack of belonging, as described above, and quite possibly a racial atmosphere that is negative (Owens et al.).

Greene et al. (2008) highlight this issue when discussing the differences between contextual and componential intelligence. They make the argument that in predominantly White institutions African Americans must develop “contextual” intelligences such as coping and adapting to an unwelcoming environment while striving to maintain a positive self-image and develop encouraging relationships. Similarly, the reality of having to expend large amounts of energy navigating this toxic environment can potentially make them unavailable to attend to the “componential” intelligences as defined by the tangible academic skills required to be successful in college (Greene et al.). These feelings can lead to a decrease in loyalty towards the institution and ultimately impact the student’s retention at that institution (Nora, 2004; Perrakis, 2008). Equally, first generation college students have to master the academic skills required to be successful in the college environment and the role of being a student in college (Collier & Morgan, 2008). As Pascarella et al. (2003) state, first generation college students must deal with cultural and social transitions along with the academic adjustments that all college students must endure.

Similarly, low socioeconomic status (SES) has been shown to profoundly impact educational attainment and school achievement, which could be the result of students attending high minority elementary and secondary schools in low income areas (Kao & Thompson, 2003). High minority elementary and secondary schools that are low income and in urban environments typically (a) provide few if any advanced placement courses, (b) yield lower scores on standardized assessments as compared to predominantly White, suburban schools, and (c) are under-funded and under-resourced (Kao & Thompson; Vaught, 2009). According to Ross et al. (2012), 46% of African American elementary and secondary school students attend high minority schools, with African Americans males attending high poverty schools at the highest

percentage of all other demographics at 42%. The students in these schools are more likely to be tracked into non-college bound curricula and receive instruction by poorly trained and/or uncertified teachers (Sheppard, 2006). For example, African American students were more likely to attend both elementary and secondary schools that have failed adequate yearly progress (AYP) second only to Hispanic students at 46% and 48% respectively (Ross et al., 2012). AYP outlines the school's ability to meet the minimum academic standards as required by the state under the criteria listed in the Elementary and Secondary Education Act (ESEA) Reauthorization (Ross et al.).

Unfortunately, high minority and high poverty schools yield high dropout rates and low student grades, with low parental participation in the school milieu (Kao & Thompson, 2003). Students from such schools may find that these challenges negatively impact their ability to graduate from the community college (VanOra, 2012). Further, these poor and working class environments tend to limit a student's access to the highly valued cultural capital necessary for success in school environments (Hertel, 2002; Lareau, 2003). Therefore, the purpose of this study is to determine the latent variable structure of a measure of cultural capital in the community college setting, the extent to which African American men possess cultural capital in community colleges, and how cultural capital contributes to the graduation of African American men in community colleges.

Statement of the Problem

Issues of equity and academic disparity among underrepresented groups in higher education are well documented occurrences in postsecondary arenas (Bensimon, 2007; Dowd, 2007; Ross et al., 2012; U.S. Department of Education, 2011). Educators, such as Estela Bensimon and Alicia Dowd, have discussed the importance of identifying issues of equity in

higher education and including them within the broader definition of student success (Bensimon). At the same time, they have focused on higher education institutions' responsibility for ensuring equity issues are minimized (Bensimon; Dowd). Lower graduation rates for African American men in community colleges indicate a lack of equity being experienced by this population in the higher education system (Bensimon; Dowd). Consequently, caution must be taken as the U.S. has a long history of discriminating against African Americans as a whole within educational systems at all levels both directly and indirectly (Bensimon; Hughes, 2010; Jackson & Moore, 2006; Noguera, 2003; Pascarella et al., 2003; Perry, Steele & Hilliard, 2003; Robertson & Mason, 2008; Strayhorn, 2008; Williams, 2006). Thus, disparities in the graduation rates of African American men should be of central concern.

First, Bensimon (2007) asserted that institutions need to be "equity-minded" and concerned about the educational disparities present for underrepresented groups. Practitioners must be more cognizant of the institutionalized racism, power disparities, and exclusionary practices inherent in educational structures impacting the opportunities and outcomes for this population. Similarly, being unaware of these contributory factors can impede the practitioner's ability to consider how their individual actions and responses may lead to the perpetuation of these inequities (Bensimon, 2007). Currently, institutions that maintain data on the graduation rates of their students rarely evaluate that data specifically related to race and gender, and therefore, are not as aware of the extent of their educational disparities (Bensimon). Bensimon advocates that the best way to illuminate any potential discriminatory practices for the purpose of eradication is to focus research efforts specifically on a lack of equitable academic outcomes that have been disaggregated by race and gender (Bensimon).

As the U.S. requires a more technology-based workforce, the demand for lower skilled workers becomes obsolete leaving less well-educated African American men with fewer opportunities for gainful employment (Boyd, 2007; Holzer & Offner, 2004). Similarly, President Barack Obama cites a projection that job opportunities demanding at least an associate degree for employment will double the volume of jobs available that currently have no educational requirement (Building American Skills, n.d.). He calls upon community colleges to spearhead the effort to keep these jobs on American soil by providing the necessary training to turn the unskilled workers into more highly skilled workers. As the world economy becomes more competitive, President Obama has outlined two major goals to be met by 2020: for the U.S. to proportionally generate more college graduates than other nations and for community colleges to produce upwards of 5 million additional graduates. President Obama highlights the fact that currently community colleges enroll more than 6 million students, making them the largest component of the overall system of higher education in the nation (Building American Skills). Consequently, President Obama has allocated federal funding to be dispensed to community colleges to assist in meeting these goals, including 2 billion dollars allotted over the course of four years for college and career training (Building American Skills). This focus on the community college and the goals to produce a more highly skilled workforce in the U.S. speak to the importance of identifying the barriers inherent in the lower graduation rates for African American men. Research that can outline the source of this disparity and offer strategies and interventions for improvement hold the key to community colleges meeting the goals as set forth by President Obama.

Third, if the discrepancy between lack of education attainment and demand for skilled labor are not resolved and African American men are subject to increased unemployment, the

repercussions will extend well beyond the African American male population. Unemployment corrodes communities, harms individuals, and is detrimental to families (Boyd, 2007).

Unfortunately, when African American men are unable to secure employment, they may access illegal means of making money during times of unemployment. Thus, society as a whole may experience the consequences of higher incarceration rates of African American men (Boyd).

These negative societal outcomes may be directly related with the fact that African American men who are incarcerated have higher rates of unemployment before entering the judicial system (Borjas, Grogger, & Hanson, 2010; Boyd).

Ultimately, clearly identifying the causes for the lack of equitable graduation outcomes for African American men is paramount to the mitigation of these effects. The fresh focus on community colleges to increase the amount of highly skilled workers in the U.S. solidifies the community college as the best level of postsecondary institution for which to concentrate research efforts. Therefore, leading to the purpose of the study which is to determine the latent variable structure of a measure of cultural capital within the community college environment, the extent to which African American men possess cultural capital in the community college environment, and the impact cultural capital has on graduation for African American men in community colleges.

Significance of the Study

The significance of this study is to illuminate the major factors indicative of cultural capital as defined as “institutionalized, i.e., widely shared, high status cultural signals (attitudes, preferences, formal knowledge, behaviors, goods and credentials) used for social and cultural exclusion” (Lareau & Weininger, 2003, p. 587); along with, the impact cultural capital may have on the graduation rates of African American men in community colleges. A paucity of

information exists regarding the cultural capital construct attributed to inconsistencies in methodology, definition, and outcomes (Dumais & Ward, 2010; Pishghadam et al., 2011; Strayhorn, 2010; Sullivan, 2001). This study will add to the currently scarce literature by (a) offering a more accurate and relevant measure of cultural capital within the community college environment, thus building a foundation for future research; and (b) informing potential interventions that can be used by parents, and community, high school, and college counselors to improve the graduation rates for African American men.

Research Questions

1. What is the latent variable structure of a measure of cultural capital in the community college field?
2. Are there differences in the self-reported levels of cultural capital for African American male students as compared to male and female students of other races in the community college?
3. How well does the presence of cultural capital predict graduation for African American males in community colleges?

Summary

Chapter one has introduced the mission and goals of the community college and how those goals have both helped and hindered the educational outcomes for African American men. Statistics surrounding the enrollment and graduation rates of African American men in postsecondary institutions were discussed, along with possible reasons for the low graduation rates including college readiness, decreased levels of cultural capital, first generation college student status, and low SES. The statement of the problem was explored through the need to identify sources of disparity between African American men and other demographics, the focus

on community colleges to improve and increase the highly skilled workforce for a more competitive global economy, and the repercussions of high unemployment rates for African American men and society as a whole. The significance of the study was identified with emphasis on opportunities for future research, improved institutional policies for community colleges, and enhanced strategies and interventions for African American men for increased graduation rates. Lastly, the purpose of the study was reemphasized to determine the latent variable structure of a measure of cultural capital in the community college setting, the extent to which African American men possess cultural capital, and how well does that possession of cultural capital predict graduation for African American men in community colleges.

Chapter two explores the historical underpinnings of African Americans and the institution of education in the U.S., to include factors contributing to the academic disparities for African American men, strengths of African American men, and cultural capital building activities for African American men. A more detailed description of the theoretical construct of cultural capital is explored, along with the most relevant research conducted on the impact of cultural capital on educational outcomes both within and outside the U.S. Chapter three outlines how these constructs were empirically investigated as possible explanations for the low graduation rates being experienced by African American males in the community college setting. Chapter four presents the results of the empirical investigations through exploratory factor analysis, factorial analysis of variance, and binary logistic regression. Lastly, chapter five highlights how these results are consistent with current literature on the construct of cultural capital, along with implications for future research and implications for counselors in community college settings.

Definition of Terms

African American – “A person having origins in any of the Black racial groups of Africa” (U.S. Department of Commerce, n.d.).

Community College – A low cost institution with open access and minimal requirements for enrollment, offering associate degrees for terminal completion, remedial education, and credits towards transfer to a four year institution (Dowd, 2007).

Cultural Capital – “Institutionalized, i.e., widely shared, high status cultural signals (attitudes, preferences, formal knowledge, behaviors, goods and credentials) used for social and cultural exclusion” (Lareau & Weininger, 2003, p. 587).

Economic Capital – Material objects, property, and financial resources that offer advantage in the field (Vyronides, 2005).

Field - The institutional structure for which all norms are established and expected to be followed, as with the institution of education (Lareau, 2003; Winkle-Wagner, 2010).

First generation college students – Students whose parents have never attended college (Pascarella et al., 2003).

Habitus - Invisible, non-tangible components of a person’s environment and upbringing that encompass the specific knowledge, linguistic abilities, and preferences that have been developed and encouraged by the individual’s social class, which later transforms into the individuals capital (Lareau, 2003).

Institutional Agents - Key authority figures with the right mix of status, institutional information, resources, and influential social networks necessary to facilitate the development of social capital with underrepresented groups (Stanton-Salazar, 2010).

Intrusive Advising - A personal interaction with students to provide referrals to support services, establish goals, and develop strategies to address non-academic factors has been shown to improve academic performance (Vander Schee, 2007).

Mentoring – Close and caring relationship with a knowledgeable adult demonstrating a long term commitment to a student, with attention to the student’s cultural background and encouragement of a supportive peer group (Warde, 2008).

Social Capital – Resultant resources acquired through one’s social networks, social support systems, and social structures that provide an advantage in the field (Stanton-Salazar, 2010)

Social Class – Status ranking of groups of people based on similarities in areas such as, occupation, education, ethnicity, lifestyle, and economic status (Vontress, 2011).

Student Engagement - Significant interactions with faculty and peers, knowledge of college resources, and participation in learning environments that are active and collaborative (Greene et al., 2008).

Teenager – For the purposes of this study “teenager” will be defined as students between the ages of 16-19.

Chapter 2

Historical Perspective

Traditionally African Americans have held education in the highest positive regard (Perry, Steele, & Hilliard, 2003; Tatum, 1997). Literacy in the pre-civil war era was heralded as a passage to freedom and an opportunity to “claim your humanity” (Perry et al., p. 11). African Americans sought education as the key to their salvation, the opportunity to succeed, and the way out of a horrendous situation (Williams, 2006). Unfortunately, it was illegal for slaves to be taught to read and write, possibly as a means to thwart off rebellions, freedom talk, and most of all, competition with the white man (Williams). To that end, African American males have suffered the most consequences in their quest for education (Perry et al.) and therefore have been the most affected by the inequalities in the educational system (Jackson & Moore, 2006; Strayhorn, 2008). African Americans have made great sacrifices for the opportunity to be educated and potentially “lead their people” (Perry et al., p. 11); however, to be a well-educated African American man can be viewed as a threat in a racist environment and ultimately lead to severe repercussions (hooks, 2004).

Concomitantly, the Little Rock Nine of 1957 from Little Rock, Arkansas is a classic example of the embodiment of this thought process. Nine high school children endured daily harassment, assaults, and emotional abuse in an effort to attend an all-white public high school which they were entitled to attend. While it took two weeks and a federal troop escort to facilitate the entrance of these nine high school children through the front door of the building, in the end, only one African American male graduated. With a silent room as this young man walked across the stage with his diploma, the city of Little Rock celebrated this event with a citywide closure of all public schools in Little Rock, Arkansas (Williams, 2006). Despite the

decision of the city of Little Rock, the sacrifices made by these nine children and their families exemplify the tenacity and reverence for education referenced earlier.

It has been argued that the current urban environment for the African American male discourages the quest for educational advancement and in many circumstances can appear anti-intellectual (Carter, 2005; Warde, 2008). To that end, the willingness for African Americans to become educated has become more of an exception rather than the rule, and in some instances has become associated with “being or acting white” (Perry et al., 2003, p.33). For example, there are some who associate the low college enrollment and low college and high school graduation rates of African American males as an outward resistance to being labeled as acting white (Carter). Carter (2005) explored this phenomenon with a group of male and female minority students in an urban section of Yonkers, New York. Her qualitative research did not support the conclusion that the students’ lack of academic success or interest was rooted in a resistance towards acting white. However, she concluded that African American males often feel stifled in their high school environments and disappointed in a curriculum that they thought was uninteresting or irrelevant to their life experiences (Carter).

It is not quite clear in the literature as to when the decline of educational interest or attainment occurred for some African American men, but it is clear that it has occurred (Warde, 2008). Unfortunately, the educational system in the United States has routinely been utilized as a perpetuation of a power structure designed to exclude at will for underrepresented groups (Bensimon, 2007). The reality is despite the tenacity of some African American men, it is ultimately the power structure that may facilitate or inhibit their progress (Noguera, 2003). The following section provides some examples of how these factors can impact the academic performance of African American men within the educational milieu.

Factors Impacting the Academic Performance of African American Men

Within the academic milieu, African American men are often viewed as being uneducable, violent, aggressive, and “at-risk” (Jackson & Moore, 2006; Strayhorn, 2008). These perceptions function as barriers and manifest themselves in very subtle ways, as evidenced by implicit biases, objectionable glances, and condescending comments from their instructors and/or classmates (Robertson & Mason, 2008). Similarly, African American men tend to be dramatically impacted by teacher expectations, for which these factors can either greatly enhance or impede the student’s ability to succeed (Noguera, 2003). African American men are the most underrepresented in college preparatory programming (Jackson & Moore; Perry et al., 2003; Strayhorn, 2008; Warde, 2008) and often times are not recommended for gifted education (Noguera; Perry et al.). The literature is saturated with examples of how low expectations from teachers breed a discontent for education in students, and low expectations simply amplify insecurities surrounding the student’s ability to succeed (Noguera). These low expectations often spawn from racist and discriminatory ideals about the African American man and can cloud the educator’s ability to view African American men as educable and intelligent individuals (Jackson & Moore; Strayhorn).

Consequently, when people are bombarded with negative assumptions surrounding their ability to be educated and successful, there is only a matter of time before these ideals become internalized (Noguera, 2003; Strayhorn, 2008). Decades of faulty educational systems (Pascarella et al., 2003; Perry et al., 2003) and a general belief that African American men are uneducable, lead some African American men to begin their college experiences at a severe disadvantage (Jackson & Moore, 2006; Strayhorn). While this disadvantage could be yet another reason why African American men represent the lowest rate of graduation as compared to all

other collegiate students (Robertson & Mason, 2008), there also may be some strengths of African American men that could help to mitigate these circumstances.

Strengths of African American Men

Commonly minority students are faced with the necessity to navigate multiple identities in order to maneuver both within their family and friend environments (Zamani, 2000). This necessity provides some African American men the practice of alternating between two worlds while managing positive attitudes towards both. Utilizing their cultural knowledge of both environments coupled with their own sense of self-awareness has been defined as biculturalism (Diemer, 2007). The ability to be “bicultural” for African American men allows them to navigate multiple worlds for the purposes of engaging with the power structure and overcoming requisite barriers (Diemer). This strength-based asset of traversing two worlds can assist African American men in academic settings to utilize the strategies and interventions that both develop and enhance cultural capital.

Marsh, Chaney, and Jones (2012) highlight African American families’ strengths, such as “high achievement orientation,” that fosters African American males’ ability to excel even in circumstances not conducive or encouraging of their success. For example, there are instances where African American men have been successful in academic environments where other demographics have not (Hughes, 2010; Robertson & Mason, 2008). An additional strength of African American families is “strong kinship bonds,” where African Americans will entrust family and fictive kin to provide support and guidance through times of need (Marsh, Chaney, & Jones, 2012). Fictive kin can be compared to faculty mentors that have been effective in assisting African American men in their quest for educational achievement (Hughes; Warde, 2008). These highlighted opportunities for strength development suggest some reasons why

historical injustices in education have not defeated all African American men, yet emphasize the importance of identifying other mechanisms for improving their graduation rates in the community college environment.

Review of the Research

Unfortunately, much of the literature evaluating the lack of success with African American men in academic environments focuses on cultural capital that seems to elude the African American man in the dominant society (Carter, 2005; Perry et al., 2003; Torres, 2009). While most published studies centering on the graduation of African American men in either community colleges or four year institutions tend to focus on a lack of skills that are not academic, they have yet to be defined as cultural capital (Chen & DesJardins, 2008; Greene et al., 2008; Hughes, 2010; Wood & Turner, 2011). The implications of specific strategies designed to impact the academic performance of various types of students have been researched (Hughes, 2010; McGrath & Burd, 2012; Robertson & Mason, 2008; Smith, 2007; Stovall, 2000; Vander Schee, 2007; Warde, 2008); however, these strategies have not formally been classified as a training ground for enhancing cultural capital. Strategies (e.g., mentoring, intrusive advising, and student success courses) are all activities designed to not only improve the student engagement experience for students, but they also can mitigate some of the common issues associated with the low levels of graduation for African American men (Hughes; McGrath & Burd; Robertson & Mason; Smith; Stovall; Vander Schee; Warde).

