FACTORS RELATED TO THE COLLEGE-GOING SELF-EFFICACY OF MIDDLE SCHOOL STUDENTS

by

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ABSTRACT

DIA YV'NAE HARDEN Factors related to the college-going self-efficacy of middle school students (Under the direction of DR. PHYLLIS POST)

The purpose of this study was to examine the relationship between middle school students' college-going self-efficacy and their race, college generational status, academic self-concept, and perceived college-going culture. The respondents were 162 seventh and eighth grade students attending one middle school in southeastern United States who responded to four instruments that assessed the different variables.

The researcher used a four-step hierarchical multiple regression analysis to determine the amount of variance accounted for by each of the predictor variables while controlling for the previously entered variables. In the final model, college generational status, academic self-concept, and college-going culture as a model accounted for 36% of the variance in middle school students' college-going self-efficacy. Although initially significant in the first two steps of the regression, race was not ultimately a significant predictor.

This finding is possibly because it was significantly correlated with college generational status and academic self-concept. The findings suggest that as early as middle school there are student characteristics and contextual factors, namely race, college generational status, academic self-concept, and perceived college-going culture that contribute to students' confidence in their ability to attend college. This research is instrumental in understanding and addressing the achievement and opportunity gaps that are often evident among diverse student populations.

DEDICATION

I dedicate this accomplishment to my parents…in loving memory of my father who epitomizes that term and will always live in my heart and to my mom who teaches me the power of prayer and the meaning of unconditional love, by example.

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TABLE OF CONTENTS

CHAPTER I: INTRODUCTION

According to the 2012 U.S. Census data, less than 30% of the total population of adults over the age of 25 has earned a college degree. This percentage is substantially lower among African American and Hispanic adults (U.S. Census Bureau, 2012). The demand for innovation and a college-educated workforce is at an all-time high. Jobs requiring at least an associate's degree are projected to grow twice as fast as jobs requiring no college degree. Our country's ability to fulfill workforce needs and maintain our standing in the world depends largely on the training and development of its citizens. President Obama has called for initiatives that improve post-secondary education access for everyone (White House, Office of the Press Secretary, 2009). The current administration has set a goal that by 2020 the United States will regain its standing in the world as the nation with the highest proportion of college graduates. Striving towards a goal such as this requires persistence and cooperation at multiple levels. At the college level there are countless efforts to increase enrollment and persistence. At the elementary and secondary levels (grades K-12) there is a focus on college and career readiness in an effort to increase educational attainment.

Education is one of the most trusted means of social mobility in America today. People are urged to attend college as a means to become the most productive citizens that they can become. Adolescents are often encouraged and expected to continue to college immediately following graduation from high school. College is often seen as the best

option for the next stage of career development for young people. The value in increasing college attendance and graduation is not limited to our positioning as a nation; there are also several benefits bestowed directly upon the college graduates and their families. As educational attainment increases so does earning potential. For example, in 2011 high school graduates earned a median salary of $29,950 while college graduates earned an average of $37,030 at the associate's level and $44,970 at the Bachelor's level (Aud et al., 2013). College graduates have also had a consistently higher employment rate as compared to those with less education. These differences actually appear with any amount of education (i.e. those who attended but did not graduate college still earn more than adults with a high school diploma or less). As levels of education increase, so do good health, life expectancy, and improved decision-making.

Going beyond the individual, the benefits of formal education also impact families. A relationship between increased levels of education of parents and their children's level of cognitive development, future earnings, and informed childbearing decisions is also cited in the literature (Vila, 2000; Wolfe & Haveman, 2001). When considering increased educational attainment's effect on society as a whole, other positive outcomes are evident, including higher labor market earnings, increased social engagement (i.e. charitable donations, volunteerism, political involvement), and lower crime rates (Vila, 2000; Wolfe & Haveman, 2001).

The appreciation and assumption of the value of education are virtually universal. In general, adolescents and their parents desire that the adolescent will attend college upon high school graduation. For example, researchers have found that as many as 80% of eighth graders say that they will earn a college degree (Noeth & Wimberly, 2002; US

Department of Education, 2002). As evidenced by our current college graduation statistics, most adolescents communicate plans and desires to attend college after high school, but many do not follow through with their plans. In one study where almost 80% of students said that they were going to college, fewer than 60% of them were engaged in the curriculum appropriate for college preparation (Wimberly & Noeth, 2005). It is hard to know for certain what stands in the way of these plans coming to fruition, but some common barriers include lack of preparation, lack of knowledge, and lack of desire which may be related to how students view themselves academically (e.g. academic self-concept) or the information and culture to which they have access (Greene & Forster, 2003; Holland & Farmer-Hinton, 2009; Kim & Nuñez, 2013).

The relatively small percentage of high school graduates who enter college shrinks even more when examining certain subgroups (e.g. racial minorities, first-generation college students). For example, White and Asian adults over the age of 25 are more than twice as likely to have earned a college degree as African Americans and Hispanics (U. S. Census Bureau, 2012). This difference that exists among individuals representing different racial groups and college generational statuses is undoubtedly related to the achievement gap that plagues our nation and feeds into the marginalization of underserved groups across generations.

Considering that educational plans are set into action in middle school, we must address the discrepancy between aspiration and attendance as early as possible in the students' educational experiences (ACT, 2008; Trusty, Niles, & Carney, 2005). It is imperative that we understand adolescents' college-going beliefs to effectively intervene and prepare future college graduates. One profession that is uniquely positioned to target

the discrepancy and the achievement gap to which it contributes is that of professional school counselor. Even if not personally moved to act, school counselors in particular are professionally called to action to reach all students, encouraging them to maximize their educational potential (American School Counselor Association, 2003). Although most college preparation activities and assistance occur at the high school level, students as early as sixth grade are encouraged to begin postsecondary education planning (Cunningham, Erisman, & Looney, 2007; Wimberly & Noeth, 2005). The point at which students are deciding to actively engage or disengage in education planning is likely the point at which research can contribute the most understanding about these decisions. Parents and professionals (e.g. school counselors, teachers, and coaches) who work with students at this point in their development have been found to be most influential in college-going decisions (Wimberly & Noeth, 2005). A key component in the ability of these adults to positively influence students' decisions during this time is their understanding of the many factors that play a role in college-going decisions of adolescents.

Foundational Theories

Social Cognitive Career Theory

School counselors' involvement in influencing students' college-going decisions is imperative because in addition to academic achievement, psychosocial factors play a significant part in preparation for and actual college attendance. Social cognitive career theory (SCCT) is a career theory based on Bandura's (1986) social cognitive theory. It postulates that students' self-efficacy plays a relevant part in their career development which includes college-going and overall educational attainment. It describes a

complicated interaction of internal states and external cues related to overt behavior. Essentially it explains that people take into account self-perceptions, or how they see themselves, and their environment (i.e. the information and experiences to which they have been exposed) when deciding what they actually do, or in this case, the career and educational paths that they will take. The authors also explain that these paths are being formed and are most flexible during childhood and adolescence (Lent & Brown, 1996). When tested, empirical support has been found for this theory among various populations, including middle school students in general (Navarro, Flores, & Worthington, 2007) and adolescents from diverse groups such as Mexican American females (Flores & O'Brien, 2002), Native Americans (Turner & Lapan, 2003), and African Americans (Alliman-Brissett & Turner, 2010). The same is true among older students outside of the United States including Argentinean (Cupani, de Minzi, Pérez, & Pautassi, 2010), Italian (Lent, Brown, Nota, & Soresi, 2003), and Chinese (Jiang & Zhang, 2012) high school students.

Habitus and College-Going Beliefs

A second construct that underpins this study and is particularly useful in understanding college-going behavior and beliefs of diverse populations and underserved students is "habitus." This term originated with Bourdieu (1977) and describes the idea that people's views of their place in the world and access to resources are related to the cultural capital that they possess and choices that they make. Swartz (1997) stated that students' college-going behavior and decisions are largely related to their perceptions of whether or not people from their social class typically attend. No one is tied more to the same social class than one's parents; therefore, the connection between parental

education and college-going that is so prevalent in the literature may be related to this concept.

Overview of Major Concepts

College-Going Self-Efficacy

Another relevant concept in people deciding to pursue a goal, including going to college, is the belief in their ability to obtain that goal. This belief is multidimensional and includes several sources of information. People often consider their past performances and self-perception of current ability to make these assessments. The overall understanding of one's ability to achieve a specific goal is considered one's self-efficacy (Bandura, 1977). Self-efficacy can be applied to specific domains; for example, in this study the researcher is considering the domain of college-going. College-going self-efficacy, conceptualized and described by Gibbons and Borders (2010a), describes ones' self-beliefs about being able to attend and persist in college.

Self-efficacy is the cornerstone of career choices, goal pursuits and persistence. It is influenced by four main experiences: mastery experiences (e.g. results of past experiences), vicarious experiences (e.g. observation of others' activities), verbal and social persuasion (e.g. feedback and judgments from influential others such as teachers, parents, and peers), and physiology or affective states (e.g. anxiety or excitement) (Bandura, 1977). The planning and persistence that is required to pursue a particular career or educational path lends itself easily to the need for students to first believe that they are capable of reaching their ultimate goal. Without this belief, people would not find it beneficial to begin the process. In addition to being related to motivation to initiate a task, individuals' self-efficacy is tied to their persistence. At an age that the

action cannot be taken (i.e. middle school students are not eligible to enroll in college), self-efficacy provides valuable information about whether or not a particular action (e.g. preparation activities and actual college attendance) is likely to take place.

Race

Race, a socially constructed concept, plays a huge part in American society today. Racial categories are often used to group and describe individuals from varying cultures. These groups are especially relevant and distinct when considering the achievement gap. The U.S. Census Bureau (2012) reported that only 19.8% of African Americans and 13.9% of Hispanics had attended and graduated from college while 30.3% of Whites and 52.4% of Asians had earned degrees. Similar to college generational status, there is evidence of a relationship between likelihood to attend and persist in college and race (Charles, Roscigno, & Torres, 2007). This study explored the relationship between middle school students' beliefs about their ability to attend and persist in college and their race.