Student engagement, defined as significant interactions with faculty and peers, knowledge of college resources and participation in learning environments that are active and collaborative, has been shown to positively affect the academic performance of underrepresented students (Greene et al., 2008). Wood and Turner (2011) conducted a qualitative study

encompassing the interviews of 28 African American male community college students and found the factors that most impacted the academic success of these students centered around their engagement with faculty. These students described experiencing a welcoming and caring environment from faculty members to include personalized attention focusing on their academic progress and concerns, which led to a sense of belonging for the student (Wood & Turner). They highlighted faculty being proactive in addressing students' performance issues allowing students to give voice to any possible conflicts (Wood & Turner), which in turn enhances the cultural capital ability to converse effectively with authority figures (Lareau, 2003). Most importantly, students reported faculty members encouraging them to succeed (Wood & Turner) and thereby mitigated any encumbered beliefs that may have suggested otherwise (Noguera, 2003).

Similarly, the benefits of obtaining cultural capital by way of strategic interactions and a sense of belonging in the environment could be why the literature also suggests a focus on African American faculty mentors and the advantages of establishing such relationships (Robertson & Mason, 2008). To enhance the development of "contextual intelligence" as a component of cultural capital, mentoring programs that utilize African American faculty and community members that incorporate some realization of a shared cultural background and explore strategies for survival within the academic environment can be especially advantageous for African American men (Hughes, 2010; Warde, 2008). Equally, strategic interactions and contextual intelligence together are why emphasis should be placed on the establishment of healthy social relationships and personal development (Robertson & Mason), culminating in the ability to understand, accept, and navigate all obstacles within a college environment to include those that may be inherently racist and oppressive (Hughes). Likewise, being provided with information that the student may not have upon entering the educational environment will help

the student become privy to the skills and communication patterns that are highly valued in the educational environment, and therefore quintessentially cultural capital.

Likewise, intrusive advising, as defined as a personal interaction with students to provide referrals to support services, establish goals, and develop strategies to address non-academic factors, has been shown to improve academic performance (Vander Schee, 2007). This specific type of advisement is both intentional and consistent and requires the advisor to initiate contact with the student early and frequently to maximize the benefits (Smith, 2007). Intrusive advising is based on a developmental advisement model where students are expected to collaborate with their advisor for the purposes of exploring educational, personal, career, financial, and social situations (Vander Schee). Smith (2007) conducted a study on the effectiveness of intrusive advising on increasing the grade point averages (GPA) of students on academic probation in a community college. He found that students on academic probation meeting with an academic advisor three or more times during the semester for intrusive advising saw significant increases in their GPA as compared to their academic probation counterparts not participating in the intrusive advising model with the same level of frequency.

Similarly, student success courses designed for transitioning high school students to college to help integrate them into the college milieu and ultimately improve their overall persistence, academic performance, and graduation also have been shown to improve educational outcomes for students (Duggan & Williams, 2010; Stovall, 2010). The common goals for these courses are to illuminate the differences between high school and college, establish relationships with other students and faculty, and identify campus resources. Student success courses assist students with the integration into the academic and social communities of the college, as well as an awareness of resources and co-curricular offerings (Duggan & Williams; Stovall). When

students are able to acquire the information, skills, attitudes, and behaviors required for college success through these courses, colleges will see both the retention and graduation of their students increase (Stovall); while at the same, students from underrepresented groups also should experience an increase in the cultural capital as a result of these classes. McGrath and Burd (2012) conducted a study on the impact of student success courses on the persistence, graduation, and GPA of students on probation at a four-year university. Thus, students on probation participating in a student success course showed improvements in persistence, GPA, and graduation as compared to their academic probation counterparts for which did not participate in a student success course (McGrath & Burd, 2012). All of these examples add to the enhancement of cultural capital by (a) imparting knowledge regarding the language and expectations of college, (b) fostering feelings of belonging in college, and (c) identifying the requisite ways of communicating in college. This suggests the need for further exploration of the construct of cultural capital.

Theoretical Framework

Cultural capital has mainly been explored in countries outside of the U.S. to explain inequities and achievement gaps in all levels of education with a variety of demographics (Noble & Davies, 2009; Leese, 2010; Vryonides, 2005; Zarycki, 2007). Likewise, the operationalization and evaluation of the impact of cultural capital on higher education and underrepresented groups has primarily been conducted in countries outside of the U.S. (Noble & Davies; Vryonides; Zarycki). The following is a discussion of cultural capital as a theoretical framework.

Cultural capital has been defined in many ways to include the economic culture of gaining power through wealth; the social culture of appreciating arts and entertainment, knowing the right people, and using influence to progress in the environment; and institutionalized culture

of advancing based on knowledge received through parents and early childhood experiences and defined through social class (Dumais & Ward, 2010; Lareau & Weininger, 2003; Ovink & Veazey, 2011; Stampnitzky, 2006; Vryonides, 2005; Zarycki, 2007).

Most discussions of cultural capital as a theory draw upon Pierre Bourdieu's theory of cultural capital, as he was a pioneer in the early construction of this concept (Dumais & Ward, 2010; Lareau, 2003; Noble & Davies, 2009; Ovink & Veazey; Torres, 2009; Vryonides, 2005; Zarycki, 2007). Bourdieu's theory of cultural capital was based on the French society and the social class structures inherent in that population (Dumais & Ward; Winkle-Wagner, 2010). Bourdieu specified that cultural capital is exemplified through three main avenues: intellectual, objectified, and embodied (Dumais & Ward; Winkle-Wagner). One can have various levels of cultural capital, especially given the different avenues (Noble & Davies). Intellectual capital refers to the academic credentials that one holds, while objectified capital refers to the material possessions that showcase wealth or lack thereof (Dumais & Ward; Winkle-Wagner). Embodied capital is the construct for which the bulk of research is conducted on cultural capital, as it refers to the specific set of skills, strategies, and knowledge that has been passed on to a person by way of their environment, or habitus (Dumais & Ward).

Lareau (2003) operationalizes the construct of cultural capital for the American culture through her research on social class and based on the foundational concepts set forth by Bourdieu. Lareau explicates the three main concepts of cultural capital as encompassing the field, the habitus, and the capital. As Bourdieu and Johnson (1993) state, "The first element of this model is a representation of the structure of the ruling class, or, as I put it, of the field of power" (p. 147).

The field of power is a field of latent, potential forces which play upon any particle which may venture into it, but it is also a battlefield which can be seen as a game. In this game, the trump cards are the habitus, that is to say, the acquirements, the embodied, assimilated properties, such as elegance, ease of manner, beauty and so forth, and capital as such, that is, the inherited assets which define the possibilities inherent in the field.

These trump cards determine not only the style of play, but also the success or failure in the game of the young people concerned (Bourdieu & Johnson, 1993, p. 150).

Put another way, the field is the institutional structure for which all norms are established and expected to be followed, as with the institution of education (Lareau; Winkle-Wagner, 2010).

The habitus is the lens through which individuals obtain very specific traits, skills, and preferences that are passed on to them from their parents and later transformed into capital. Generally, it is invisible to the individual and functions without their control (Winkle-Wagner, 2010). In an educational context, Nora (2004) describes habitus as the fit between students' academic environment and their value and belief systems. This fit between the two produces a sense of belonging (Nora, 2004), or sense of entitlement as described by Lareau (2003). Lareau further expands the concept of habitus by making the alignment to social class within the American context. Habitus as the invisible, non-tangible components of a person's environment and upbringing encompasses the specific knowledge, linguistic abilities, and preferences for which the individual has no control yet has been developed and encouraged by the individual's social class (Lareau). Lareau explored this concept of social class by conducting an in-depth qualitative study of 88 African American and white families from three different class structures. Twelve of those families were observed in more detail through the lenses of the middle class, working class, and poor class, and the impact of social class on their children. Based on the

theoretical concepts of Pierre Bourdieu and cultural capital theory, Lareau remarked on each class's relative advantages and disadvantages within their educational systems. She examined social class in terms of socioeconomic status, race, and ethnicity to understand how class effects and reproduces cultural capital and how that cultural capital manifests in both social and academic environments. Lareau found that different levels of habitus were present amongst the three categories of class regardless of race or ethnicity based upon the manner in which the different classes communicated with each other, the activities for which their children were exposed, and the way in which they encouraged their children to interact with authority figures.

Lastly, the capital is the resulting resources, knowledge, and linguistic abilities that are highly valued within the educational structure and when used appropriately become highly advantageous to its users (Lareau, 2003). In other words, capital becomes the direct manifestation of a person's habitus. The educational power structure highly values the habitus of the middle and upper classes and perpetuates a system that rewards those who not only possess the appropriate habitus but also utilize the resultant capital to its advantage (Bourdieu & Johnson, 1993; Lareau). Lareau (2003) described the cultural capital that is passed on to middle class families as "concerted cultivation". Middle class families engage in behaviors specifically designed to cultivate their children which ultimately, inadvertently, make them more prepared for success in educational environments (Lareau). For example, Lareau remarked in her observations of middle class families that there were differences in the communication patterns of middle class families as evidenced by: more talking between parent and child, more encouragement for the child to converse, question, and challenge adults, and more negotiating with authority figures to meet the expectations of the child. Lareau noted that as a result of these behaviors, middle class children had better training in the rules of the game. They were more

comfortable interacting with adults and authority figures, had larger vocabularies, had greater verbal agility, were more open to sharing information with adults and asking for attention, and were more familiar with abstract concepts. Similarly, the early engagement with adults through structured activities and organized sports contributed to the development of a sense of belonging in educational settings, an ease with working with authority figures, and a confidence in being prepared for performance based tests at school (Lareau).

Winkle-Wagner (2010) acknowledged that the cultural capital that is typically discussed and measured based on Bourdieu's construct generally focuses on the dominant culture as the point of reference for which the capital is valued. It has been postulated that students who enter the educational environment from underrepresented groups perhaps bring capital that may not be highly valued within the particular educational field of necessity (Lareau, 2003; Owens et al., 2011; Torres, 2009). For example, within working class and poor class environments, a cultural capital also exists and tends to be well known by those who occupy that space (Lareau; Noguera, 2003). Many times, there is a focus on survival, and the skills coveted are strength and aggression (Noguera). Lareau found in a few of her observations that poor class families and social networks praised their children for defending themselves physically within the school and other social environments. For example, she references a basketball game at a local park where one of the working class students was being encouraged to demonstrate his toughness on the basketball court while playing a game with one of his friends (Lareau).

Unfortunately, within college environments skills such as strength and aggression are seen as intimidating, especially when they are being exhibited by African American males and many times will perpetuate the stereotype that African American males are aggressive and violent (Jackson & Moore, 2006; Strayhorn, 2008). Therefore, it is important to note in

academic settings, especially postsecondary, the cultural capital can be starkly different and many times requires contradictory skills for which a student may not be accustomed to ensure academic success (Conley, 2008; Owens et al., 2011; Torres, 2009). In those instances, students for whom the cultural capital they possess is more aligned with the cultural capital that is highly valued within their educational setting are at an extreme advantage.

Bourdieu and Johnson (1993) refer to these advantages as providing a “feel for the game”. They viewed the “field” literally as a playing field and the habitus brought to that field as determining the individual’s level of success in that field based on how and if they decide to utilize the resultant capital (Bourdieu & Johnson, 1993). Bourdieu and Johnson’s use of the “game” as a metaphor and the idea that the field is power makes his theory the most appropriate for research studies designed to promote the success of African American males within educational environments. African Americans commonly view the power structures associated with the dominant society as a “game” that must be played. At the same time, they understand their capacity to succeed in this “game” is based on their ability to navigate, understand, and display the rules of the “game” (Brotherton, 2002; Edmond, 2011; Lampe, 2002).

For example, Lareau and Horvat (1999) conducted a qualitative study with 24 elementary school families in a small Midwestern town with a high minority population. Overall, 40 parents and 9 school personnel were interviewed, in addition to key members of the town’s community. The purpose of their study was to highlight how cultural capital is reproduced by recognizing the value attached to the capital in the social context, the process by which people activate this capital, and the way in which the field legitimizes the behavior. They identified some of the cultural signals present in the school environment that led to moments of inclusion and exclusion for African American families from varying social classes. One example provided was between

two African American families with a shared habitus belief that racial injustice was occurring at the school based on the area's history of racial discrimination in educational settings. However, both families chose to handle the situation differently and hence experienced very different results. The Irving family chose to camouflage their beliefs about the school environment and instead closely monitor the situation by their presence in school, volunteering, and frequent visits with the teacher. The Mason family, on the other hand, chose to be more vocal about their dissatisfaction and demanded the school administration make swift changes. School personnel reported that the Mason family frequently raised their voices during conversations and used yelling as a means of communication. As a result, the Irving family was viewed and treated very differently than the Mason family within the school environment. The Irving family was seen as very supportive, helpful, and actively involved in the academic affairs of their daughter; they were seen as a pleasure to work with and were frequently welcomed in the school environment. While the Mason family was viewed as being very difficult to deal with, disruptive, and aggressive; the Masons were seen as unhealthy to the school environment with school personnel preferring not to interact with them at all (Lareau & Horvat, 1999).

In the end, both families were looking to obtain more rigorous academic programming for their daughters. However, when both families requested support from the teaching staff, the Irving family was successful, while the Mason family was not. Lareau and Horvat (1999) refer to these behaviors as moments of inclusion for the Irving family and moments of exclusion for the Mason family. Moments of inclusion in the school environment appear in the form of being placed in gifted and talented programming and/or getting encouragement and assistance with applying for college. Moments of exclusion appear as remedial education, being placed into low reading groups, retention, and failure to complete preparatory programming for college. Lareau

and Horvat also highlighted the unspoken and unwritten rules of communication in this school environment. The implied standard was for communication with school personnel to be polite and collaborative, for which the Irving family was able to exhibit more readily than the Mason family. This lack of maneuvering caused the Mason family's daughter to be excluded from the advantages present in more rigorous academic preparation, while the Mason family's daughter was included (Lareau & Horvat, 1999).

Unfortunately, the concept of cultural capital in its truest form centering on the framework designed by Pierre Bourdieu has been fraught with inconsistencies in measurement and consequently inconsistencies in outcomes (Dika & Singh, 2002; Pishghadam et al., 2011; Sullivan, 2001). Therefore, the following review of the research explores what has been conducted on cultural capital in both the U.S. and other countries and discusses the areas for which further research is needed.

Cultural Capital and Cultural Arts Participation

Cultural capital has been traditionally explored in the quantitative literature investigating the construct through the lens of highbrow cultural arts participation (Dumais & Ward, 2010; Lareau & Horvat, 1999). DiMaggio (1982) conducted one of the most frequently cited studies on cultural capital in the U.S. (Kalmijn & Kraaykamp, 1996; De Graaf, De Graaf, & Kraaykamp, 2000; Dumais, 2002). He explored the impact of cultural capital on the high school grades of white parochial school students from the 1960's. The sample was drawn from students participating in the Project Talent search program and consisted of 2906 students, approximately half boys and half girls. Cultural capital was measured in terms of self-reported involvement in literature, art, and music. DiMaggio used factor analysis to operationalize cultural capital using three measurement scales: attitudes, activities, and information. Attitudes captured students'

interest in the specified artistic activities. Activities focused on the extent of participation in the specified cultural events, such as creating visual arts, public performances, reading literature, and attending artistic events. Information utilized test results centering on the students' knowledge of literature, art, and music. The factor analysis ultimately yielded four factors: cultural interests, cultural information, cultural capital, and middlebrow activities. Cultural interests included the attitude measures; cultural information consisted of the test score results. Cultural capital included both the attitude and activity measures, and middlebrow activities included the non-highbrow cultural creative arts such as drawing, crafts, and sewing. While cultural capital had a positive relationship to high school grades, cultural interests and middlebrow activities had no significant impact on high school grades (DiMaggio, 1982). When the analysis was disaggregated by gender, the impact was only significant for boys from low socioeconomic status backgrounds.

Conversely, Dumais (2002) investigated the impact habitus has on school success in the United States while controlling for cultural capital and structural school issues. Habitus was defined as the aspiration towards white collar, high status jobs, and cultural capital was defined as participation in cultural arts. Using the National Education Longitudinal Survey (NELS) from the first wave for eighth grade White students, Dumais first explored the degree to which boys and girls participated in the cultural arts, by examining how many events they participated in on a scale of 1-6. Students also were evaluated on the duration of their participation in cultural arts events. She found that cultural arts participation varied by gender and SES, with SES having a stronger impact than gender when habitus was added to the matrix. Additionally, both the girls and boys did not participate in these events at any significant level; however, girls did show higher participation than boys in the activities that did not require a long term commitment (i.e.,

going to museums). When adding habitus to the equation, Dumais found that habitus had a significant impact on grades for both boys and girls. As for the disparities within the school environments, Dumais wanted to control for any mitigating effects of under resourced schools on the impact cultural capital and habitus may have on the student grades. School level differences were defined through region, SES, and percentage of minority students at the school. When these variables were controlled for she found cultural capital to impact the grades of the male students but to a lesser degree than the grades of the female students. Overall, Dumais concluded that habitus had a stronger impact on student grades than cultural capital for both boys and girls. Unlike the DiMaggio (1982) study, Dumais concluded that overall cultural capital, as she defined it, played a limited or no role in the grades of male eighth graders.

More recently, Gaddis (2013) investigated the impact of cultural capital and habitus on the GPA of elementary and secondary students pulled from the Big Brothers/Big Sisters program in the United States. The sample size consisted of 959 students ages 9-16 from mainly single parent homes making less than \$25,000 per year. Cultural capital was defined as the number of museum visits, number of plays attended, hours spent on cultural lessons, and the hours spent on reading. Habitus was defined through the use of two instruments: the Harter Scholastic Competence scale (HSC) and the Berndt and Miller School Value scale (SV). Gaddis was interested in capturing the students' attitudes about themselves and their abilities, along with their attitudes towards school. The HSC instrument measured the students' individual self-concept, while the SV measured the student's aspirations for higher education. Like Dumais (2002), Gaddis found that habitus had the most significant impact on the GPA of these students more so than any other variable.