College Generational Status

College generational status is determined by the educational attainment of one's parents. First-generation college students are defined as students' whose parents have no formal education beyond high school (Gibbons & Borders, 2010b; Nailor, 2008). These students are less likely to attend college and often report more difficulties in college (Choy, 2001; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Warburton, Bugarin, & Nuñez, 2001). This study focused on these students before they entered college; therefore, this group is referred to as prospective first-generation college students (PFGCS; Gibbons & Borders, 2010b).

The connection between college generational status and the college experience clearly exists. What connects the two, however, is less clear. This study addressed the relationship between students' college generational status and their confidence in their ability to attend and persist in college.

Academic Self-Concept

Academic self-concept refers to individuals' perceptions of their knowledge and achievement in academic settings (Wigfield & Karpathian, 1991). Academic self-concept is differentiated from self-efficacy in that self-efficacy is related to people's beliefs about their ability to complete a task in the future, while self-concept describes perception of current ability and/or achievement based on past experiences (Ferla, Valcke, & Cai, 2009).

In essence, academic self-concept is one way to measure the mastery experiences which influence overall self-efficacy. This study examined the relationship between academic self-concept and college-going self-efficacy. As students are examining their college-going beliefs, their academic self-perceptions are likely to be paramount in their considerations.

College-Going Culture

A college-going culture is one in which all students are provided the resources and support to consider college as a post-secondary option. While realistically all students will not attend college, all students seem to benefit from exposure to a college-going culture (Grodsky & Riegle-Crumb, 2010). Recognizing the benefits, both inter- and intrapersonal, of students attending college, College Board (2006) supports the idea of all secondary schools fostering a college-going culture. In their *Creating a College-*

Going Culture Guide, they support and describe the mechanics of a shift towards public education being viewed as K-16 as opposed to ending at grade 12. The Guide connects the existence of a college-going culture to several levels of student and school goal achievement. While there is a focus on the school embodying a college-going culture, the assessment of the culture also includes aspects that go beyond the actual building and are related to the students' home life and community. Considering the influential nature of vicarious experiences and verbal and social persuasion in self-efficacy and their existence in a college-going culture, this study explored the relationship between students' perceived college-going culture and their college-going self-efficacy.

Purpose of the Study

In an age where college graduation is so important to personal and professional goal attainment, as well as our nation's standing in the global market, it is imperative that educational leaders discover ways to positively impact the current college attendance and graduation rates. One avenue for addressing the issue is to better understand those who are making initial decisions about college-going—middle school students. Timing alone makes the study of middle school students relevant. Furthermore, within that population, racial minorities and PFGCS are of special interest when considering that these students are significantly less likely to attend and persist in college. The purpose of this study was to examine the relationship between middle school students' college-going self-efficacy and their race, college generational status, academic self-concept, and perceived college-going culture.

Significance of the Study

Educational level has been identified as an important factor in living conditions, with higher levels of education relating to better health, higher earnings, and job stability. It is important to understand those variables that play a part in decision-making and success as it relates to college-going to better prepare today's and tomorrow's students who will likely be tasked with attending college to reach many of their professional and personal goals. This study examined students' race, college generational status, academic self-concept, perceived college-going culture present in their lives (including home and school) relative to their reported college-going self-efficacy.

Whereas college generational status has been examined with college-going self-efficacy (Gibbons & Borders, 2010a), this study expands this body of research by also examining the students' race, academic self-concept, and perceived college-going culture. Furthermore, this study adds to the sparse literature (Gibbons & Borders, 2010b; Nailor, 2008) that explores generational status as early as seventh grade. Because the connection between college generational status and successful college attendance is clear, we must now start to study the nuances of the differences between these students before their college-going decisions are made.

This study also expands the body of literature related to college-going self-efficacy, particularly for middle school students. Not only is it imperative that we better understand college-going beliefs of underserved students such as PFGCS and those from racial minority groups, but it is imperative to better understand all students as their beliefs about career development and college-going begin to form, require planning, and inspire action on their parts and the parts of their families.

The work of school counselors and the counselor educators who prepare them to be change agents within schools will benefit most from this expansion. As counselors who provide career counseling to this population, school counselors can use this understanding to inform targeted interventions to increase the likelihood that students will experience higher levels of self-efficacy thus making it more likely that they will attend college. Other educational leaders will also be able to use this information to inform their practices and policies in education that influence students' college-going beliefs and behaviors.

Two main ideas emerge from the literature on self-efficacy: (1) it makes future action more predictable, and (2) it is influenced by prior experiences, such as past performance, observation of others' actions and outcomes, feedback and judgments of others, and one's own physiological states. Considering this understanding, this study explored the relationships between the college-going self-efficacy of middle school students and their race, college generational status, academic self-concept, and perceived college-going culture.

Research Questions

The research questions for this study were as follows:

1. How much variance can be accounted for in college-going self-efficacy by race?
2. After controlling for race, how much variance can be accounted for in college-going self-efficacy by college generational status?
3. After controlling for race and college generational status, how much variance can be accounted for in college-going self-efficacy by academic self-concept?

4. After controlling for race, college generational status, and academic self-concept, how much variance can be accounted for in college-going self-efficacy by perceived college-going culture?

Research Design

This research is a correlation research study. A hierarchical multiple regression research analysis was utilized to examine the relationships between race, college generation status, academic self-concept, and college-going culture and middle school students' college-going self-efficacy. A four-step hierarchical multiple regression analysis was used to analyze the amount of variance accounted for in college-going self-efficacy by each of the predictor variables.

Assumptions

The following assumptions were made in relation to this study:

1. Participants in the study responded willingly and honestly.
2. Participants accurately comprehended and responded to the survey items.

Delimitations

The researcher identified the following delimitations associated with the study:

1. The study included students in grades seven and eight from one middle school in Southeastern United States.
2. The data used to address the research questions in this study were self-reported by the middle school participants.
3. The participants were limited to those who are able to read and respond in English.

Limitations

The following limitations are true of this study:

1. Because this study was conducted in one school district in a rural area of a southeastern state, the results may not be generalizable to dissimilar schools or geographic areas.
2. The study is a correlational study; therefore, the researcher cannot make causal inference.
3. Social desirability may limit the results of this study. Participants may have attempted to answer in a way that they perceive the researcher will view as favorable.

Operational Definitions

The following operational definitions were used while conducting this study:

College-Going Self-Efficacy

College-going self-efficacy is students' perception of the likelihood that they will attend and persist in college. In this study, CGSE was assessed by a self-report score based on the College-Going Self-Efficacy Scale (CGSES; Gibbons & Borders, 2010a). The CGSES measures two dimensions of college-going self-efficacy: attendance and persistence. The total score of this measure was used to assess students' college-going self-efficacy.

Race

For the purposes of this study, race was the self-report of the student's race as reported on the Demographics Survey (see Appendix G). The self-report options are consistent with the guidelines set forth by the Office of Management and Budget (White

House, Office of Management and Budget, 1997), which requires a minimum of five categories. Specifically, students had the option to identify as American Indian or Alaska Native, Asian, Black or African-American, Native Hawaiian or Other Pacific Islander, White, or Multiracial. The Multiracial category was added at the researcher's discretion to more accurately describe the students represented.

College Generational Status

College generational status was determined by the educational attainment of the students' parents. In this study, students were categorized as PFGCS if neither of their parents has participated in formal education beyond high school. Students were categorized as non-first-generation college students (NFGCS) if they reported that at least one of their parents has been educated beyond the high school level. This information was gathered from the students' self-reports on the Demographic Survey (see Appendix G).

Academic Self-Concept

Students' academic self-concept was defined as students' perceptions of themselves and their abilities in academics. For this study, this information was based on the total score of the Self Description Questionnaire II (Marsh, 1992; see Appendix I) in which higher scores indicate more positive self-perceptions.

Perceived College-Going Culture

A college-going culture is defined as an environment in which all students are prepared and expected to consider college as an option. Students who are prepared are on track to graduate with at least the minimum credit and test score requirements to apply to a postsecondary education institution. They also have information about applying and

gaining acceptance into college. An expectation of college-going is typically communicated by supportive adults who believe in the students' ability to apply to and be admitted into a college. Other characteristics of the culture include that college information is readily available and opportunities are accessible. This perception was assessed by the total score on the College-Going Culture Survey Revised (Willis, 2013; see Appendix J) with higher scores indicating the stronger perception of a college-going culture.

Summary

Chapter 1 examined several topics related to the relevance and timeliness of examining middle school students' college-going self-efficacy. The impact of educational attainment on individuals' standing in society and on our nation's standing in the world helps explain the importance of college-going beliefs and behavior. College-going beliefs and behaviors are formed and set into action during the middle school years for most students. The college attendance of middle school students and their beliefs during that stage of life cannot be studied simultaneously; however, college-going self-efficacy of these students can be measured. Self-efficacy is influenced by several aspects of students' experiences and has the potential to predict the likelihood of particular behaviors. In this study, the domain of college-going is explored in an effort to understand the students' confidence in and likelihood of attending and persisting in college. The achievement gap, as it pertains to college attendance and graduation, is also relevant in the study of college-going beliefs. Groups such as minority and first-generation college students experience lower levels of college attendance and persistence. Self-efficacy is influenced, in part, by students' past experiences including the amount of

mastery that they experience in addition to the feedback that they receive from influential others. Therefore, beyond demographics, students' academic self-perception (e.g. academic self-concept) and their exposure to a college-going culture are also important considerations in college-going beliefs. The relationship between these variables was measured in a cross sectional, correlational study. Middle school students supplied self-reported data via surveys based on the respective constructs. To address the identified gaps in the literature, the purpose of this study was to examine the relationship between middle school students' college-going self-efficacy and their race, college generational status, academic self-concept, and perceived college-going culture. This chapter introduced the background, purpose, and methodology which describes why and how the researcher approached this investigation.

Organization of the Study

This dissertation is divided into five chapters. Chapter 1 reviewed the significance of the proposed study as well as the pertinent variables, foundational theories, and research methods. Chapter 2 discusses the literature associated with each variable and the relationships between each of the independent variables (race, college generational status, academic self-concept, and college-going culture) and the dependent variable, college-going self-efficacy, and demonstrates the need for this research. Chapter 3 details the research methodology used in this study. It outlines the description of the participants, methodology, including instrumentation and data collection procedures, and data analysis. The results are presented in Chapter 4, and the discussions, conclusions, limitations, and recommendations for future research are presented in Chapter 5.