Interestingly, both DiMaggio (1982) and Dumais (2002) pointed to the small numbers of students actually participating in cultural arts activities in their studies. The findings of Dumais concluded that participation in cultural activities are not relevant to the measure of cultural capital in the U.S., yet DiMaggio suggested that additional measures of cultural capital be used to ensure a more accurate prediction regarding the influence of cultural capital. Likewise, Lareau and Horvat (1999) have criticized studies utilizing cultural arts participation as a measure of the possession of cultural capital due to the subjectivity in determining which activities should be deemed highbrow. Additionally, they point to the dearth of literature explicating how cultural arts participation demonstrates either inclusion or exclusion from cultural or social advantages (Lareau & Horvat). Similarly, other researchers have questioned the relevance of cultural arts participation as indicators of cultural capital in the U.S. (De Graaf et al., 2000); they propose that cultural capital and school success be explored in the context of the parents' cultural capital and not children's.

De Graaf et al. (2000) explored the relationship between parental cultural capital and school success for children in the Netherlands with cultural capital being measured through the behavior of the parents, as it pertained to their cultural tastes and preferences. These researchers suggested that perhaps the cultural participation and/or reading habits of parents are better indicators of success than any other measure. The sample collected in the Netherlands consisted of family survey data of 1653 respondents aged 25 or older to ensure that all respondents had at least finished their educational careers.

The adults were evaluated based on measures of their individual educational attainment, the combined educational attainment of their parents, their father's occupational status, and the overall financial resources of their parents (De Graaf et al., 2000). The parental cultural capital

included participation or attendance in cultural activities, such as beaux arts, art museums, opera or ballet performances, theatrical performances or historical museums. Similarly, the examination of cultural capital included aspects of reading habits (e.g., frequency with which the respondent's parents read Dutch literature, literature in a foreign language, translated literature, war novels, thrillers, or science fiction). De Graaf et al. (2000) found that the reading habits of parents were the better indicators of school success for their children than parental attendance of cultural events. Furthermore, the benefits of parental cultural capital were more important for children from middle to lower socioeconomic backgrounds when compared to children from higher SES backgrounds.

Sullivan (2001) discusses the vagueness of Bourdieu's definition of cultural capital theory and therefore the resulting difficulty with regards to its measurement. She investigated which components of cultural capital actually yield a "return". Her sample size consisted of 465 students in England who were approximately 16 years of age. Participants were from four different schools, two of which were co-educational and two of which were single sex. The questionnaires measured cultural capital through their activities (i.e., reading behaviors, television and music preferences, and attendance of cultural activities, such as theatre, concert performances, and art galleries). Cultural knowledge entailed tested knowledge of famous cultural figures and language measured from active and passive vocabulary tests. Lastly, students were surveyed on the cultural activities of their parents, including subjects discussed by parents in the home, number of books in the home, music and radio station preferences, and participation in cultural activities. She found significant differences in the amount of cultural capital based on type of parental employment and education attainment. For service-class parents and graduates, their mean scores were significantly higher than their counterparts with

regard to possession of cultural capital. She also found a strong relationship between the cultural capital of parents and students' cultural activities, supporting the idea that cultural resources are passed down from parents to their children. According to Sullivan, the cultural capital possessed by parents is strongly associated with the social class and qualifications of the parents, supporting Bourdieu's view that there is an unequal distribution of cultural capital based on social class and education. Further, linguistic ability and cultural knowledge are passed down from the home environments more so than in the school environments (Sullivan, 2001). Similarly, reading was found to develop the intellectual abilities of students more so than participation in formal culture activities; musical habits and participation in formal cultural activities did not equate to capital (Sullivan).

Unfortunately, the discrepancies mentioned above with regard to which variables should be included as accurate measures of cultural capital for the purposes of exploring the impact on educational outcomes have made the investigation of cultural capital highly subjective (Pishghadam et al., 2011). These studies do not clearly indicate which institutionalized high status cultural signals cause social and cultural exclusion, as suggested by the definition of cultural capital. Thus, there is a need to determine the latent variable structure of a measure of cultural capital, particularly within the community college field for this study.

Cultural Capital and Postsecondary Education

Cultural capital as a contributor to the issues of equity and academic disparity of any demographic in higher education has mainly been discussed within the context of college choice and college accessibility (Dumais & Ward, 2010; Noble & Davies, 2009; Nora, 2004; Ovink & Veazey, 2011; Stampnitzky, 2006; Vryonides, 2005; Zarycki, 2007). Regardless of how cultural capital has been defined, researchers have found when measured quantitatively that the outcomes

related to college choice and accessibility are consistently conclusive of cultural capital being a catalyst for the decision making process of underrepresented groups (Dumais & Ward; Noble & Davies; Nora; Torres, 2009; Vryonides). However, the existing body of research has been fraught with a variety of conflicting results in determining how this concept may directly impact educational outcomes due to the nuances of cultural capital (Dika & Singh, 2002; Pishghadam et al., 2011; Sullivan, 2001). The following sections will highlight some of the research that has been conducted on cultural capital, utilizing various methodological approaches from many countries and diverse student demographics, in order to highlight recommendations for improved research.

Qualitative Measures

It has been recommended that the construct of cultural capital be measured qualitatively as the objective nature of quantitative research may not capture the degree to which cultural capital can appear (Noble & Davies, 2009; Vryonides, 2005). Likewise, research studies that have most accurately linked cultural capital to educational outcomes have been qualitative in nature, possibly because these qualitative studies tend to more closely identify the specifics of habitus and the presence of its resultant capital (Winkle-Wagner, 2010). For example, cultural capital as a construct has been measured to explain difficulties some students may be having adapting to the U.S. educational environment, as exemplified by the qualitative study conducted by Collier and Morgan (2008). The researchers conducted focus groups with first generation college students and traditional college students who have at least one college graduate parent. Collier and Morgan found that the first generation students demonstrated remarkably lower cultural capital than the traditional students as evidenced by their difficulty communicating with faculty and understanding faculty expectations. For example, one of the first generation college

students expressed a view that perhaps the other college students had more of an understanding of college expectations than he did, while another student expressed a lack of comfort with the faculty member as an authority figure limiting her ability to seek out the professor for assistance. Another student misunderstood the definition of “writing” in the college environment to mean literally “writing” on paper, instead of knowing that the faculty member assumed that all “written” assignments would be typed (Collier & Morgan).

Despite their merits, there have not been a lot of qualitative studies evaluating the impact of cultural capital on the academic progress of underrepresented groups (Leese, 2010; Ovink & Veazey, 2011). Perhaps small sample sizes and difficulties generalizing results to other populations make this methodology less appealing (Leese; Ovink & Veazey). Consequently, there is a demand for reliable and valid measures of cultural capital that can be used to explain the inequities and offer a foundation for successful globalized interventions in academic settings (Noble & Davies, 2009).

Quantitative Measures

Quantitative research focusing on the impact cultural capital has on retention and graduation has been equally sparse. Both the pro and con of cultural capital is that it can be operationalized in many different ways causing the resulting outcomes to vary (Dumais & Ward, 2010; Noble & Davies, 2009; Vryonides, 2005; Zarycki, 2007). For example, Zarycki (2007) measured cultural capital in terms of parental education and the number of books in the home. The purpose of the study was to investigate the role of cultural capital in accessing higher education to include attending either a state-run or private college or university and getting accepted into more prestigious versus less prestigious majors. The quantitative study consisted of approximately 3000 college students from both state-run and private schools, with 1550 from

Moscow and 1556 from Warsaw who were asked questions about their parent's behaviors. State-run institutions offered free tuition with a competitive admissions process and entrance exam. While private colleges offered a non-competitive admissions process, no exam, and a superficial interview (Zarycki). Zarycki stated that in both Poland and Russia, there is a focus on cultural arts participation, knowledge, and appreciation, as is consistent with the emphasis highlighted in the French culture by Pierre Bourdieu. He further stated that college and university admissions exams and exams for the majors focus heavily on cultural arts knowledge and appreciation. Zarycki found cultural capital to be significant in accessing higher education in both countries, with Russia demonstrating more importance than Poland. Students from higher social classes demonstrated higher levels of cultural capital, higher acceptance into state-run institutions, and higher acceptance into more prestigious majors (Zarycki). Therefore confirming the parental variables of education and number of books in the home for cultural capital as being advantageous for accessing college and ultimately for students from higher social classes (Zarycki).

Noble and Davies (2009) conducted a quantitative study by which they defined cultural capital in terms of participation in cultural activities, access to current events, and reading habits. The researchers created a shorter version of a survey to measure cultural capital based on the previous survey constructed by Sullivan (2001). They normed the survey on high school aged students and their parents in England, to determine separate levels of cultural capital for both the students and parents. Specifically, the researchers were interested in the role cultural capital plays in college enrollment and the factors affecting the student's likelihood of attending college. Therefore, in addition to the cultural capital survey, the researchers collected data on both parents' education and occupation and, students' predicted school grades to ascertain whether

any of these factors effected college enrollment. As a result, Noble and Davies found that cultural capital had a significant impact on college enrollment for the students. However, when identifying the factors most predictive of enrolling in a college, the parental variables of education and occupation were not significant when compared to the variables of predicted student grades.

Consequently, the inability to obtain consistently positive outcomes as it pertains to a lack of cultural capital being a factor for academic progress has been equally problematic (Dumais & Ward, 2010; Noble & Davies, 2009; Vryonides, 2005). For example, Dumais and Ward (2010) conducted a quantitative study investigating the impact of cultural capital on college enrollment, graduation, and college GPA in the U.S. Using a National Education Longitudinal Survey (NELS) through the U.S. Department of Education, cultural capital was defined as arts participation in the eighth grade to include going to museums, libraries, and concerts, as well as strategic interactions such as students receiving help with college applications and essays and parent contact with the school regarding college resources and opportunities. The researchers found that cultural capital did not affect college graduation or GPA. However, when a similar study was conducted by Strayhorn (2010) using the same database, he found the exact opposite. For Strayhorn's study, cultural capital was defined in terms of both cultural and social indicators inclusive of socioeconomic status, parental education and expectations, discussions with parents about college, and student involvement in clubs and organizations. Strayhorn found that the cultural capital and social capital variables as he had defined them did in fact have an impact on college GPA. The disparity between the two sets of findings may be due to the quantitative method limitations based on the information collected in the data set which may not consistently get to the specifics of tastes and preferences, as required

for the identification of habitus (Winkle-Wagner, 2010) and ultimately the conclusive linking of cultural capital to academic progress.

Mixed Methods Approach

Lastly, it has been suggested that cultural capital be measured using a mixed methods approach in order to better explain the extent to which cultural capital plays a role in the academic success of the targeted population (Leese, 2010). When major themes arise in quantitative surveys, they can then be explored in more depth using qualitative methods to identify the true impact of cultural capital on educational outcomes (Leese; Vryonides, 2005). For example, Wood (2011) explored the factors related to African American male attrition in community colleges using the Beginning Postsecondary Students Longitudinal Study database in the U.S. When African American student responses were compared to non-African American student responses, the largest reason provided by African American males for leaving college was “other” (Wood, 2011). While this research did not identify specifically what factors contributed to a designation of “other”, the fact that these students chose “other” when given the options of academic problems, dissatisfaction with the program, family responsibilities, finances, personal, military service, or scheduling reasons as alternatives (Wood), indicates that there may have been contributing factors specific to cultural capital for which the attrition may have been better explained. However, since the data set was limited to the options provided, the strictly quantitative method did not allow for further exploration of other reasons for attrition.

Vryonides (2005) conducted a mixed methods study of cultural and social capital, where he measured cultural capital through (a) the parental knowledge of the educational system, including options for higher education in Greece, (b) the reading habits of students, and (c) the ownership of various cultural and or educational objects (e.g., computers and internet access).

Social capital was measured in terms of (a) the parental social networks, (b) methods for engaging and mobilizing the most advantageous networks to benefit their child's educational and occupations opportunities for the future, and (c) their perceived effectiveness in obtaining these goals. The purpose of the study was to identify variables related to the student's cultural and social influences on educational decision making. The study consisted of a questionnaire completed by 450 secondary students and interviews conducted with 28 parents. Results indicated that the quantitative measures did not prove sufficient in examining the extent to which cultural capital effectively influences educational decision making. The qualitative measures proved to be the most informative, as the researcher was able to use probing techniques to obtain specific practices, attitudes, habits, and beliefs demonstrating cultural capital as an intentional resource with an unintended impact on the educational decision making (Vryonides).

Similarly, Ovink and Veazey (2010) conducted a mixed methods analysis of cultural capital being taught to "high achieving graduates" of the Biology Undergraduate Scholars program (BUSP) in the U.S. The BUSP is comprised of minority students who are science majors that despite their academic abilities still require some intervention with regards to their cultural and social capital development (Ovink & Veazey, 2010). The researchers first began with a survey of their 201 BUSP alumni, for which they followed up with semi-structured telephone interviews for 106 alumni. They then randomly selected 15 of those interviews to be analyzed further to identify the presence of any cultural capital development. The interviews confirmed the development of cultural and social capital, as the alumni reflected on the guidance received from their advisors that helped them "navigate the environment" (the main purpose of this program), acquire social capital through the interactions, and access peers demonstrating common interests with the alumni (Ovink & Veazey). Lastly, the alumni revered the

opportunities provided through their undergraduate research experiment specifically designed to foster social capital and the necessary networking skills to help further the career of these impending graduates (Ovink & Veazey).

Cultural Capital and Student Engagement

The literature has suggested that perhaps other definitions of cultural capital be explored to determine their impact on academic performance (DiMaggio, 1982; Dumais & Ward, 2010). However, the research has been inconsistent in identifying which specific variables should be included to ensure the valid measurement and generalization of cultural capital and the implications for academic success in the U.S. For example, Pishghadam et al. (2011) recently utilized factor analysis to validate questionnaires they created to determine cultural and social capital indicators for college level students; however, it was normed on college students in Iran.

Cultural capital in higher education should be measured by obtaining information about graduation requirements and variables related to the college experience (Chen & DesJardins, 2008; Dumais & Ward, 2010). Having a “feel for the game”, a sense of belonging and entitlement, and recognizing the importance of being actively engaged in the college milieu has arguably been considered cultural capital as it relates to higher education (Dumais & Ward; Lareau, 2003; Wells, 2008). However, these variables have not been included in any recent studies of cultural capital regarding its impact on educational outcomes for college students (Dumais & Ward; Strayhorn, 2010). Perhaps one way to include these engagement variables could be through the use of questions related to the college experiences of students. The Community College Survey of Student Engagement (CCSSE) is a nationally administered survey used by hundreds of community colleges across the United States (Center for Community College, 2013a). According to the CCSSE website, the CCSSE is a measure of a students’ level

of both social and academic engagement, and it is used by community colleges to determine policies and procedures designed to improve the academic and social outcomes of their students. CCSSE results can be analyzed by the institution against their own internal standards or compared to other community colleges of like size and demographics. The CCSSE serves as a benchmarking tool for the purposes of establishing norms in the educational practices of both community and technical colleges (Center for Community College, 2013a). The CCSSE was adapted to the community college environment based on the National Survey of Student Engagement (NSSE), which was based on the four year institutional model. The CCSSE is inclusive of five benchmarking items: Active and Collaborative Learning, Student Effort, Academic Challenge, Student-Faculty Interaction, and Support for Learners. Active and Collaborative Learning refers to the extent to which students engage in learning both inside and outside of the classroom, by participating in class and interacting with other students. Student Effort refers to the student's use of student services, preparation, and time on task. Academic Challenge, the extent for which students engage in "challenging mental activities" of evaluation and synthesis and their self-reported quantity and rigor of academic coursework. Student-Faculty Interaction, the extent to which students communicate with faculty about their career plans, course content, and academic performance. Lastly, Support for Learners, the students perception of their college and their self-reported use of advising and college services. These five benchmarks are normed on community college students and validated by the CCSSE organization on a regular basis (Center for Community College, 2013a). According to McClenney, Marti, and Adkins (2007), the most recent validation report surveyed 700,000 community college students in 48 states to include the islands of Marshall, British, and Macau. Analysis procedures included correlations, multiple regression, and logistic regression of the

survey results on various academic outcomes to include degree completion, persistence, GPA, and credit completion. The researchers found that all five benchmarks collectively were linked to both academic and persistence outcomes (McClenney et al., 2007).

Summary

Despite the aforementioned conflicts in the cultural capital research, cultural capital has been shown to improve educational outcomes as evidenced by higher grades (Strayhorn, 2010) and college enrollment (Dumais & Ward, 2010). Furthermore, the ability to engage in “strategic interactions” with key stakeholders, school administrators, and teachers is a component of cultural capital (Dumais & Ward). Both the knowledge of and the ability to effectively utilize cultural capital at critical stages in the academic process proves to be educationally advantageous (Dumais & Ward; Lareau & Horvat, 1999). However, the ability to accurately measure the impact of cultural capital on graduation proves extremely problematic due to the lack of an operational definition for cultural capital; leaving researchers to employ relatively subjective means of interpretation (Pishghadam et al., 2011).

Chapter 3

Methodology

Therefore, the purpose of this study was to (a) determine the latent variable structure of a measure of cultural capital in the community college setting, (b) determine if there are differences in the self-reported levels of cultural capital for African American male students when compared to male and female students of other races in community colleges, and (c) investigate the impact of cultural capital on graduation for African American men in community colleges.

This study utilized the National Education Longitudinal Survey (NELS) to build on previous research outlining the necessary factors indicative of cultural capital. Previous factor analyses of the indicators of cultural capital date back over thirty years (DiMaggio, 1982) for the U.S. or have been limited to studies in other countries (Pishghadam et al., 2011). Updated variables needed to be identified and normed on the appropriate age groups and cultures in order for the construct to be appropriately validated and generalized (Drummond & Jones, 2010).

This study utilized exploratory factor analysis to determine the latent variable structure of the cultural capital construct for quantitative measurement within the community college environment. Quantitative methods allow for generalization of the role cultural capital plays in postsecondary education and to add to better operationalized definitions of the construct (Noble & Davies, 2009; Winkle-Wagner, 2010). This study utilized the results of selected questions from the NELS, particularly items related to cultural capital, social capital, and student engagement.

The *field* for this study was the community college, and the research addressed the following research questions:

1. What is the latent variable structure of a measure of cultural capital in the community college field?
2. Are there differences in the self-reported levels of cultural capital for African American male students when compared to male and female students from other races within the community college?
3. How well does the presence of cultural capital predict graduation for African American males in community colleges?

It was hypothesized that:

1. The latent variable structure of a measure of cultural capital in the community college setting will emerge through exploratory factor analysis.
2. There will be differences in the self-reported levels of cultural capital for African American male students when compared to male and female students of other races within the community college.
3. The presence of cultural capital will significantly predict graduation for African American males in community colleges.

Instrument

The NELS is representative of 24,599 eighth grade students first surveyed in the spring of 1988. A sample of those students was then surveyed again as a follow up in 1990, 1992, 1994, and 2000 (Curtin, Ingels, Wu, & Heuer, 2002). According to Curtin et al. (2002), the purpose of the NELS was to collect data that could aid in the examination and development of federal education policy. Additional emphasis was placed on informing parents, education practitioners, and education administrators about changes in the educational system and how those changes affect the lives of students over time. The NELS began with a nationally stratified probability

sample of 1,052 eighth grade schools, inclusive of 815 public schools and 237 private schools. NELS:88 was considered the base year survey conducted in 1988 and consisted of a student questionnaire and cognitive tests. Students first completed the instruments in school about their home experiences, their school, and the role of education in the lives of their parents and peers, educational aspirations, and various other topics. Achievement tests information also were incorporated for the in-school waves of data collection to include reading, math and science. In addition to the student survey parents, teachers, and school administrators were surveyed. School administrators were questioned about their school; teachers were questioned about their students, themselves, and their school; and the parents were questioned about their family characteristics and their students' activities. To increase the analytic potential of the data, high school transcripts were collected in 1992 and postsecondary transcripts were collected in 2000. Beginning in 1992 the NELS began utilizing computer assisted telephone interviews (CATI) and computer assisted personal interviews (CAPI) due to time and financial constraints, while reserving in person interviews for difficult to reach respondents. The NELS has strong external validity, high response rates, and large sample sizes (Bryan, Day-Vines, Holcomb-McCoy, & Moore-Thomas, 2010; Curtin et al., 2002; U.S. Department of Education, 2013). The NELS also utilizes weighted sampling and freshening techniques increasing the generalizability of results and ensuring a highly representative sample (Bryan et al.; Curtin et al.; U.S. Department of Education, 2013).

Sample

The NELS:88 utilized a two stage probability sampling design with schools constituting the primary sampling unit and students constituting the second. The sampling frame was obtained from the Quality Education Data, Inc., with the African American and Hispanic student

school percentages obtained from Westat (Curtin et al., 2002). Schools were then sorted into strata based on their similarity to each other. Within the strata schools were sorted by school type (e.g., public or private) and geographic region (consistent with census bureau definitions). Schools were then sorted by urbanization (e.g., urban, rural, or suburban), and corresponding minority classification. Probability sampling was then used to select schools in the strata to be used in the survey based on the estimated school enrollment for the eighth graders. All in all, 24 students were then selected from each school, with oversampling utilized for Asian/Pacific and Hispanic students to maintain a representative sample of students (Curtin et al., 2002).

This study used the sample from the last follow up round of data collection from the year 2000 that included parental and high school variables from 1992, high school and college variables from 1994, and college variables from 2000. NELS:88/92 marks the second follow-up (F2) for the NELS conducted in 1992 and includes students in the second semester of their senior year. These students were questioned on their transition into postsecondary education, including students who have dropped out of school since the last follow-up (Curtin et al., 2002). Parents were self-selected based on who was the best informed about the student and questioned on their attitudes and behaviors regarding education and the career choices and aspirations of their teenager. Parents also were questioned on their participation in their teenager's school and their financial preparation for their teenager's postsecondary education. Data was collected utilizing in school surveys; however, for the 1994 and 2000 survey waves, time and financial constraints caused the researchers to slightly alter their data collection procedures and sampling frames (Curtin et al).

NELS:88/94 marks the third follow-up (F3) for the NELS conducted in 1994 and was based on a subsample of the second follow up of students, regarding their history of response,

race, SES, dropout status, eligibility, school sector type, test scores, and freshened status (Curtin et al., 2002). This sample was inclusive of students who have graduated from high school and either began postsecondary education or entered the workforce. Students were questioned about issues related to employment and postsecondary access with data collection being conducted via CATI. NELS:88/00 marks the fourth and final follow-up (F4) for the NELS conducted in 2000 and utilized a sampling frame from the third follow up to exclude students who had died, were duplicated, institutionalized, and otherwise ineligible for the study (Curtin et al.). The residual sample size was 12,144 and was inclusive of students who were approximately 26 years old and had been out of high school for 8 years. Data were collected via CATI and CAPI with personal interviews being reserved for selected non-respondents. Students were questioned on postsecondary and employment related issues, specifically their transitions out of postsecondary and secondary education into the job market. Additionally, experiences with postsecondary education were captured along with postsecondary transcript information since high school to include persistence patterns and graduation (Curtin et al.).

To compensate for unequal probabilities and the effects of non-response, sample weights were added to all five rounds of the survey to assist the analyst in making projections about the data (Curtin et al., 2002). For the purposes of this study of the three rounds examined, F2 had nine sample weights, F3 had eleven sample weights, and F4 had nine sample weights. The participant sample was inclusive of 3,097 U.S. students and corresponding parental information for whom have indicated their first postsecondary college attended was a two-year public institution. The students came from a variety of different racial and ethnic backgrounds, high schools, geographic regions of the country, varying socioeconomic backgrounds, and varying degrees of academic preparation. Similarly, within the sample, 105 were African American

males who were either first generation or traditional college students, who were community college graduates, impending graduates, or community college dropouts at the time of the survey (U.S. Department of Education, 2013).

Variables

Variables used to determine the presence of cultural capital should be representative of the culture for which the measurement is being based (De Graaf et al., 2000). The variables should measure accurate indicators of capital attainment based on the norms and values for that particular culture (De Graaf et al.). While the NELS was not designed for cultural capital research, it is the most frequently used data source for this type of research (Bryan et al., 2011; Dumais, 2002; Dumais & Ward, 2010; Strayhorn, 2010; Yan, 1999).

The fourth follow up study (F4) for the NELS:88/00 is inclusive of base year data (BY) through F4 and contains more than 7400 variables. Therefore, questions related to the construct of cultural capital were selected from the F2, F3, and F4 NELS:88/00 that shared similarities with questions listed in both the Social and Cultural Capital questionnaire and the CCSSE (Pishghadam et al., 2011; Center for Community College, 2013b). For example, a Social and Cultural Capital questionnaire item was “I usually talk about job/education with family”, the corresponding NELS:88/00 item was “Parent talked to teen in general about schools”. Likewise, a CCSSE item was “Which of the following have you done, are doing, or do you plan to do while attending this college? (c) Developmental/remedial reading course, (d) developmental/remedial writing course” and the corresponding NELS:88/00 item was “In college, have you taken courses in remedial English?” (see Appendices D and E).

Ethical Considerations

The confidentiality of student information and student records must be maintained at all times. Therefore, all data will be stored on a password protected computer and spreadsheet for a period of no more than five years. Similarly, this study will be using the public use data files from the NELS:88/00, which have already been altered by the National Center for Education Statistics to minimize the risk of disclosure for the individual respondents (Curtin et al., 2002).

Data Preparation

According to the Virginia Tech's Institutional Review Board (IRB) website, studies utilizing existing data from a public use data set are exempt from review by the IRB (Virginia Tech, 2013). However, since IRB submission is a requirement of the Graduate School for doctorate students prior to beginning any form of research study, an institutional review was granted prior to the preparing and analyzing of data.

Variables meeting the aforementioned criteria were selected electronically and downloaded from the National Center for Education Statistics, National Education Longitudinal Survey (NELS:88/00), sponsored by the U. S. Department of Education (U.S. Department of Education, 2013). All variables selected utilized a mixture of both nominal and ordinal scales where any missing values were coded depending on the follow up and number of options available for specific questions (see Table 3.1).

Table 3.1

Missing Value Codes for NELS:88/00

BY – F2	F3	F4
6 (Multiple Response)	-2 (Currently Attending)	-1 (Don't Know)
7 (Refusal)	-3 (Not asked in SAQ)	-2 (Refused)
8 (Missing)	-4 (Uncodeable Verbatim)	-3 (Legitimate Skip)
9 (Legitimate Skip/Not in Wave)	-5 (Not Applicable)	-5 (Foreign City)
96 (Multiple Response)	-6 (Missing)	-6 (Uncodeable)
97 (Refusal)	-7 (Refused)	-7 (Not reached)
98 (Missing)	-8 (Don't Know)	-8 (CATI/CAPI error)
99 (Legitimate Skip/Not in Wave)	-9 (Legitimate Skip)	-9 (Missing)
	-10 (Institution not in 1993/1994 IPEDS file)	
	-11 (Military Training)	
	-12 (Foreign Institute)	

Note. From “National Education Longitudinal Study of 1988: Base-Year to Fourth Follow-Up Data File User’s Manual (NCES 2002-323),” by T. R. Curtin, S. J. Ingels, S. Wu, and R. Heuer, 2002, U.S. Department of Education, National Center for Education Statistics, pp. 141, 143 & 146.

The NELS:88/00 also utilizes universe variables to identify the level of education the student is in at the time of survey completion, as well as, a flagging system for determining if the student participated in all or just some of the survey waves. Therefore, the selected variables were first filtered by the universe variable, F4UNI2D, to ensure that all students included from the F2 wave were in the 12th grade at the time of the survey. This filter ensured that the students surveyed in the F3 wave would have graduated from high school and therefore be eligible to answer questions related to their possible college experiences. Secondly, students were filtered by the panel flag, F4F2PNFL, indicating which students participated in the F2, F3, and F4 waves

of the survey. This filter immediately discarded any students with missing data codes across all selected variables. Lastly, students were then filtered by their response to variable F4EFSECT indicating that a public two year institution was their first college attended.

Frequencies were then run on all of the variables to determine the extent and value of the missing value codes. Variables with missing value codes of 80% or higher were removed from the analysis. The remaining variables totaled 131, with a few variables indicating missing value codes of “legitimate skip”. These variables were then reviewed within the survey; it was determined that the reason for these missing value codes were due to the student not being eligible for the question (NORC, 1992a, 1992b, 1994; National Education Longitudinal, 2000). For example, if the question asked whether or not the student took any remedial English classes in college and the student had not yet begun college at the time of the survey, the appropriate action for the student was to skip the question. The largest percentage of legitimate skip missing value codes were present on the questions specifically related to the college experience. Since this series of questions were the most salient to the research study, imputation was used to replace the missing value codes. According to Lohr (2010), imputation is a commonly used technique by which missing values are replaced by assigned values. These values are calculated and replaced based on the responses of the other survey respondents similar to the respondent with the missing values (Lohr). To make certain that the imputation did not impute any erroneous response codes, all dichotomous variables were first recoded so that all “Yes” responses received a 1 and all “No” responses received a 0. In some cases the response codes required additional recoding as there were multiple categories of yes and no responses. For example, the question “Parent knows what courses teen is taking” the response codes were 1 for

“Yes”, 2 for “No”, and 3 for “Does not apply”. Therefore, 1 continued to indicate “Yes”, while both 2 and 3 were recoded to indicate 0 for “No” (see Appendix G).

Lastly, variables for sex and the “Black” category for race were dummy coded with male =1, and “Black” = 1 to form the new variables “male” and “Black”. Also, a new variable was recoded, where “Black” and “male” =1 and non-“Black”, non-“male” = 0 to form the variable “Black_male”. The imputation was run and once all missing values were imputed the variables were then grouped to further scale down the total number of variables for interpretation. The grouping process entailed the combining of similar NELS:88/00 questions as they corresponded to cultural capital and student engagement survey questions. For example, a question on the Cultural Capital Questionnaire by Pishghadam et al. (2010), was “I frequently perform activities together with my parents.” The corresponding NELS:88/00 items were: “Parent attended school activities with teen,” “Parents attended concerts, plays, movies with teen,” “Parents attended sports events outside of school with teen,” “Parents attended family social functions with teen,” and “Parent did something else fun with teen” (Berkovits, 2002). Subsequently, these five NELS:88/00 items were grouped to create a new variable titled “Parent reported involvement with teen” (see Appendix H).

Data Analysis

Data were analyzed utilizing the IBM® SPSS® Statistics Grad-Pack 20.0 software package for Complex Samples to account for the complex sampling design used by the NELS:88/00 (Bryan et al., 2010). Data were inclusive of students who met the following criteria (a) were in the 12th grade during the F2 wave of the survey, (b) were participants in waves F2, F3, and F4, and (c) indicated their first postsecondary institution attended was a two-year public higher education institution.

To determine the latent variable structure of a measure of cultural capital for the community college field, an exploratory factor analysis (EFA) was conducted. EFA is a multivariate technique designed to allow the researcher to explore if correlations between variables are related to one or more latent variables within the data (Field, 2009). Therefore, on a sample of 3,097 students utilizing 39 variables (exclusive of race, sex, and graduation status), the EFA was run using oblique factor rotation (Promax). Oblique factor rotation is used to discriminate between correlated factors by determining the variable loadings on each factor (Field). Eigenvalues were computed along with a scree plot to determine which factors to retain. According to Field (2009), eigenvalues are numerical values indicating the substantive importance of each component based on the factor loadings, while the scree plot is a graphical representation of each eigenvalue against the associated factor. Once the pertinent factors were identified, the EFA was conducted again outlining the exact amount of factors to retain. Due to the size of the sample and to assist in the interpretation of the factor loadings, absolute value coefficients less than .4 were suppressed instead of the default value of .1 to compute the factor loadings for each factor (Field). At the same time, the Anderson Rubin method was selected to convert response codes into factor scores being used for the subsequent analyses. The Anderson Rubin method produces uncorrelated and standardized factor scores with a mean of 0 and a standard deviation of 1 (Field). The factor scores for each individual respondent were then summed to create their individual cultural capital score.

To determine if there are differences in the self-reported levels of cultural capital for African American male students when compared to male and female students from other races within the community college, a factorial analysis of variance (ANOVA) was conducted. A factorial ANOVA is used when comparing the group means of two or more groups with two or

more independent variables (Field, 2009). The mean cultural capital scores from the African American male and female students, along with the male and female students from the Asian, White, Hispanic, and Native American races were compared. Based on the sampling design of the NELS:88/00, a complex samples plan (CSP) was created first to accurately compare the group means. The CSP includes the variables of STRATUM and PSU (Primary Sampling Unit), along with a sampling weight variable (F4F2PNWT). According to Berkovits (2002), this sample weight is for use with respondents who participated in the F2, F3, and F4 waves of the survey, and it allows for projections to be made pertaining to respondents who were in the 12th grade during the F2 wave of the survey. The CSP then was used to conduct the factorial ANOVA increasing the overall sample size to 4,821,078. The mean cultural capital factor scores for each group obtained from the factor analysis constituted the dependent variable with “male” and “Black” constituting the independent variables. A simple contrast was conducted on the “male”, “Black”, and “Black_male” variables along with an analysis of all two-way interactions between the “male” and “Black” variables.

To determine the predictive value of cultural capital on graduation for African American men, the same CSP was applied to conduct the binary logistic regression on a sample of 18,582 African American men. Binary logistic regression is used when the researcher is trying to predict a categorical outcome with exactly two categories based on the predictor variables (Field, 2009). Therefore, the dependent variable of whether or not the African American male graduated from a community college was regressed on the independent and predictor variable of cultural capital. To ensure outcomes for African American males, only the subpopulation was specified using the “Black_male” variable. Lastly, descriptive statistics were obtained considering the sampling design and sample weights to illustrate the central measures of

tendency for cultural capital amongst the groups, as well as, the revised population counts for the racial and gender groups being explored in this study.

Limitations

This study utilized self-reported data from the NELS:88/00, and students were not surveyed directly by this researcher to determine levels of cultural capital. However, the use of self-reported data as a reliable source of information is a common practice in other published research on cultural capital, as well as the use of the NELS (De Graaf et al., 2000; DiMaggio, 1982; Dumais & Ward, 2010; Noble & Davies, 2009; Strayhorn, 2010). Likewise, the NELS:88 is more than 20 years old with information that may be considered outdated for the purposes of generalizing the results. Similarly, factors contributing to the graduation of African American males may be much different today as compared to 20 years ago; yet, this study will still lay a foundation from which to build more current studies of cultural capital. Likewise, the sample size for the African American men is relatively small at 105 students for the exploratory factor analysis; however, the lowered enrollment rates are consistent with statistics reporting African American men demonstrating markedly lower enrollment rates in postsecondary education than any other demographic (Ross et al., 2012). Lastly, only limited variables of cultural capital are being utilized based on the available data for this study. However, based on the amount and variety of variables chosen, this study aimed to provide a comprehensive evaluation of cultural capital as a construct, expanding on other cited studies in this research (De Graaf et al.; DiMaggio; Dumais, 2002, Dumais & Ward; Noble & Davies; Pishghadam et al., 2011; Strayhorn).

Summary

This chapter provided a description of the NELS:88/00 instrument and dataset to include the purpose of the longitudinal study, types of questions asked, and original sample size. The complex sampling design was outlined, along with the identification of the sampling waves being utilized for the current study. The process for variable selection was described, the extensive data preparation process was outlined, and the data analysis procedures were specified. Ethical considerations for the storage and use of data files were highlighted, in addition to some of the major limitations of the current research study to include; (a) the age of the dataset, (b) variables selected, and (c) sample sizes for African American men. The latent variable structure of cultural capital was measured through exploratory factor analysis, the differences in the self-reported levels of cultural capital amongst the various racial and gender groups was measured through factorial ANOVA, and the extent to which cultural capital predicts graduation for African American men in community colleges was measured through a binary logistic regression. The following chapter will provide the results of the aforementioned analyses.