CHAPTER II: REVIEW OF THE LITERATURE

The purpose of this study was to examine the relationship between middle school students' college-going self-efficacy and their race, college generational status, academic self-concept, and perceived college-going culture. The focus of this chapter is to review the conceptual and empirical literature related to these topics and demonstrate a need for this study.

This chapter is divided into six main sections. The first section covers the relevant literature on self-efficacy and middle school students. This section also covers the theoretical background of the dependent variable in this study, college-going self-efficacy, and reviews two studies that have examined the construct with middle school students. The next sections address each of the independent variables the in the study. The second section examines pertinent literature on race and college-going. The third section is related to college generational status and covers the literature relevant to first-generation college students (FGCS) and prospective first-generation college students (PFGCS) who are students who will potentially be the first in their families to attend college upon graduating high school. The fourth section focuses on the construct of academic self-concept and the relevant literature about how it is related to middle school students and FGCS. The fifth section provides a description of and relevant literature on perceived college-going culture. The sixth section concludes the chapter and includes a summary based on the findings from the literature review. The information in this

chapter summarizes the relevant literature highlighting the scarcity of empirical data on the concepts and sample included in this study and demonstrates a need for this particular study.

Theoretical Background of College-Going Self-Efficacy

Overview of Self-Efficacy

In 1977, Bandura (1977) described behavioral change in humans as being largely related to cognitive processes. His theory was based on his work with individuals experiencing phobias. During this time Bandura challenged the traditionally accepted view of behavior modification which described behavior as being regulated by immediate consequences and rewards. Bandura countered this idea with the claim that cognitive processes play a prominent role in initiation and maintenance of new behavior. He proposed that people use their past experiences and modeling as they make decisions about future action. Furthermore, individuals' behaviors are influenced by the cognitive connections that they make about things that have happened and what is likely to happen that is contingent on their courses of action. Ultimately this understanding acts as a source of motivation. The other piece of motivation is more self-evaluative. This self-evaluative piece encompasses both outcome expectancy and efficacy expectations. Outcome expectancy refers to people's evaluations of whether or not a particular action or set of actions will lead to a specific result; while people's efficacy expectations rely on their conviction that they are capable of executing the necessary actions. Just as individuals' experiences, both direct and vicarious, strongly influence their behavior so do their self-evaluations. Even when people believe, based on experience, that particular actions lead to a specific outcome, if they do not feel confident in their ability (i.e. self-

evaluation) to execute those actions, that information will not be used to inform their decision to move forward with the behavior or action. Individuals' personal efficacy expectations are more concisely described as "self-efficacy."

Self-efficacy refers to individuals' levels of confidence in their ability to complete a task or group of tasks related to a specific goal (Bandura, 1997; Schunk, 1991). Self-efficacy not only speaks to individuals' confidence, but it has also been found to be related to the likelihood of persisting particularly when the task is difficult (Bandura, 1997). Individuals tend to avoid tasks or situations that they see as being beyond their coping skills. Contrarily, people are likely to follow a course of actions when they feel confident in their ability to handle the situation even if it is a fearful or intimidating situation. Bandura (2005) explained that self-efficacy is domain-specific and influences decision-making and outcome expectations. Therefore, for students who are not yet able to apply to and attend college, such as middle school students, understanding their college-going self-efficacy may enhance the understanding of their intentions and likelihood of attending college.

Self-Efficacy and Middle School Students

While various domains of self-efficacy have been studied among several populations, the area of literature that is most pertinent to this study is self-efficacy of middle school students. A literature search of peer reviewed articles related to self-efficacy and middle school students yielded 210 results from 1993-2013. The author identified and retrieved 39 recent (i.e. within the last 10 years) and relevant articles which explored various domains of self-efficacy among middle school students. The most recent studies have served common purposes: describing the sources of self-efficacy (Britner &

Pajares, 2006; Chen & Usher, 2013; Ritzhaupt, Higgins, & Allred, 2011), describing significant relationships between specific domains of self-efficacy and other variables (Chong, 2007; Levpuscek, Zupancic, & Socan, 2012; Pearson, 2008), and developing scales to assess the phenomenon in domain-specific ways (Bray, Nash, & Froman, 2003; Liu & Wilson, 2010; Thompson, Bachman, Baranowski, & Cullen, 2007). The most commonly covered domains included health-related behaviors such as physical activity (Ross, Dowda, Beets, & Pate, 2013), nutrition (Young, Fors, & Hayes, 2004), smoking (Lotrean, Mesters, & Vries, 2013), and bullying (Özer, Totan, & Atik, 2011), as well as academics areas, including general academic (Chong, 2007),science (Chen, 2012),writing (Bruning, Dempsey, Kauffman, Zumbrunn, & Mimi, 2013), mathematics (Chen & Zimmerman, 2007); and career development (e.g. Turner & Lapan, 2005).The following sections summarize current literature related to the sources of self-efficacy, significant relationships between self-efficacy and other variables, and scales developed to assess specific domains of self-efficacy.