Chapter 4

Results

To determine the latent variable structure of a measure of cultural capital in the community college field, exploratory factor analysis (EFA) was conducted on 39 items from the NELS:88/00 using oblique factor rotation (Promax). As mentioned in Chapter 3, EFA is a multivariate technique designed to allow the researcher to explore if correlations between variables are related to one or more latent variables within the data (Field, 2009). Likewise, oblique factor rotation (Promax) is used to discriminate between correlated factors by determining the variable loadings on each factor (Field). According to Field (2009), to verify that the sample was adequate for the aforementioned analysis, the Kaiser-Meyer-Olkin (KMO) measure was utilized and indeed verified the sampling adequacy ($KMO = .674$), as all KMO values for individual items were $\geq .5$; which is within the acceptable limit of .5 (Field). Likewise, as recommended by Field, a Bartlett's test of sphericity $\chi^2(703) = 9398.12, p = .000$, indicated that correlations between items were sufficiently large for EFA. An initial analysis was run to obtain eigenvalues for each component (factor) in the data. Fourteen factors had eigenvalues over Kaiser's criterion of 1 and in combination explained 52.02% of the variance. The scree plot was slightly ambiguous and showed inflexions that would justify retaining either 4 or 6 factors (see appendix I). Therefore, given the large sample size, convergence of the scree plot, and Kaiser's criterion on all six of the factors, six is the number of factors that were retained in the final analysis explaining 28.63% of the variance. Table 4.1 shows the factor loadings after rotation and appendixes J and K show the structure and pattern matrices for the rotation. The items that cluster on the same factors suggest that *factor 1* represents parent reported involvement with teen, *factor 2* represents habitus, *factor 3* represents student reported

engagement with parents, *factor 4* represents educational level of parents, *factor 5* represents high school extracurricular activities, and *factor 6* represents awareness of college norms.

Table 4.1

Cultural Capital Factor Loadings After Rotation

Factor	Title	Variables	Loadings
1	Parent Reported Involvement with Teen	*Parental involvement in high school academic issues	.709
		*Parental discussion with teen about attending college	.682
		*Parent reported involvement with teen	.634
		*Parental participation in programs designed for post high school opportunities	.514
		*Parental involvement with parents of other teens	.499
2	Habitus	Highest level of education expected	.603
		*Enrichment activities	.537
		*Experience with advanced coursework in high school	.487
		Total time spent on homework outside of SCHL	.425
3	Student Reported Engagement with Parents	How often you do things with your mother or father	.709
		*Student reported discussion with parents about academic progress and goals	.650
		Time talking/doing things w/parents	.500
		Parents trust you to do what they expect	.492
4	Educational Level of Parents	How far in school did your father go	.853
		How far in school did your mother go	.849
5	High School Extracurricular Activities	*Participation in high school sporting activities	.778
		Time spent on extracurricular activities	.730
6	Awareness of College Norms	*College financial assistance	.607
		*College social engagement	.477

Note. *Denotes grouped variables (see appendix H).

Factor scores were obtained and computed at the same time as the factor analysis. The resultant six factor scores were summed for each respondent to create individual cultural capital scores.

The means for these factors by female and male racial groups are listed in Table 4.2.

Table 4.2

Group Means for Individual Factors

Variable	Parent Reported Involvement	Habitus	Student Reported Engagement with Parents	Educational Level of Parents	High School Extra curricular Activities	Awareness of College Norms
	(Factor 1)	(Factor 2)	(Factor 3)	(Factor 4)	(Factor 5)	(Factor 6)
Black (F)	.0107	-.1267	-.0805	-.0183	-.0732	.1889
Native Am (F)	.4043	.0364	-.2489	-.1817	.1383	-.3072
White (F)	.0349	.1459	-.0636	-.0305	-.0093	.0206
Hispanic (F)	-.1654	-.0083	-.2346	-.1738	-.0103	.0741
Asian (F)	-.3702	-.0766	.0848	.1552	.0811	.1204
Black (M)	.2451	-.0178	.0959	.1423	.0649	.0628
Native Am (M)	.4158	-.0409	.1468	-.0608	.1971	.2665
White (M)	.0490	-.0860	.0490	.0186	-.0178	-.1414
Hispanic (M)	-.0135	-.1912	.0344	-.0285	.0176	.0469
Asian (M)	-.5484	-.2648	.2180	.1510	.1121	.0574

Note. (M) = male, (F) = female

The group cultural capital means for African American males and females, along with the group means for the males and females from the Asian, White, Hispanic, and Native American races were then utilized to answer the second and third research questions. Descriptive statistics

on the central measures of tendency for the sample considering the sampling design and sample weights are displayed in Table 4.3.

Table 4.3

Descriptives for Latent Variable Structure of Cultural Capital

Variable	Population Size	Group Mean	Standard Error
Cultural Capital	4,821,078	-.0420	.0793
Native Am (M)	28,984	1.555	.8210
White (M)	1,684,249	-.2031	.1224
Hispanic (M)	316,194	-.1437	.3997
Asian (M)	164,481	-.3390	.5354
Black (M)	289,079	.4730	.3583
Native Am (F)	51,223	-.3714	1.09
White (F)	1,642,099	.1381	.1132
Hispanic (F)	311,071	-.5436	.2604
Asian (F)	63,686	-.1641	.3044
Black (F)	270,010	.1136	.2550

Note. (M) = male, (F) = female

To determine if there are differences in the self-reported levels of cultural capital for African American male students when compared to male and female students from other races within the community college, a factorial ANOVA was conducted. The overall analysis of variance showed that the 4,821,078 community college students of various races and sex exhibited no significant differences in their levels of cultural capital ($F(3, 794) = 1.309, p = .270$). Using η^2 as a correlation-based measure of effect showed that differences among the groups accounted for only .4 percent of the overall variability in cultural capital. The simple contrasts results showed that the 289,079 Black males had a mean score of .5205 while the 4,531,998 males, Black females, and females of other races had a mean score of -.0339, which was not statistically significant ($F(1, 796) = 1.536, p = .216$). The 95% confidence interval for

the difference was $-.2396 \leq \mu \leq 1.281$. Likewise, the 559,089 Black males and females had a mean score of .2933 while the 4,261,988 males and females of other races had a mean score of .1933, which also was not statistically significant ($F(1, 796) = .135, p = .713$). The 95% confidence interval for the difference was $-.1532 \leq \mu \leq .7399$. Lastly, the 2,482,988 males of all races had a mean score of .1457 while the 2,338,089 females of all races had a mean score of .3409, which was again not statistically significant ($F(1, 796) = 1.621, p = .203$). The 95% confidence interval for the difference was $-.2246 \leq \mu \leq .5106$. Therefore, the null hypothesis was accepted, as the model demonstrated no significant difference in the self-reported levels of cultural capital for African American male students as compared to male and female students of other races within the community college. Consequently, due to the large sample sizes created as a result of the sampling weights, the ANOVA was run five times to ensure no potential areas of significance were missed. Similarly, a simple contrast also was run on all racial and gender groups, with no significance found for any of the combinations.

To determine how well the presence of cultural capital predicts graduation for African American males in community colleges, a binary logistic regression was used to estimate the probability of graduation in this sample of 288,830 African American male community college students. The predictor variable of cultural capital was used in this analysis with an $n = 18,582$. The overall predictive model was statistically significant (likelihood ratio chi square = 12.24 [5] $p = .000$). However, the independent variable of cultural capital was not a significant predictor of graduation for African American males, $p = .062$. Overall, 10% of the African American male students in this community college sample graduated with the odds of graduating being 20% higher for every one unit increase in the level of cultural capital ($OR = 1.218$), as compared to the 90% who did not graduate. The predictive value of the model was modest, with an overall

rate of correct classification of 89%. The overall effect size was small, with the Likelihood Ratio Index R^2 equal to .037.

Summary

The results for this study suggested the latent variable structure of a measure of cultural capital within the community college field using exploratory factor analysis. A factorial ANOVA was used to measure the differences between the self-reported levels of cultural capital for African American male community college students and male and female community college students of other races. The results indicated no significant differences in the self-reported levels requiring an acceptance of the null hypothesis. Lastly, a binary logistic regression was conducted to measure the extent of cultural capital as a predictor of graduation for African American male community college students. The results also were not statistically significant for cultural capital being a predictor of graduation for this sample.

Chapter 5

Discussion

The latent variable structure of a measure of cultural capital within the community college field was defined through exploratory factor analysis (EFA) extracting six factors. To determine if there were differences between the self-reported levels of cultural capital for African American male students and male and female students of other races within the community college, a factorial ANOVA was conducted. No significant difference was determined between the levels of cultural capital for these groups. Similarly, a binary logistic regression also revealed that the latent variable structure of a measure of cultural capital was not a significant predictor of graduation for African American male community college students. Therefore, the following discussion will outline the six factors extracted from the EFA and how they are consistent with previous research. The results of the factorial ANOVA and binary logistic regression will be explored to include pertinent delimitations of the study, implications for future research, and implications for community college counselors.

All in all, the 6 factors extracted through EFA are consistent with previous research measuring the effect of cultural capital on school success and college choice both in the United States and other countries (De Graaf et al., 2000; Dumais, 2002, 2010; Gaddis, 2013; Nora, 2004). The model measured cultural capital in terms of both the behaviors of the students and the behaviors of their parents. Factor 1, *parent reported involvement with teen*, centered on the parents reported involvement with the teenager's high school curriculum in terms of their awareness and discussions with teenager surrounding graduation requirements, academic progress, and plans post-high school. This factor also focused on the parent being proactive about contacting the high school to inquire about the teenagers' academic progress and college

prep coursework. This factor is consistent with the qualitative research conducted by Lareau (2003), where she emphasized the importance of parental involvement in the school setting as a form of cultural capital. Similarly, Lareau and Horvat (1999) stressed the value of parents being able to interact effectively with school personnel as a measure of both social and cultural capital which can lead to moments of inclusion or exclusion for the student. Furthermore, De Graaf et al. (2000) highlights that the cultural capital of the parents is actually a stronger predictor of success for the student within academic environments than the cultural capital of the student.

Factor 2, *habitus*, focuses on the highest level of education expected by the teenager, whether the teenager took advanced placement courses in high school, and whether the teenager participated in gifted and talented programs in high school. Likewise, enrichment activities included, going to the library, attending plays and concerts, reading books, papers, and magazines, and using the computer and internet for information. Cultural capital as a theory names *habitus* specifically as one of its major constructs (Bourdieu & Johnson, 1993; Lareau, 2003; Lareau & Weininger, 2003; Winkle-Wagner, 2010). Previous cultural capital research has defined *habitus* within academic environments as the fit between the students' academic field and their value and belief systems producing a sense of belonging (Nora, 2004) or a sense of entitlement (Lareau, 2003). For example, participating in gifted and talented programs and taking advanced placement courses could yield a sense of belonging and entitlement within college fields. Based on the similarities in rigor and expectations, students participating in these programs tend to be more prepared for college, which in turn could produce more comfort in the college environment due to this previous exposure (Lareau & Horvat, 1999). College and career aspirations were previously defined in cultural capital research as *habitus* (Dumais, 2002; Gaddis, 2013; Nora, 2004). Lastly, enrichment activities also were previously defined as

measures of cultural capital (DiMaggio, 1982; Kraaykamp, Noble & Davies, 2009; Pishghadam, 2011).

Factor 3, *student reported engagement with parents*, focuses on the student reported engagement with parents (i.e., how often they did things with their parents, talking with parents, and discussing going to college, preparing for the ACT/SAT tests, and exploring job possibilities post high school). This factor is consistent with cultural capital being defined as those skills, attitudes, and knowledge passed down from parents to children (Bourdieu & Johnson, 1993; De Graaf et al., 2000; Lareau, 2003). Lareau (2003) further explicates the communication skills that are developed based on the frequency and manner in which children communicate with their parents as being a highly valuable aspect of cultural capital. She states that the communication styles centering on substantive discussions with adults and caretakers are different amongst the various social classes. Therefore, students who are the most encouraged and exposed to substantive communication with adults and caretakers are more privy to highly advantageous cultural capital for success (Lareau).

Factor 4, *educational level of parents*, denotes how far in school the teenager's mother or father has completed. Again, this is one of the hallmarks of cultural capital theory based on the assumed links between educational status and the social class of the family (Bourdieu & Johnson, 1993; Dumais & Ward, 2010; Vryonides, 2005). Thus, when parents have a high educational status, they typically have higher familial income resulting in a higher social class (Bourdieu & Johnson; Dumais & Ward). Therefore, most studies of cultural capital include an educational measure for the parents to denote possible advantages passed down to the child based on social class (De Graaf et al., 2000; Lareau, 2003; Noble & Davies, 2009; Dumais & Ward). The educational level of parents also is consistent with first generation research

indicating that college students from first generation households tend to struggle more than non-first generation students with regard to success in college (Collier & Morgan, 2008; Pascarella et al., 2003; Museus & Neville, 2012). Previous research has linked first generation status to a lack of cultural capital, which in turn inhibits the student's ability to be retained and ultimately graduate from college (Collier & Morgan; Dumais & Ward; Museus & Neville; Pascarella et al.).

Factor 5, *high school extracurricular activities*, focuses on whether or not the teenager participated in either an individual or team sport or how much time they spent on extracurricular activities. This factor is consistent with the cultural capital research conducted by Dumais (2002), where she found sporting activities to be a better indicator of cultural capital for boys when compared to participating in cultural activities such as plays, arts and crafts, and playing an instrument. Similarly, Lareau (2003) suggested that participation in extracurricular activities assists with students' ability to interact with adults and be comfortable around authority figures. Likewise, extracurricular activities build team oriented behaviors, a respect for authority, to include the appropriate manner in which to challenge authorities, and ultimately, more ease in communicating with authority figures; all of which are highly valuable measures of cultural capital (Lareau).

Lastly, factor 6, *awareness of college norms*, focuses on whether the student received financial assistance in the forms of grants, scholarships, or loans; and how engaged they were in the social context of college with regard to the school newspaper, school government, and social clubs and fraternities. This factor is relatively new to cultural capital research as other studies of cultural capital have merely suggested that college engagement variables be included in measures of cultural capital amongst postsecondary students (DiMaggio, 1982; Dumais, 2002). To date, only one other study known to this researcher has included the college engagement

measure of social clubs and fraternities as a measure of cultural capital within the postsecondary environment (Strayhorn, 2010). However, a lack of financial aid has been shown to be a major inhibitor for both the college attendance and completion rates of African American students (Hughes, 2010), while social engagement in the college milieu has been shown to be a strong predictor of success for all students (McClenney et al., 2007; Ross et al., 2012).

The EFA conducted extracting these 6 factors expands on the last factorial analysis of cultural capital conducted in the United States in 1982 (DiMaggio, 1982). Likewise, instruments used to measure cultural capital have mainly be utilized in other countries and normed on students from other populations (Noble & Davies, 2009; Pishghadam et al., 2011; Sullivan, 2001; Vryonides, 2005; Zarycki, 2007), thereby making it difficult to determine appropriately normed variables for cultural capital from which to select for United States students. The current research study has added to the literature by providing a framework from which to draw future variables of cultural capital for the purposes of future measurement amongst community college students.

Likewise, the preceding six components of cultural capital were used to conduct a factorial ANOVA to determine if there were differences in the self-reported levels of a measure of culture capital among African American males. When compared to males and females of other races in the community college field those differences were found to lack significance. However, it is important to note the visual numeric differences between the mean scores for the various racial and gender groups. While not significant, African American males in particular demonstrated the second highest mean score for the latent variable structure of cultural capital. These results are not consistent with previous theoretical conceptualizations of cultural capital and underserved populations (Bensimon, 2007; Dowd, 2007; Jackson & Moore, 2006; Noguera,

2003; Strayhorn, 2008; Torres, 2009; Winkle-Wagner, 2010). One possible explanation for these visual differences could be sampling error. Sampling error is defined as the amount of expected variance in a set of scores due to chance (Howell, 2008). Howell (2008) states when scores vary in a direction not consistent with what would be expected, potential causes could be the inclusion of participants demonstrating characteristics outside of the norm for that particular sample. For example, this particular sample of African American males may be demonstrating characteristics that are outside of the norm for a typical African American male community college student. Therefore causing the differences in mean scores to appear incorrect and inconsistent with previous research. While some degree of sampling error is expected in quantitative analyses, one of the purposes of the ANOVA was to determine if the differences in scores could be attributed to racial and gender factors as opposed to sampling error (Howell). However, due to the lack of significance for this analysis sampling error cannot be ruled out as a potential contributor to the differences in mean scores.

Other explanations for the visual numeric differences in the mean scores could include the results being accurate both for the African American male increases and the lack of significance. Previous studies measuring the deficits present for community college students and the differences in cultural capital among various racial groups and social classes have found the similar results (Lareau, 2003; Oudenhoven, 2002; Sullivan, 2001; VanOra, 2012). When considering the overall demographics of community college students, the majority of community college students come from low income and educationally disadvantaged backgrounds (Oudenhoven; VanOra). Both of these characteristics have been considered measures of low cultural capital in previous social and cultural capital studies (Dumais & Ward, 2010; Lareau). The results of this study support these conclusions as the mean cultural capital score for this

sample was negative, indicating that on average the majority of students in this sample demonstrated low levels of cultural capital.

Similarly, as was mentioned previously in this study, Lareau (2003) observed the differences in cultural capital among children and families from African American and White racial groups and social classes. Her observations found no differences in the level of cultural capital among these racial groups when they were a part of the same social class (Lareau). Due to the probability of the racial groups being measured in this study coming from the same social class, the lack of significant difference between their levels of cultural capital could be plausible.

Furthermore, Lareau (2003) found stark differences when comparing levels of cultural capital among the various social classes. Regardless of race, Lareau found social class to be a stronger indicator of the presence of cultural capital. Consequently, African Americans of higher social classes demonstrated higher levels of cultural capital when compared to Whites of lower social classes (Lareau). This study, while limited in its inclusion of social class variables, did isolate educational level of parents as a factor of cultural capital. The educational level of parents is a common social class variable utilized in previous studies of cultural capital (DeGraaf et al., 2000; Dumais & Ward, 2010; DeGraaf et al., 2000; Noble & Davies, 2009; Strayhorn, 2010; Sullivan, 2001; Zarycki, 2007). Therefore, when reviewing the mean scores for the individual factor scores for this study, African American male students exhibited higher scores on the educational level of parent's factor. This difference in scores could be indicative of slightly higher social classes for the sample of African American males included in this study. Concomitantly, Lareau also highlighted the link between higher levels of cultural capital and higher levels of parental involvement and engagement. Therefore, when considering the educational level of African American male parents as an individual proxy for cultural capital,

African American males also demonstrated corresponding high scores on the parent reported involvement and student reported engagement with parents factors. These score differences could explain their increased mean cultural capital scores supporting the probability of African American males having higher mean cultural capital scores than Whites. These results, while not significant, inadvertently support quantitatively what was found previously qualitatively (Lareau).