Sources of Self-Efficacy

Bandura (1977) described four main sources of self-efficacy: performance accomplishments; vicarious experiences; verbal persuasion; and physiological and affective states. Performance accomplishments are based on mastery experiences. As students experience success their efficacy expectations seem to increase; the experience of repeated failure lowers these expectations. A strong sense of self-efficacy, often influenced by habitual success, is less influenced by failure. For example, individuals who have already experienced several points of success (e.g. passed tests) are less likely to begin to doubt themselves or stray away from doing a difficult assignment after

receiving a low grade on a project. Whereas students who typically fail tests may refuse to even begin a difficult assignment as they assume that they will not do very well on it. Vicarious experiences are those that individuals witness through the behaviors of others. Seeing individuals similar to themselves succeed at a task often influences students to believe that they, too, can perform those tasks or behaviors. Following the same example from above, the students whom doubt themselves may be encouraged to try the new assignment after noticing that some of the other students, who they see as being similar in academic ability, are completing the assignment and receiving positive feedback from their teacher. Observing the success of others is not as strong an influence as mastery experiences, but witnessing others does seem to influence the efficacy beliefs in the observer. Verbal persuasion refers to the verbal and social encouragement that individuals receive from others. An example of this source would be students feeling more confident in attempting the assignment after their teacher encourages them and reminds them that they are capable. Lastly, affective states refer to the anxiety or other emotional experiences that individuals use to assess their comfort or safety in a particular situation. So the students from the previous example would be more likely to attempt the assignment if they felt low levels of anxiety as they began the work. People's experiences with these four sources largely influence their confidence in addition to their comfort in attempting and completing particular actions.

Bandura's claims of the sources of self-efficacy have been supported by various empirical studies. With a group of 263 sixth grade students from a public suburban middle school in southeastern United States, Usher and Pajares (2006) found that mastery experiences, vicarious experiences, social persuasion, and physiological arousal

independently predicted academic and self-regulatory self-efficacy with mastery experience proving to be the strongest predictor of the four. These significant findings were true for the sample as a whole. In addition to examining the influence of the four sources on the students' academic and self-regulatory self-efficacies, these researchers explored if the sources differed in relation to the students' gender, reading ability, or race/ethnicity. They found that students reported varying degrees of the different sources based on these variables. Students did not differ in overall self-efficacy by gender, but girls reported stronger vicarious experience and social persuasion than boys. Students with higher reading levels reported stronger mastery experiences than students who were on or below grade level in reading. Students with lower reading levels reported greater physiological arousal than above level students. Although small percentages of other races were represented in the study, the researchers only compared White and African American students for the questions related to race. They found that African American students reported greater physiological arousal and lower reading grades than White students.

Similar to these findings, mastery experiences in modern educational game play using an interactive computer game which incorporates math concepts positively influenced students' mathematics self-efficacy (Ritzhaupt, Higgins, & Allred, 2011).In this study, 225 middle school students from four Title I schools completed pre- and post-assessments in addition to a 16-week intervention during which the students played at least one session of game play per week. Game play sessions were facilitated by teachers as an intervention. The sessions occurred in computer labs and classrooms and lasted for an average of 69.27 minutes per session. The researchers found a significant increase in

interest and self-efficacy in mathematics but did not find a significant increase in mathematic achievement. Examination of the students' gender, socioeconomic status, or frequency of computer use did not produce any additional significant findings in relation to the variables being examined. A significant interaction was found in regards to race. Although non-White students began the study with higher overall attitudes towards math, White students exhibited a higher rate of change following the intervention. Specifically with regards to mathematics self-efficacy, the researchers found that the amount of leisure time the students spent playing video games influenced their increase in self-efficacy with students who spent more time experiencing a higher rate of change following the intervention period.

In other studies, significant correlations were found between the four sources and science self-efficacy as well (Britner & Pajares, 2006; Chen & Usher, 2013), but mastery experience was the only source that significantly predicted self-efficacy. Britner and Pajares (2006) found that among their middle school sample of students in grades five through eight, the self-efficacy theory was supported in that all four sources of self-efficacy, science self-efficacy, and the students' science achievement were correlated. In this study girls and boys reported similar levels of science self-efficacy. Only mastery experiences significantly predicted science self-efficacy for the full sample and for the sample grouped by gender. Chen and Usher (2013) used the data they collected from 1225 middle and high school students to describe different profiles of science learners. Profiles refer to students' "habits of thinking" or the type of information to which they attend. Students who used information from various sources of self-efficacy were

deemed to have the most adaptive profile. The researchers found that mastery experience was the most influential source of science self-efficacy.

Also speaking to the relevance of mastery experience, Friedel, Cortina, Turner, and Midgley (2010) found that teachers' increased emphasis on mastery goals was positively related to students' increased self-efficacy beliefs. These researchers investigated students' mathematics self-efficacy as they made the transition from elementary to middle school. They hypothesized that students' self-efficacy would increase as they entered middle school and this increase would be largely related to the difference in teachers' and parents' emphasis on mastery goals. Data for this article was taken from a larger longitudinal study in which a total of 929 sixth and seventh graders participated in all four of the waves of data collection. Students who perceived an increase in the focus of mastery goals by their teachers reported an increase in their mathematics self-efficacy.