Correspondingly, binary logistic regression was used to determine the predictive value of cultural capital on the graduation of African American male community college students. The findings indicated that the latent variable structure of cultural capital identified in this study was not a significant predictor of graduation among African American male community college students. These findings also are consistent with previous empirical studies investigating the impact of cultural capital in higher education, where no predictive relationship between cultural capital and graduation was found (Dumais & Ward, 2010).

Delimitations

The overall results of this study should be considered with extreme caution. As was mentioned earlier in this study, cultural capital is profoundly sensitive to its measurement structure causing the resultant outcomes to vary (Dika & Singh, 2002; Dumais & Ward, 2010; Pishghadam et al., 2011; Sullivan, 2001). For example, previous studies of cultural capital have stressed the importance of including social class variables, such as occupation, socioeconomic status, educational level of parents, and cultural activities of the parents in the identification and measurement of cultural capital (Bourdieu & Johnson, 1993; Dumais & Ward; Noble & Davies, 2009; Lareau, 2003, Sullivan; Winkle-Wagner, 2010). However, this study only included one measure of social class which was the educational level of the parents. This lack of adequate

variable inclusion could explain why the mean cultural capital scores were not consistent with what would have been expected based on previous theoretical conceptualizations.

Similarly, due to the limitations of the dataset, variables indicating the strategic activation of the cultural capital variables denoting the presence of cultural capital were also missing (Bourdieu & Johnson; Dumais & Ward; Lareau; Winkle-Wagner). For example, as was mentioned earlier in this study, Lareau and Horvat (1999) provide an example of two African American families for which would have received high scores on the parental involvement factor for this variable structure. However, based on the different implementations of parental involvement by the two families, their associated behaviors received very different responses within the school environment. These associated behaviors, such as the communication style and reception of those styles by key school personnel highlighted in the Lareau and Horvat study, were not included in the variables selected for this study. These associated behaviors vastly impacted outcomes as it pertained to advantages for their children (Lareau & Horvat). Furthermore, Lareau and Horvat state that the advantages or disadvantages resembled moments of inclusion or exclusion for these families and indicated their requisite level of both social and cultural capital.

This study utilized self-reported survey data from human subjects thereby increasing the probability of measurement error (Field, 2009; Lohr, 2010). Lohr (2010) defines measurement error as stated responses being inconsistent with true responses. For example, if a respondent is asked whether or not their parents attended college and they answer yes, when the true response is no, measurement error has just occurred. Additionally, due to the large amounts of missing data associated with the college engagement variables and low sample sizes for the various racial groups, imputation was used to replace the missing values. Imputation entails the prediction of

values for missing data based on the previous responses from similar respondents in the study (Lohr). However, when missing values are being replaced with predicted values based on measurement error, the results are not only detrimental to the original data, but also to the analysis output as well (Lohr). For example, if the original responses in this study were not consistent with what would be expected from African American male community college students, those incorrect values would then be used to impute additional incorrect values. The resultant data would potentially display an output inconsistent with what would generally be expected. Therefore, the imputation utilized may be a plausible explanation for the inconsistent findings noted in this study as compared to other theoretical conceptualizations of cultural capital (Bensimon, 2007; Dowd, 2007; Jackson & Moore, 2006; Noguera, 2003; Strayhorn, 2008; Torres, 2009; Winkle-Wagner, 2010).

Therefore, future recommendations for a study of this type would include more extensive data collection to minimize the missing values and use of imputation. Another recommendation is the expansion of the amount of data collected for the various racial groups to ensure increased sample sizes and greater generalizability of results. Lastly, it is recommended that a more concerted effort to obtain adequate and complete social class variables for the true measurement of cultural capital. Based on the aforementioned concerns and the varying ways in which this study's results can be interpreted, additional research is still greatly needed to ascertain the extent to which cultural capital may impact African American male students in community college environments.

Implications for Future Research

As was stated earlier, there was no significant difference between the levels of cultural capital for African American male students and male and female students of other races within

the community college field. However, mean cultural capital scores for this population indicated overall low levels of cultural capital. Based on the age of the dataset and the changing nature of the community college, this study should be replicated with a more up to date community college sample to confirm the latent variable structure of cultural capital for this population, as well as, the current levels of cultural capital amongst community college students. Similarly, the study could be replicated with African American male students within four-year environments to determine if the latent variable structure remains consistent and whether there are differences between the races and sexes within that field.

Likewise, cultural capital was found to not be a predictor of graduation for African American males as was consistent with previous studies of cultural capital and its predictive value on college graduation. Therefore, additional research is still needed to determine predictors of success for African American men in community colleges. For example, this quantitative study did not explore the qualitative features inherent in the college experience which could lead to moments of inclusion or exclusion (Lareau & Horvat, 1999). Specifically, how might the current latent variable structure of cultural capital translate into the college milieu for African American male students? Future research on these aspects could lead to auxiliary components of cultural capital effecting African American male community college students that may be more pronounced than the variables of cultural capital itself.

Additionally, cultural arts participation (as defined as going to museums, the orchestra, and taking music and dance lessons) did not load as factors indicative of cultural capital for this sample of community college students. This finding is consistent with previous research suggesting cultural arts participation defined in these terms are not relevant for the American culture (De Graaf et al., 2000; DiMaggio, 1982, Dumais, 2002). Perhaps, future studies of

cultural capital should refine cultural arts participation as an indicator of cultural capital through the attending of plays and concerts, as these specific behaviors did load as measures of cultural capital. Similarly, Kalmijn and Kraaykamp (1996) highlight the attending of plays and concerts as a better indicator of cultural capital as it allows for the ethnic and racial disparities in cultural arts participation to be honored. Specifically, they found increases in the cultural capital of African Americans when references included more ethnically related events such as African American plays and jazz concerts.

Lastly, the results of the factor analysis have implications for counselors in various settings: community mental health, high schools, and community colleges. The emphasis on parental involvement and engagement with parents can be possibly advocated, modeled, and stressed by community mental health counselors conducting family therapy and parenting workshops to help parents promote a successful transition for their community college bound teenager. The results of this study regarding cultural capital suggested that encouraging parents to (a) be more proactive about their teenager's high school academic experiences, (b) be more involved with school personnel at their respective high school, and (c) create and maintain an open and honest communication relationship with their teenager may all prove to be educationally advantageous (Berkovitz, 2002). Some suggested activities to build cultural capital include parents (a) going to plays and concerts with their teenager, (b) doing fun things with their teenager, and (c) encouraging and supporting their teenager's participation in extracurricular activities in high school (Berkovitz, 2002).

Similarly, high school counselors and college counselors within the high school setting can encourage parents to be more involved and engaged with their teenager's current academic activities, as well as, their plans post high school. Increasing this parental involvement could be

discussed with parents during college preparatory programming for high school students and treated as an intervention. Similarly, this intervention could be considered a variable of cultural capital and measured for its impact on the community college success of African American male students. Interestingly, many of the factors outlined through the factor analysis focused on areas that are required prior to college entrance, however, there are still some areas for which community college counselors can impact the cultural capital of students both prior to and after their college enrollment.

Implications for Counselors in Community College Settings

The role of the community college counselor is varied depending on their location within the country (CCBC, n.d.; NVCC, 2013). For some community college counselors, their job responsibilities center on academic advising, high school outreach, schedule planning, and first year experience programming (NVCC, 2013). For others, their position may require a professional counseling license, and they may be engaged in mental health counseling for the community college (CCBC, n.d.). For the purposes of this research, the implications being outlined are specifically for the community college counselors engaged in academic advising, high school outreach, and first year experience programming. This type of community college counselor will herein be referred to as “counselor.” The implications for counselors in community college environments will focus on the specific behaviors and interventions that counselors can implement to enhance the cultural capital being brought to the community college environment by African American men. Consequently, counselors in this setting can be most instrumental with imparting the awareness of college norms: in some cases, the altering of a student’s habitus, the encouragement of parental engagement, and increasing collaboration with high school counselors and college counselors within the high school.

Previous research has acknowledged the ability to engage in “strategic interactions” with key stakeholders, school administrators, and teachers as cultural capital (Dumais & Ward, 2010). These key stakeholders, school administrators (i.e., counselors) can be identified as institutional agents, authority figures with the right mix of status, institutional information, resources, and influential social networks necessary to facilitate the development of social capital with underrepresented groups (Stanton-Salazar, 2010). Museus and Neville (2012) conducted a qualitative study at four predominately White institutions to determine the key characteristics of institutional agents. They found that in order for institutional agents to impact the development of social capital in students, they must convey several major themes to include an emphasis on academic achievement, a value for educational accomplishment, and a validation of the student’s cultural background.

Based on the findings of this current research study, it can be argued that these themes could be pertinent for imparting cultural capital as well. Therefore, lending itself to four main areas for which institutional agents can impart both social and cultural capital in students of color in higher education. Adapting specifically for counselors by this researcher, Museus and Neville’s (2012) four recommendations for institutional agents include, firstly, counselors can share commonalities with the student that will establish trust through common backgrounds, common experiences, and common knowledge about the student’s experiences. Secondly, counselors can provide comprehensive support that is inclusive of recognizing the multiple needs that underrepresented students bring to the college environment and ensuring that the student is appropriately directed to the correct resources. Thirdly, counselors can present themselves as “human” and not just a representative of their working title, as this helps to demonstrate an

authentic sense of caring about the success of the student. Lastly, counselors can be proactive, visible, and unafraid to initiate conversations with underrepresented students about their success.

These recommended behaviors require intrusive intervention by the college counselor tasked with assisting college students. For example, when meeting with an African American male for the first time, counselors might ensure that this becomes a “strategic interaction”. During the course of the meeting, counselors should consider taking a few minutes to ask the student about his major and future career goals, regardless of whether this was the initial intent of the meeting. This could help the counselor identify the student’s habitus. Similarly, the counselor could ask the student whether the student is aware of (a) the pertinent support services on campus (i.e., financial aid, student activities, etc.), (b) how and when to access these services, and (c) where they are located on the campus. Prior to the conclusion of the meeting, counselors could ensure that the student leaves with a business card and the invitation for future contact should there be any additional questions or concerns. This could help the counselor make the student aware of college norms.

For many community college environments, there is a “transition to college course” and/or a new student orientation program that is part of the first year experience programming. These activities are either mandatory for all first time degree seeking students or is optional to all students. When meeting with African American males or conducting outreach on behalf of the college, consider strongly encouraging these students to participate in these programs. If these are not programs for which counselors are directly involved, counselors could consider making a concerted effort to partner with those who are and encourage the course or program content to focus on the culture of college, both teacher and student expectations, and classroom etiquette (Leese, 2010). At the same time, counselors could ensure that these students are provided

specific contact information for personnel for whom they can seek in the event of unforeseen difficulty. These actions could assist in helping the student be aware of college norms and increase their sense of belonging within the community college environment thereby enhancing their cultural capital.

Similarly, there is an increased need for parental involvement with regard to precipitating and maintaining the academic success of African American men in postsecondary education (Strayhorn, 2008; Warde, 2008). The current research study also found parent reported parental involvement and student reported engagement with parents to be key factors of cultural capital for community college students. Therefore, counselors could be instrumental in developing strategies for improving the communication between students and parents and outlining the ways in which parental involvement can be most beneficial in the community college environment. For example, parent programs could be a part of new student orientation and could be geared towards strategies for parents to support their student(s) through college. Similarly, student and teacher expectations could be addressed with the parents, refraining from focusing solely on the parents' inability to be as involved in college as they may have been in high school. Yet, focusing on things parents could do at home and during the matriculation process to ensure the retention and graduation of their student(s). For example, parents could be advised to ask their sons about their future plans and their strategy for completing their education. Further recommendations could be for parents to ask their sons if they have spoken to anyone on campus about their goals and if they are participating in the social engagement activities available on campus, such as student government and/or social clubs and organizations.

Likewise, counselors should consider being increasingly collaborative with the high school counselors and college counselors within the high school environments. These

relationships could focus on including pertinent non-academic indicators of college success in the college preparatory curricula as outlined through the variables of cultural capital.

Community college counselors could make connections that will allow the counselor to provide workshops to students and parents highlighting the cultural capital required for college success. When conducting these workshops counselors should consider emphasizing the importance of being socially and athletically engaged both in high school and in college. When speaking directly with parents counselors might stress the importance of strong communication based relationships with their teenager's to ensure greater success in college. Counselors could stress the importance of parents encouraging and supporting the participation of their teenager in extracurricular activities and provide examples of how that might be done. By building relationships with the high school counselors and college counselors within the high schools, community college counselors could encourage more visibility for themselves during college focused events.

Lastly, in order for counselors to be effective in their role as agents of the institution, when working specifically with African American males, Owens et al. (2010) suggested that counselors be "keenly" aware of the challenges these men have faced over time. Counselors need to demonstrate a willingness to work with this population and assist them with coping skills necessary to surpass some of barriers associated with their college success. For example, counselors can act as mentors by not only listening to the perspectives of these students but by also being willing to discuss issues related to racism and discrimination and validating those experiences when necessary. Similarly, cultural capital could be enhanced by outlining the importance of networking with faculty and alumni and encouraging students to get involved with professional and student organizations (Owens et al., 2010). Counselors could be proactive

about assisting students with the negotiation of relationships both inside and outside of the institution and seek out appropriate mentors to further assist them in their educational and career pursuits (Owens et al.). All of these behaviors could potentially increase a student's cultural capital by altering the student's habitus, as well as, increasing the awareness of college norms for the purposes of increased graduation.

Summary

The purpose of this study was to focus on the theoretical framework of cultural capital as a catalyst for the graduation rates of African American men in community colleges. Exploratory factor analysis (EFA), factorial analysis of variance (ANOVA), and binary logistic regression were used to identify (a) the latent variable structure of a measure of cultural capital within the community college field, (b) the differences between the self-reported levels of cultural capital for African American male students as compared to male and female students of other races within the community college field, and (c) how well cultural capital predicts the graduation of African American men in community colleges. The findings concluded with a measureable construct of cultural capital outlining the latent variable structure. The factorial ANOVA concluded that there were no significant differences between the self-reported levels of cultural capital for African American male students as compared to male and female students of other races within the community college. The binary logistic regression also concluded that cultural capital was not a significant predictor of graduation for African American male students within this sample of community college students. As a result, delimitations for the study were discussed to include the need for a more complete dataset minimizing the use of imputation to replace missing values, and, a more complete variable set utilizing adequate and comprehensive social class variables. Likewise, implications for future research were outlined to include

replicating the study with a more current dataset and replicating the study with a four-year student population. Implications for counselors in community college settings also were highlighted centering on imparting an awareness of college norms, encouraging student engagement with parents, increasing parental involvement, and collaboration with high school counselors and college counselors in high school environments. Consequently, this study examined the measureable indicators of cultural capital for the U.S. culture and has provided a foundation for which future studies can build. However, based on the delimitations of this study, the need still remains to identify the predictors of graduation for African American males in community colleges, specifically as it pertains to the presence of cultural capital.

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APPENDIX A

IRB Approval Letter

Office of Research Compliance Institutional Review Board North End Center, Suite 4120,
Virginia Tech 300 Turner Street NW Blacksburg, Virginia 24061 540/231-4606 Fax
540/231-0959 email irb@vt.edu website <http://www.irb.vt.edu>

MEMORANDUM

DATE: May 28, 2013
TO: Simone Lambert, Robtrice D Brawner
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)
PROTOCOL TITLE: Cultural capital and the impact on graduation for African American men in community colleges
IRB NUMBER: **13-226**

Effective May 24, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at: <http://www.irb.vt.edu/pages/responsibilities.htm>
(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As: **Exempt, under 45 CFR 46.110 category(ies) 4**
Protocol Approval Date: **May 24, 2013**
Protocol Expiration Date: **N/A**
Continuing Review Due Date*: **N/A**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Date*	OSP Number	Sponsor	Grant Comparison Conducted?

* Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.

APPENDIX B

Permission Email for Social and Cultural Capital Questionnaire

reza pishghadam <rpishghadam@yahoo.com> May 6 (2 days ago)

to robtri5

hi. sure you can use it.
best
reza pishghadam

On Mon, May 6, 2013 8:05 PM IRDT Robtrice Brawner wrote:

Good Morning,

My name is Robtrice Brawner and I am a doctoral candidate at Virginia Polytechnic Institute and State University (Virginia Tech). My dissertation topic focuses on cultural capital and the impact on graduation for African American men in community colleges. I am planning to utilize public use data from a survey conducted in the United States and I would like to make reference to several items used on your social and cultural capital questionnaire. Currently I am planning to cite several of your exact questions used and was wondering if I could get your written permission to do so?

Please let me know as soon as you can.

Thank you,

Robtrice Brawner

APPENDIX C

Permission Email for CCSSE

May 6 (2 days ago)

Mike Bohlig

to me

Hi Robtrice,

If you are going to use data from NELS and all you are doing is looking for items that are similar to CCSSE items, then you do not need our permission to proceed. The survey is available from our website. The only thing we ask is, that if you quote the full text of any items from the survey, that you properly cite the source. The correct source would be:

Center for Community College Student Engagement, Community College Survey of Student Engagement [date of survey version -- e.g., 2008], The University of Texas at Austin.

Good luck with your dissertation. Please let me know if you have any questions about this email.

Thanks,

Mike.

E. Michael Bohlig, Ph.D. | Senior Research Associate

Center for Community College Student Engagement

Community College Leadership Program | College of Education

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APPENDIX D

NELS:88/00 questions and matching items from the Social and Cultural Capital Questionnaire

Item #	<u>NELS:88/00</u>		<u>Social and Cultural Capital Questionnaire</u>	
	Questions	Follow-up Survey	Questions	
F2S12BB	Chose program with a counselor or teacher?	F2 Student Pub	#37 I usually talk about job/education with other adults	
F2S12BC	Chose program with parents?	F2 Student Pub	#36 I usually talk about job/education with family	
F2N12B	Family receives a daily newspaper	F2 Student Pub	#10 When a child, my parents regularly encouraged me to read	
F2N12M	Does family have more than 50 books	F2 Student Pub	#11 We have lots of books at home	
F2S30AA	Participated on a team sport at school?	F2 Student Pub	#34 I used to participate in extracurricular activities	
F2S30AB	Participated in an individual sport at school?	F2 Student Pub	#34 I used to participate in extracurricular activities	
F2S31	Time spent on extracurricular activities?	F2 Student Pub	#34 I used to participate in extracurricular activities	
F2S30BA	Participated in school music group?	F2 Student Pub	#33 I used to participate in school activities regularly	

F2S30BB	Participated in school play or musical?	F2 Student Pub	#33 I used to participate in school activities regularly
F2S30BF	Participated in school service clubs?	F2 Student Pub	#33 I used to participate in school activities regularly
F2S30BG	Participated in school academic clubs?	F2 Student Pub	#33 I used to participate in school activities regularly
F2S30BH	Participated in school hobby clubs?	F2 Student Pub	#33 I used to participate in school activities regularly
F2S33H	How often do you do things w/mother or father?	F2 Student Pub	#20 I frequently perform activities together with my parents
F2S33J	How often do you take music, art, or dance classes?	F2 Student Pub	#12 I used to take art or music classes outside of school
F2S68B	Among your friends, how important is it to study?	F2 Student Pub	#25 I have friends with high educational expectations
F2S68D	Among your friends, how important is it to get good grades?	F2 Student Pub	#25 I have friends with high educational expectations
F2S68F	Among your friends, how important is it to finish high school?	F2 Student Pub	#25 I have friends with high educational expectations
F2S68H	How important is it to continue education past high school?	F2 Student Pub	#25 I have friends with high educational expectations
F2S69A	How many of your friends have dropped out of high school?	F2 Student Pub	#25 I have friends with high educational expectations

F2S69B	How many of your friends have no plans for college?	F2 Student Pub	#25 I have friends with high educational expectations
F2S97	My parents know my closest friends parents	F2 Student Pub	#32 My parents know parents of my friends
F2S99A	Discussed school courses with a parent	F2 Student Pub	#28 At home, my parents keep track of my progress; #19 My parents used to monitor my homework regularly; #36 I usually talk about job/education with family; #14 I regularly talk with my parents
F2S99C	Discusses things studied in class with a parent	F2 Student Pub	#28 At home, my parents keep track of my progress; #19 My parents used to monitor my homework regularly; #36 I usually talk about job/education with family; #14 I regularly talk with my parents
F2S99D	How often do you discuss grades with your parents?	F2 Student Pub	#28 At home, my parents keep track of my progress; #19 My parents used to monitor my homework regularly; #36 I usually talk about job/education with family; #14 I regularly talk with my parents
F2S99E	Discussed prep for the ACT/ SAT Test	F2 Student Pub	#28 At home, my parents keep track of my progress; #19 My parents used to monitor my homework regularly; #36 I usually talk about job/education with family; #14 I regularly talk with my parents
F2S99F	Discussed going to college with parents	F2 Student Pub	#28 At home, my parents keep track of my progress; #19 My parents used to monitor my homework regularly; #36 I usually talk about job/education with family; #14 I regularly talk with my parents

F2S99B	Discussed school activities with a parent	F2 Student Pub	#21 My mom used to encourage me in my school activities regularly
F2S99G	Discussed job possibilities after high school	F2 Student Pub	#36 I usually talk about job/education with family; #14 I regularly talk with my parents
F2S99I	Discussed troubling things with parents	F2 Student Pub	#14 I regularly talk with my parents
F2S100A	Parents trust you will do what they expect?	F2 Student Pub	#29 My parents know where I am, what I do
F2S100E	My parents get along well w/each other?	F2 Student Pub	#41 My parents have strong ties with each other
F2P44A	Parent contacted school about teens academic performance	F2 Parent Pub	#13 My mother used to get involved in my primary schooling; #22 My mom used to attend school meeting regularly; #31 My parents used to have a regular connection with my school
F2P44B	Parent contacted school about teens academic program	F2 Parent Pub	#13 My mother used to get involved in my primary schooling; #22 My mom used to attend school meeting regularly; #31 My parents used to have a regular connection with my school
F2P44C	Parent contacted school about teen's plans after high school	F2 Parent Pub	#13 My mother used to get involved in my primary schooling; #22 My mom used to attend school meeting regularly; #31 My parents used to have a regular connection with my school
F2P44D	Parent contacted school about teens college prep course selections	F2 Parent Pub	#13 My mother used to get involved in my primary schooling; #22 My mom used to attend school meeting regularly; #31 My parents used to have a regular connection with my school

F2P45A	Parent attended program about educational opportunities after high school	F2 Parent Pub	#13 My mother used to get involved in my primary schooling; #22 My mom used to attend school meeting regularly; #31 My parents used to have a regular connection with my school
F2P45B	Parent attended program about college financial aid	F2 Parent Pub	#13 My mother used to get involved in my primary schooling; #22 My mom used to attend school meeting regularly; #31 My parents used to have a regular connection with my school
F2P45C	Parent attended program about employment opportunities	F2 Parent Pub	#13 My mother used to get involved in my primary schooling; #22 My mom used to attend school meeting regularly; #31 My parents used to have a regular connection with my school
F2P46A	Parent knows which courses teen is taking	F2 Parent Pub	#14 I regularly talk with my parents; #36 I usually talk about job/education with family; #28 At home my parents keep track of my progress
F2P46B	Parent knows how well teen is doing in school	F2 Parent Pub	#14 I regularly talk with my parents; #36 I usually talk about job/education with family; #28 At home my parents keep track of my progress
F2P46C	Parent knows # of credits teen has towards graduation	F2 Parent Pub	#14 I regularly talk with my parents; #36 I usually talk about job/education with family; #28 At home my parents keep track of my progress
F2P46D	Parent knows # of credits teen needs to graduate	F2 Parent Pub	#14 I regularly talk with my parents; #36 I usually talk about job/education with family; #28 At home my parents keep track of my progress

F2P49A	Parent discusses with teen selecting courses	F2 Parent Pub	#14 I regularly talk with my parents; #36 I usually talk about job/education with family; #28 At home my parents keep track of my progress
F2P49C	Parent discusses with teen things teen as studied	F2 Parent Pub	#14 I regularly talk with my parents; #36 I usually talk about job/education with family; #28 At home my parents keep track of my progress
F2P49D	Parent discusses with teen, teen's grades	F2 Parent Pub	#14 I regularly talk with my parents; #36 I usually talk about job/education with family; #28 At home my parents keep track of my progress
F2P49F	Parent discusses with teen applying to colleges	F2 Parent Pub	#28 I regularly talk with my parents; #36 I usually talk about job/education with family; #28 At home my parents keep track of my progress
F2P49E	Parent discusses with teen plans to take SAT / ACT	F2 Parent Pub	#14 I regularly talk with my parents; #36 I usually talk about job/education with family
F2P49G	Parent discusses with teen jobs teen might apply to	F2 Parent Pub	#14 I regularly talk with my parents; #36 I usually talk about job/education with family
F2P49B	Parent discusses with teen school activities	F2 Parent Pub	#21 My mom used to encourage me in my school activities regularly
F2P49I	Parent discusses with teen things troubling teen	F2 Parent Pub	#14 I regularly talk with my parents

F2P49J	Parent discusses with teen, teen's interests/hobbies	F2 Parent Pub	#14 I regularly talk with my parents; #21 My mom used to encourage me in my school activities regularly
F2P50A	Parent attended school activities with teen	F2 Parent Pub	#20 I frequently perform activities together with my parents
F2P50C	Parents attended concerts, plays, movies with teen	F2 Parent Pub	#20 I frequently perform activities together with my parents
F2P50D	Parents attended sports events outside of school with teen	F2 Parent Pub	#20 I frequently perform activities together with my parents
F2P50F	Parents attended family social functions with teen	F2 Parent Pub	#20 I frequently perform activities together with my parents
F2P50L	Parent did something else fun with teen	F2 Parent Pub	#20 I frequently perform activities together with my parents
F2P50B	Parent worked on homework/projects with teen	F2 Parent Pub	#19 My parents used to help me with my homework regularly
F2P50K	Parent spent time talking with teen	F2 Parent Pub	#14 I regularly talk with my parents
F2P51A	There is a family rule about maintaining a grade point average	F2 Parent Pub	#28 At home my parents keep track of my progress
F2P51B	There is a family rule about doing homework	F2 Parent Pub	#28 At home my parents keep track of my progress
F2P51C	There is a family rule about attending school regularly	F2 Parent Pub	#28 At home my parents keep track of my progress
F2P53	Parent knows 1st name of teen's friends	F2 Parent Pub	#32 My parents know parents of my friends

F2P54B1	Parent knows parent(s) of teen's 1st friend	F2 Parent Pub	#32 My parents know parents of my friends
F2P62A	Parent encouraged teen to prepare for SAT	F2 Parent Pub	#36 I usually talk about job/education with family
F2P62B	Parent encouraged teen to prepare for ACT	F2 Parent Pub	#36I usually talk about job/education with family
F2P63	Parent talked to teen about applying for college	F2 Parent Pub	#36 I usually talk about job/education with family
F2P65A	Teen wants to decide about college by themselves	F2 Parent Pub	#36 I usually talk about job/education with family
F2P65B	Parent talked to teen about particular schools	F2 Parent Pub	#36 I usually talk about job/education with family
F2P65C	Parent talked to teen in general about schools	F2 Parent Pub	#36 I usually talk about job/education with family
F2P65D	Parent gave teen information from school	F2 Parent Pub	#36 I usually talk about job/education with family
F2P67	Parent visited how many schools with teen	F2 Parent Pub	#36 I usually talk about job/education with family
TALKPARN	Time talking / doing w / parents	F3 Experiences and Opinions	#14 I regularly talk with my parents; #20 I frequently perform activities together with my parents
F4ICULT	Integration-attend plays, concerts	F4 Other Outcomes	#6 I frequently visit museums, theaters, or attend concerts

READING	Time spent reading for pleasure	F3Experiences and Opinions	#9 I enjoy reading (in general)
F4LIBRY	Integration-go to public library	F4 Other Outcomes	#7 I frequently buy/borrow books

Note. The items in columns 1-3 are from “NELS:88/2000 Public Use Data Files and Electronic Codebook – Base Year through Fourth Follow-up, by I. Berkovits, 2002, U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (Publication #NCES 2002322REV). Retrieved from <http://nces.ed.gov/EDAT/index.aspx?agrmnt=1>.

Note. The questions in column 4 are from “The construct validation of a questionnaire of social and cultural capital,” by R. Pishghadam, M. Noghani, & R. Zabihi, 2011, *English Language Teaching*, 4, p. 202-203.

APPENDIX E

NELS:88/00 questions and matching items from the Community College Survey of Student Engagement (CCSSE)

Item #	<u>NELS:88/00</u> Questions	Follow-up Survey	<u>CCSSE</u> Questions
F2S9B	How many times did you cut/skip classes?	F2 Student Pub	#4 In your experiences at this college during the current school year, about how often have you done each of the following? (u) Skipped class?
F2S12BB	Chose program with a counselor or teacher?	F2 Student Pub	#4 In your experiences at this college during the current school year, about how often have you done each of the following? (m) Talked about career plans with an instructor or advisor?
F2S13E	Ever in an advanced placement program?	F2 Student Pub	#8 Which of the following have you done, are you doing, or do you plan to do while attending this college? (g) Honors course
F2S13J	Ever been in a gifted/talented program?	F2 Student Pub	#8 Which of the following have you done, are you doing, or do you plan to do while attending this college? (g) Honors course
F2S24B	Go to class without books	F2 Student Pub	#4 In your experiences at this college during the current school year, about how often have you done each of the following? (e) come to class without completing readings or assignments

F2S24C	Go to class without homework done?	F2 Student Pub	#4 In your experiences at this college during the current school year, about how often have you done each of the following? (e) come to class without completing readings or assignments
F2S25F2	Total time spent on homework outside of school?	F2 Student Pub	#10 About how many hours do you spend in a typical 7-day week doing each of the following? (a) Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)
F2S41A	Father's desire for you after high school?	F2 Student Pub	#16 How supportive is your immediate family of your attending this college?
F2S41B	Mother's desire for you after high school?	F2 Student Pub	#16 How supportive is your immediate family of your attending this college?
F2S42A	How far in school does father want you to go?	F2 Student Pub	#16 How supportive is your immediate family of your attending this college?
F2S42B	How far in school does mother want you to go?	F2 Student Pub	#16 How supportive is your immediate family of your attending this college?
F2S59A	How important are college expenses?	F2 Student Pub	#14 How likely is it that the following issues would cause you to withdraw from class or from this college? (d) Lack of finances
F2S59B	How important is financial aid?	F2 Student Pub	#14 How likely is it that the following issues would cause you to withdraw from class or from this college? (d) Lack of finances

F2S68A	Important to attend classes regularly?	F2 Student Pub	#4 In your experiences at this college during the current school year, about how often have you done each of the following: (u) Skipped class
F2S69C	# of friends to work full-time post high school?	F2 Student Pub	#15 How supportive are your friends of your attending this college?
F2S69D	# of friends to attend a 2 year CC / Tech school?	F2 Student Pub	#15 How supportive are your friends of your attending this college?
F2S69E	# of friends to attend a 4 year school	F2 Student Pub	#15 How supportive are your friends of your attending this college?
F2P80	Grade teen in when parent started saving for college?	F2 Parent Pub	#18 Indicate which of the following are sources you use to pay your tuition at this college? (b) Parent or spouses/significant other's income/savings
F2P81	Money parent set aside for teen's future education?	F2 Parent Pub	#18 Indicate which of the following are sources you use to pay your tuition at this college? (b) Parent or spouses/significant other's income/savings
F2P86A	Parent or teen has applied for loans?	F2 Parent Pub	#18 Indicate which of the following are sources you use to pay your tuition at this college? (e) Student loans (bank, etc.)
F2P86B	Parent or teen has applied for scholarships/grants?	F2 Parent Pub	#18 Indicate which of the following are sources you use to pay your tuition at this college? (d) Grants and scholarships

F2P90	Amount parent expects to spend on teen's education next year?	F2 Parent Pub	#18 Indicate which of the following are sources you use to pay your tuition at this college?
RENGGLISH	Courses in remedial English	F3 PSE Education	#8 Which of the following have your done, are you doing, or do you plan to do while attending this college? (c)Developmental/remedial reading course, (d) developmental/remedial writing course.
TUTOR	Formal tutoring by faculty / student	F3 PSE Education	#13 (1) How often you use the following services (d) peer or other tutoring
COUNSEL	Personal,academic,financial,career counseling	F3 PSE Education	#13 (1) How often you use the following services (a) Academic advising/planning, (b) career counseling, (g) financial aid advising
SPECINST	Special instruction in Eng/ math/ read/ writing	F3 PSE Education	#8 Which of the following have your done, are you doing, or do you plan to do while attending this college? (c)Developmental/remedial reading course, (d) developmental/remedial writing course (e) Developmental/remedial math course
OTHERATH	Other intercollegiate athletics	F3 PSE Education	#10 About how many hours do you spend in a typical 7-day week doing each of the following? (c) participating in college-sponsored activities (organizations, campus publications, student government, intercollegiate or intramural sports, etc.)

INTRATH	Intramural athletics	F3 PSE Education	#10 About how many hours do you spend in a typical 7-day week doing each of the following? (c) participating in college-sponsored activities (organizations, campus publications, student government, intercollegiate or intramural sports, etc.)
NEWSRADI	Do college newspaper	F3 PSE Education	#10 About how many hours do you spend in a typical 7-day week doing each of the following? (c) participating in college-sponsored activities (organizations, campus publications, student government, intercollegiate or intramural sports, etc.)
STDTGOV	Student government / politics	F3 PSE Education	#10 About how many hours do you spend in a typical 7-day week doing each of the following? (c) participating in college-sponsored activities (organizations, campus publications, student government, intercollegiate or intramural sports, etc.)
SOCLCLUB	Social clubs, fraternities	F3 PSE Education	#10 About how many hours do you spend in a typical 7-day week doing each of the following? (c) participating in college-sponsored activities (organizations, campus publications, student government, intercollegiate or intramural sports, etc.)
EDEXPECT	Highest level of education expected	F3 PSE Education	#17 Indicate which of the following are your reason/goals for attending this college
ACTSTA1	Working full- or part-time	F3 Experiences and Opinions	#10 About how many hours do you spend in a typical 7-day week doing each of the following? (b) working for pay

F4EGRD	Grades at highest undergrad institution	F4 Postsecondary Education	#21 At this college, in what range is your overall college grade average?
F4IMAGS	Integration-read papers or magazines	F4 Other Outcomes	#6 During the current school year about how much reading and writing have you done at this college? (b) number of books read on your own (not assigned) for personal enjoyment or academic enrichment
F4IBOOKS	Integration-read books	F4 Other Outcomes	#6 During the current school year about how much reading and writing have you done at this college? (b) number of books read on your own (not assigned) for personal enjoyment or academic enrichment
F4ICOMPT	Integration-use computer at home	F4 Other Outcomes	# 4 In your experiences at this college during the current school year, about how often have you done each of the following? (j) Used the internet or instant messaging to work on an assignment; (k) Used e-mail to communicate with an instructor
F4IINET	Integration-Internet for information	F4 Other Outcomes	# 4 In your experiences at this college during the current school year, about how often have you done each of the following? (j) Used the internet or instant messaging to work on an assignment; (k) Used e-mail to communicate with an instructor
F3PSECT	PSE: Continuity of enrollment	F3 PSE Attendance at Student level	#1 Did you begin college at this college or elsewhere?