There is a substantial amount of support that the four identified sources of self-efficacy (i.e. mastery experiences, vicarious experiences, verbal persuasion, and affective states) all play a role in students' self-efficacy beliefs. It seems that mastery experience is typically the most influential source. These sources have proven relevant in a range of self-efficacy of domains including general academic, science, and mathematics. These same domains of self-efficacy, in addition to others, have been examined in relation to other variables.

Significant Relationships between Self-Efficacy and Other Variables

In addition to studies exploring the sources that influence self-efficacy, others have examined outcomes that suggest the benefits of possessing self-efficacy as it has

been found to be significantly related to various characteristics. Within the literature related to middle school students, the significantly related variables fall into three broad categories: health-related behaviors, academics, and career development. The following sections elaborate on the significant findings from these studies.

Middle school student self-efficacy and health-related behaviors. In the realm of health-related behaviors among middle school students, researchers have found two consistent themes: higher levels of self-efficacy are related to healthier behaviors (e.g. King, Ogletree, Fetro, Brown, & Partridge, 2011; Ross et al, 2013;Young, Fors, & Hayes, 2004) and self-efficacy has successfully been influenced by interventions in schools (McCaughtry, Fahlaman, Martin, & Shen, 2011; Shoshana & Steinmetz, 2013). The health related behaviors that have been examined include physical activity, food consumption, and risky behaviors such as bullying and smoking.

Specifically, children who reported higher levels of self-efficacy also reported higher levels of physical activity (Gao, Lochbaum, & Podlog, 2011; King et al., 2011; Ross et al., 2013) and higher levels of low-fat fruit and vegetable consumption (Thompson et al., 2007; Young et al., 2004). Overweight students reported lower healthy-eating self-efficacy as compared to their peers who maintained a recommended weight (Steele, Darahta, Bindler, & Power, 2011). In a study on bullying behaviors among middle school students, researchers found that students with higher self-efficacy beliefs tended to not be involved in bullying incidents while students with lower self-efficacy were more likely to be the bully or victim of bullying (Özer et al., 2011). Studies related to smoking behavior have found that lower self-efficacy was significantly related to the likelihood of a non-smoker becoming a smoker (Lotrean et al., 2013) and

that self-efficacy to not smoke was one of five factors that made up a model which significantly predicted smoking behavior among adolescents (Lotrean et al., 2013). Not only have researchers examined the health-related behaviors associated with various domains of self-efficacy, they have also examined interventions that influence self-efficacy beliefs.

Interventions have been administered at the school level in an effort to influence middle school students' self-efficacy. One school based intervention rooted in positive psychology implemented 15 group sessions with teachers and students. Following the year-long intervention, researchers found that among other positive results, students reported higher levels of self-efficacy as compared to the comparison group who did not participate in the intervention (Shoshani & Steinmetz, 2013). A different school-wide intervention implemented a nutrition-based education program during which students received six constructivist-oriented sessions aimed at increasing their knowledge of nutrition. The students in the experimental group reported higher levels of dietary self-efficacy following the intervention (McCaughtry et al., 2011). In both of these school-wide interventions students experienced increased self-efficacy beliefs along with other positive effects of the health-related programs in which they participated. In addition to its relationship to health-related behaviors of middle school students, self-efficacy and academics has also been widely researched.

Middle school student self-efficacy and academics. Among Asian students, academic self-efficacy was positively correlated with most domains of self-concept and negatively correlated with fear of failure (Chong, 2007). High achieving African American girls also demonstrated high self-efficacy and levels of resilience (Pearson,

2008). In creative self-efficacy, students with higher levels of self-efficacy held more positive beliefs about their academic abilities in all subject areas and were significantly more likely to indicate that they planned to attend college than students with lower levels of creative self-efficacy. Students' self-efficacy has been found to be positively related to their achievement in mathematics (Levpuscek et al., 2012). After receiving a technology-based intervention, students' self-efficacy and achievement increased while performance approach and performance avoidance goals significantly decreased (Hsieh, Cho, Liu, & Schallert, 2008). Specifically, these researchers found that self-efficacy positively influenced achievement when students were not performance-avoidance oriented. With a different technology-based intervention, Liu, Hsieh, Cho, and Schallert (2006) found that science self-efficacy was a significant predictor of achievement; this was particularly true for students who were categorized as having low attitudes and low achievement. In another study that categorized students according to profiles, researchers found that the "thriving" profile which included students with the most sophisticated beliefs about acquiring science knowledge encompassed students with the highest science self-efficacy and grades (Chen, 2012). When examining writing self-efficacy, researchers found positive correlations between different dimensions of self-efficacy and performance (Bruning et al., 2013).

Middle school student self-efficacy and career development. A literature search of peer reviewed articles related to middle school student self-efficacy and career development yielded 12 articles spanning the years of 1999 to 2013. In this age group, career-related self-efficacy (e.g. career-decision self-efficacy, career self-efficacy) refers to students' confidence in being able to make postsecondary decisions. Among seventh

grade Latino students a significant amount of variance in career-decision self-efficacy was accounted for by several cultural variables: acculturation, enculturation, ethnic identity, and conscientiousness (Ojeda, Pina-Watson, Castillo, Castillo, & Leigh, 2012). Although a slightly older population, high school students' career-decision self-efficacy is also relevant in considering adolescents' self-efficacy beliefs. A study involving career self-efficacy and career planning and exploration self-efficacy of this group found that these domains of self-efficacy predicted the adolescents' career interests across Holland themes. In a separate study, students' career planning and exploration self-efficacy increased following a computer-assisted intervention (Turner & Lapan, 2005).