GRANTS	Grants / scholarships / fellowships	F3 PSE Attendance at Student level	#18 Indicate which of the following are sources you use to pay your tuition at this college?
LOANS	Loans	F3 PSE Attendance at Student level	#18 Indicate which of the following are sources you use to pay your tuition at this college?
OTH_FINA	Other financial aid	F3 PSE Attendance at Student level	#18 Indicate which of the following are sources you use to pay your tuition at this college?
AMT_FINA	Total amount of financial aid received / year	F3 PSE Attendance at Student level	#18 Indicate which of the following are sources you use to pay your tuition at this college?

Note. The items in columns 1-3 are from “NELS:88/2000 Public Use Data Files and Electronic Codebook – Base Year through Fourth Follow-up, by I. Berkovits, 2002, U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (Publication #NCES 2002322REV). Retrieved from <http://nces.ed.gov/EDAT/index.aspx?agrmnt=1>.

Note. The questions in column 4 are from “The community college survey of student engagement (2013),” Center for Community College Student Engagement, The University of Texas, Austin. Retrieved from www.ccsse.org/aboutsurvey/aboutsurvey.cfm. Copyright CCSSE, Reprinted with permission.

APPENDIX F

NELS:88/00 demographic questions

Item #	Questions	Follow-up Survey
F3QSEX	Respondent sex	F3 General Information
F3QRACE	Respondent race	F3 General Information
F4EFSECT	Sector for first PSE attended	F4 Postsecondary Education
F4TYPEDG	Types of PSE degrees attained as of 2000	F4 Postsecondary Education

Note. The items in columns 1-3 are from “NELS:88/2000 Public Use Data Files and Electronic Codebook – Base Year through Fourth Follow-up, by I. Berkovits, 2002, U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (Publication #NCES 2002322REV). Retrieved from <http://nces.ed.gov/EDAT/index.aspx?agrmnt=1>.

APPENDIX G

NELS:88/00 recoded question responses

Item #	Questions	Previous Codes	Current Codes
F2P45A	Parent attended program about educational opportunities after high school	3 = Didn't know about program	3 = 0 (No)
F2P45B	Parent attended program about college financial aid		
F2P45C	Parent attended program about employment opportunities		
F2P46A	Parent knows which courses teen is taking	3 = Does not apply	3 = 0 (No)
F2P46B	Parent knows how well teen is doing in school		
F2P46C	Parent knows # of credits teen has towards graduation		
F2P46D	Parent knows # of credits teen needs to graduate		
F2P51A	There is a family rule about maintaining a grade point average	3 = Does not apply	3 = 0 (No)
F2P51B	There is a family rule about doing homework		
F2P51C	There is a family rule about attending school regularly		
F2P62A	Parent encouraged teen to prepare for SAT	2 = No, no prep necessary	2 = 0 (No)
F2P62B	Parent encouraged teen to prepare for ACT	3 = No, no other reason 4 = No, test not necessary 5 = Not heard of it	3 = 0 (No) 4 = 0 (No) 5 = 0 (No)
F2P86A	Parent or teen has applied for loans?	2 = Yes, don't know if approved	2 = 1 (Yes)
F2P86B	Parent or teen has applied for scholarships/grants?	3 = Yes, turned down 4 = No didn't apply	3 = 1 (Yes) 4 = 0 (No)
F2P50A	Parent attended school activities with teen	5 = Does not apply	5 = 0 (No)

F2P50B	Parent worked on homework/projects with teen		
TUTOR	Formal tutoring by faculty / student	1 = Not available	1 = 0 (No)
COUNSEL	Personal,academic,financial,career counseling	2 = Available, not received	2 = 0 (No)
SPECINST	Special instruction in Eng/ math/ read/ writing	3 = Received	3 = 1 (Yes)
F4IMAGS	Integration-read papers or magazines	99 = Less than one day each wk	99 = .5
F4IBOOKS	Integration-read books		
F4ICOMPT	Integration-use computer at home		
F4IINET	Integration-Internet for information		
F4ILIBRY	Integration-go to public library		
F4ICULT	Integration-attend plays, concerts		
F2S30AA	Participated on a team sport at school?	1 = School doesn't have	1 = 0 (No)
F2S30AB	Participated in an individual sport at school?	2 = Didn't participate	2 = 0 (No)
F2S30BA	Participated in school music group?		
F2S30BB	Participated in school play or musical?		
F2S30BF	Participated in school service clubs?		
F2S30BG	Participated in school academic clubs?		
F2S30BH	Participated in school hobby clubs?		
F2S41A	Father's desire for you after high school	1 = Does not apply	1 = 0 (No)
F2S41B	Mother's desire for you after high school		
F2S97	My parents know my closest friends parents	1 = No 4 = Don't know	1 = 0 (No) 4 = 0 (No)
F2P56A	Parent discusses things at teen's school with other parents	5 = Does not apply	5 = 0 (No)

F4TYPEDG Types of PSE degrees attained as of 2000

1 = None	1 = 0 (No)
2 = Certificate/license only	2 = 0 (No)
3 = AA only	3 = 1 (Yes)
4 = BA only	4 = 0 (No)
5 = Certificate & AA only	5 = 1 (Yes)
6 = Certificate & BA only	6 = 0 (No)
7 = AA & BA only	7 = 1 (Yes)
8 = Certificate, AA, & BA only	8 = 1 (Yes)
9 = MA only	9 = 0 (No)
10 = Ph.D/Professional doctorate	10 = 0 (No)

Note. The items in columns 1-3 are from “NELS:88/2000 Public Use Data Files and Electronic Codebook – Base Year through Fourth Follow-up, by I. Berkovits, 2002, U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (Publication #NCES 2002322REV). Retrieved from <http://nces.ed.gov/EDAT/index.aspx?agrmnt=1>.

APPENDIX H

NELS:88/00 question groupings

Item #	Questions	Grouping Variable
F2S13E	Ever in an advanced placement program?	Experience with advanced coursework in HS (HSadvanceCW)
F2S13J	Ever been in a gifted/talented program?	
F2S30AA	Participated on a team sport at school?	Participation in HS sporting activities (HSsports)
F2S30AB	Participated in an individual sport at school?	
F2S30BA	Participated in school music group?	Participation in HS cultural activities(HScultural)
F2S30BB	Participated in school play or musical?	
F2S33J	How often do you take music, art, or dance classes?	
F2S30BF	Participated in school service clubs?	Participation in HS clubs (HSclubs)
F2S30BG	Participated in school academic clubs?	
F2S30BH	Participated in school hobby clubs?	
F2S68A	Important to attend classes regularly?	Academic standards among friends (AcadStandFriends)
F2S68B	Among your friends, how important is it to study?	
F2S68D	Among your friends, how important is it to get good grades?	
F2S68F	Among your friends, how important is it to finish high school?	
F2S68H	How important is it to continue education past high school?	
F2S69D	# of friends to attend a 2 year CC / Tech school?	

F2S69E	# of friends to attend a 4 year school	
F2S69A	(-) How many of your friends have dropped out of high school?	
F2S69B	(-) How many of your friends have no plans for college?	
F2S69C	(-) # of friends to work full-time post high school?	
F2S9B	How many times did you cut or skip classes?	Friends with low academic standards/Lack of class preparation in HS (LackofHSprep)
F2S24B	Go to class without books?	
F2S24C	Go to class without homework done?	
F2S99A	Discussed school courses with a parent	Student reported discussions with parents about academic progress and goals (SRdiscussparents)
F2S99C	Discusses things studied in class with a parent	
F2S99D	How often do you discuss grades with your parents?	
F2S99E	Discussed prep for the ACT/ SAT Test	
F2S99F	Discussed going to college with parents	
F2S99B	Discussed school activities with a parent	
F2S99G	Discussed job possibilities after high school	
F2S99I	Discussed troubling things with parents	
F2N12B	Family receives a daily newspaper	Familial encouragement to read (FAMreading)
F2N12M	Does family have more than 50 books	
F2P44A	Parent contacted school about teens academic performance	Parental involvement in HS academic issues (ParentInvolvement)
F2P44B	Parent contacted school about teens academic program	
F2P44C	Parent contacted school about teen's plans after high school	
F2P44D	Parent contacted school about teens college prep course selections	

F2P46A	Parent knows which courses teen is taking	
F2P46B	Parent knows how well teen is doing in school	
F2P46C	Parent knows # of credits teen has towards graduation	
F2P46D	Parent knows # of credits teen needs to graduate	
F2P49A	Parent discusses with teen selecting courses	
F2P49C	Parent discusses with teen things teen as studied	
F2P49D	Parent discusses with teen, teen's grades	
F2P45A	Parent attended program about educational opportunities after high school	Parental participation in programs designed for post HS opportunities (ParentparticipationHS)
F2P45B	Parent attended program about college financial aid	
F2P45C	Parent attended program about employment opportunities	
F2S41A	Father's desire for you after High School?	Parental expectations post HS (Parentexpectations)
F2S41B	Mother's desire for you after High School?	
F2S42A	How far in school does your father want you to go?	
F2S42B	How far in school does your mother want you to go?	
F2P50A	Parent attended school activities with teen	Parent reported involvement with teen (PRinvolvementWteen)
F2P50C	Parents attended concerts, plays, movies with teen	
F2P50D	Parents attended sports events outside of school with teen	
F2P50F	Parents attended family social functions with teen	
F2P50L	Parent did something else fun with teen	
F2P50B	Parent worked on homework/projects with teen	
F2P50K	Parent spent time talking with teen	
F2P53	Parent knows 1st name of teen's friends	
F2P49G	Parent discusses with teen jobs teen might apply to	

F2P49B	Parent discusses with teen school activities	
F2P49I	Parent discusses with teen things troubling teen	
F2P49J	Parent discusses with teen, teen's interests/hobbies	
F2P51A	There is a family rule about maintaining a grade point average	Familial academic standards (FAMacadStand)
F2P51B	There is a family rule about doing homework	
F2P51C	There is a family rule about attending school regularly	
F2P54B1	Parent knows parent(s) of teen's 1st friend	Parental involvement with parents of other teens (PRinvolvementWotherparents)
F2P56A	Parent discusses things at teen's school with other parents	
F2P56C	Parent discusses teen's career plans with other parents	
F2P62A	Parent encouraged teen to prepare for SAT	Parental discussions with teen about attending college (ParentdissussAttendingcollege)
F2P62B	Parent encouraged teen to prepare for ACT	
F2P63	Parent talked to teen about applying for college	
F2P65B	Parent talked to teen about particular schools	
F2P65C	Parent talked to teen in general about schools	
F2P65D	Parent gave teen information from school	
F2P67	Parent visited how many schools with teen	
F2P49F	Parent discusses with teen applying to colleges	
F2P49E	Parent discusses with teen plans to take SAT / ACT	
F2P65A	(-) Teen wants to decide about college by themselves	
F2P84B	Talked w/college rep about financial aid	Parental knowledge of college financial aid (ParentKnowFA)
F2P84D	Talked w/other person about financial aid	
F2P84F	Read college info on financial aid	

TUTOR	Formal tutoring by faculty / student	College academic engagement (CollegeAE)
COUNSEL	Personal,academic,financial,career counseling	
OTHERATH	Other intercollegiate athletics	College athletic engagement (CollegeAthEngagement)
INTRATH	Intramural athletics	
NEWSRADI	Do college newspaper	College social engagement (CollegeSE)
STDTGOV	Student government / politics	
SOCLCLUB	Social clubs, fraternities	
F4IMAGS	Integration-read papers or magazines	Enrichment activities (Enrichment)
F4IBOOKS	Integration-read books	
F4ICOMPT	Integration-use computer at home	
F4IINET	Integration-Internet for information	
F4ILIBRY	Integration-go to public library	
F4ICULT	Integration-attend plays, concerts	
GRANTS	Grants / scholarships / fellowships	College Financial Assistance (CollegeFA)
LOANS	Loans	
OTH_FINA	Other financial aid	
REGLISH	Courses in remedial English	College Remediation (CollegeRemedial)
SPECINST	Special instruction in Eng/ math/ read/ writing	
F2S59A	How important are college expenses?	Importance of college financial assistance (ImportanceFA)
F2S59B	How important is financial aid?	

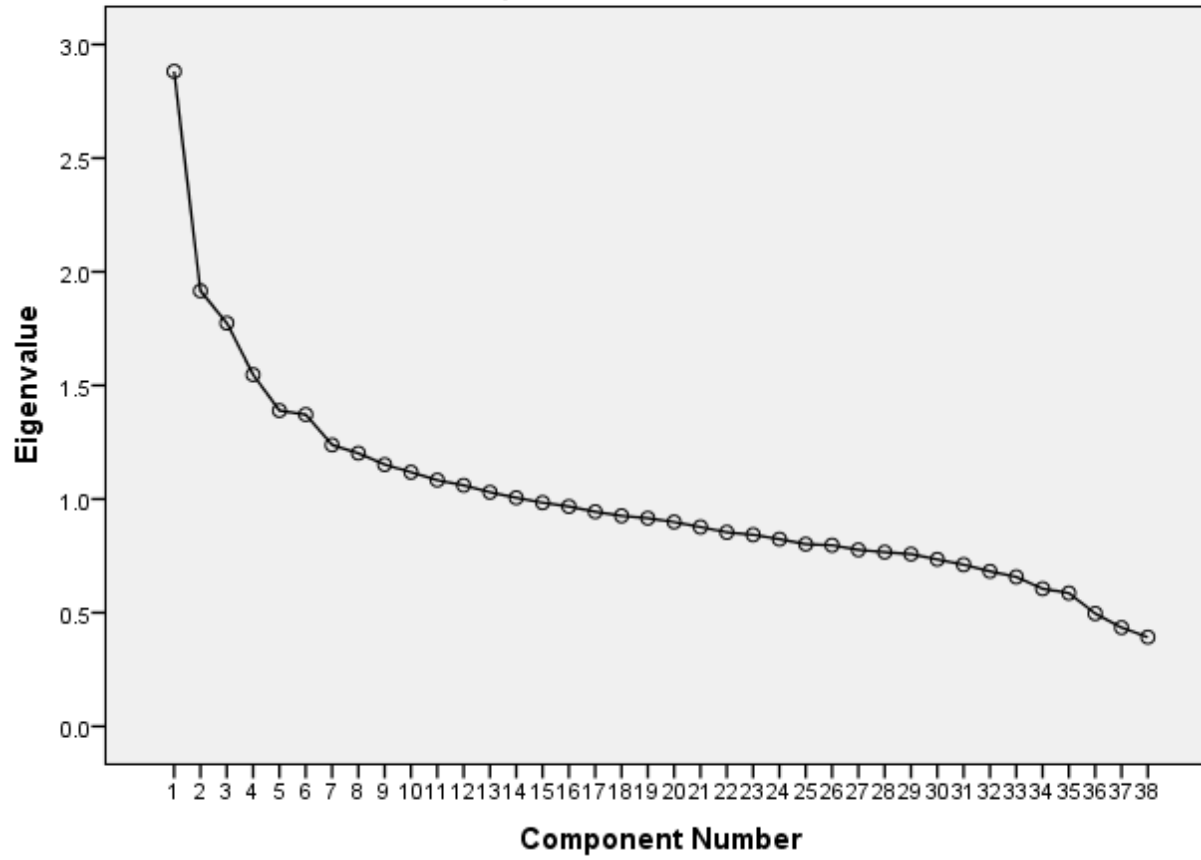
F2P80	Grade teen in when parent started saving for college?	Parental preparation for college expenses (ParentalPrepCollegeExp)
F2P81	Money parent set aside for teen's future education?	
F2P90	Amount parent expects to spend on teen's education next year?	
F2P86A	Parent or teen has applied for loans?	
F2P86B	Parent or teen has applied for scholarships/grants?	

Note. The items in columns 1 and 2 are from “NELS:88/2000 Public Use Data Files and Electronic Codebook – Base Year through Fourth Follow-up, by I. Berkovits, 2002, U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (Publication #NCES 2002322REV). Retrieved from <http://nces.ed.gov/EDAT/index.aspx?agrmt=1>.

APPENDIX I

Scree Plot

Imputation Number: 5



APPENDIX J

Structure Matrix

	Component					
	1	2	3	4	5	6
ParentInvolvement	.696					
PRinvolvementWteen	.686					
ParentdiscussAttending college	.683					
PRinvolvementWother parents	.511					
ParentparticipationHS	.498					
FAMacadStand						
ParentKnowFA						
ParentalPrepCollegeExp						
Highest level of education expected		.601				
Enrichment		.524				
HSadvanceCW		.490				
Total time spent on homework outside of school		.454				
HScultural						
Time spent reading for pleasure						
HSclubs						
Parentexpectations						
SRdiscussparents			.689			
How often you do things w/mother/father			.685			
Parents trust you will do what they expect			.456			
Time talking/doing w/parents			.456			
AcadStandFriends			.421			
SREngageAcadissues						
Grades at highest undergrad institution						

How far in school did your father go	.845	
How far in school did your mother go	.843	
HSsports		.775
Time spent on extracurricular activities		.758
CollegeAthEngagement		
CollegeFA		.621
CollegeSE		.472
ImportanceFA		
CollegeAE		
FAMreading		
PSE: Continuity of enrollment		
Working full- or part-time		
Types of PSE degrees attained as of 2000		
CollegeRemedial		
LackofHSprep		

Note. Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.

APPENDIX K

Pattern Matrix

	Component					
	1	2	3	4	5	6
ParentInvolvement	.709					
ParentdiscussAttending college	.682					
PRinvolvementWteen	.634					
ParentparticipationHS	.514					
PRinvolvementWother parents	.499					
ParentKnowFA						
FAMacadStand						
ParentalPrepCollegeExp						
Highest level of education expected		.603				
Enrichment		.537				
HSadvanceCW		.487				
Total time spent on homework outside of school		.425				
Time spent reading for pleasure						
HSclubs						
HScultural						
Parentexpectations						
How often you do things w/mother/father			.709			
SRdiscussparents			.650			
Time talking/doing w/parents			.500			
Parents trust you to do what they expect			.492			
AcadStandFriends						
SREngageAcadissues						
Grades at highest undergrad institution						
How far in school did your father go				.853		

How far in school did your mother go	.849	
HSsports		.778
Time spent on extracurricular activities		.730
CollegeAthEngagement		
CollegeFA		.607
CollegeSE		.477
ImportanceFA		
CollegeAE		
PSE: Continuity of enrollment		
FAMreading		
Working full- or part-time		
Types of PSE degrees attained as of 2000		
CollegeRemedial		
LackofHSprep		

Note. Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.