Based on the extensive nature of the literature on self-efficacy, it is clearly a well-established and influential construct. It offers much in terms of understanding middle school students' academic performance, self-evaluation, and career development. Specifically, researchers have found evidence that supports the four main sources of self-efficacy with mastery experiences being the strongest predictor. Higher levels of self-efficacy have been linked to positive behaviors and favorable outcomes such as higher levels of achievement and order of thinking. Interventions that have targeted self-efficacy beliefs have yielded positive results including increasing self-efficacy. Career-related self-efficacy studies have examined the constructs' relationships to cultural variables, been used to predict interest, and have shown positive results from interventions. To study the many domains of self-efficacy scholars have developed various scales. A portion of the literature related to middle school students' self-efficacy describes the different scales that have been developed for various domains.

Scale Development and Validation

As demonstrated in this literature review of middle school students' self-efficacy beliefs, self-efficacy is domain-specific and researchers have examined various domains depending on its relevance to their fields of study. The specificity of the different domains of self-efficacy requires that different scales be developed to measure the construct as it relates to different domains (Bandura, 2005). Bandura (2005) explained that a "one measure fits all" approach would be ineffective in explaining or predicting self-efficacy in more specifically defined domains. Instead he encouraged and gave specific instructions for developing and validating scales to measure different domains of self-efficacy. He explained that although there is some overlap among certain domains, scales often must be tailored to measure the particular domain being studied in order to be valid. The overlapping that he described occurs in academic self-efficacy. Because competencies across academic subjects are typically developed within the same social context, the self-efficacies for these domains are typically co-developed and therefore will often lend themselves to being measured by similar scales. Another overlap is related to mastery experiences. Some mastery experiences are powerful enough that they cross domains. When individuals experience a certain level of success or series of successes, they may experience a transformational restructuring of their self-efficacy beliefs that proves to be relevant across domains. Despite these occurrences of overlap, self-efficacy beliefs do vary by domain, and researchers have developed various scales to account for those differences. Some of, the scales have covered the domains of Fruit and Vegetable Consumption Self-Efficacy (Thompson et al., 2007), Career and Talent Development Self-Efficacy (Yuen, Gysbers, Chan, Lau, &Shea, 2010), Middle School

Self-Efficacy (Bray et al., 2003) and most relevant to this study, College-Going Self-Efficacy (Gibbons & Borders, 2010a).

For the purposes of this study it is important to understand self-efficacy as it relates to middle school students in general. The more specific domain of self-efficacy that is relevant here has been less studied, and it is that of college-going self-efficacy. As the literature demonstrates, students' self-efficacy beliefs have been linked to other characteristics and outcomes. Furthermore, the literature also suggests that self-efficacy is a construct that can be influenced by interventions. These two components are evidence for the importance of studying self-efficacy as a way to better understand middle school students, their college-going beliefs and overall career development. Not only will understanding students in relation to the variables being studied add to our understanding of this population but this understanding has the potential to allow for the development of critical programs and practices to influence college-going behavior and beliefs.

College-Going Self-Efficacy among Middle School Students

The domain-specific nature of self-efficacy requires the topic of college-going to be looked at separately from other domains. In establishing the domain and instrument to measure it, Gibbons and Borders (2010a) explained that college-going beliefs are centered on both getting into and staying in college. There are various factors related to these processes including socioeconomic status and financial resources (i.e. ability to pay the associated costs), family encouragement and support, beliefs about academic preparation and ability as well as decision-making skills and abilities (Gibbons & Borders, 2010a). Ultimately, college-going self-efficacy is comprised of two

dimensions: college attendance and persistence. Exploring this belief basically asks the student two questions “Am I able to go to college?” and “Once there, am I able to stay or persist?”

A search for peer reviewed articles related to college-going self-efficacy yielded three articles. Two of these articles were published by Gibbons and Borders (2010a; 2010b). These researchers used college-going self-efficacy within the framework of social cognitive career theory (SCCT) to help describe the college-going beliefs and career development of PFGCS. SCCT is a career development theory that takes into account self-efficacy, outcome expectations (i.e. one’s expectations about the probable result from a specific set of actions), and goals in addition to background characteristics and contextual influences as components of career-related interests, choices, and outcomes (Lent & Brown, 1996). The theory is used as a framework for understanding individuals’ career and educational decisions, occupational interests, and ability to achieve success and stability. It highlights the role that cognitive factors, personal attributes, external environmental factors, and demographics play in career development (Niles & Harris-Bowlsbey, 2013). Gibbons and Borders (2010b) described this theory as being particularly applicable to this population because PFGCS, K-12 students whose parents have not earned a degree beyond a high school diploma, often come from disadvantaged or underserved backgrounds which may strongly influence their career and educational planning.

Empirical Research Related to College-Going Self-Efficacy

Although there is an abundance of work done on other domains of self-efficacy, only two research teams have studied college-going self-efficacy specifically. Gibbons

and Borders' (2010a) initial article establishes the instrument to measure the construct empirically. They used a series of studies to examine middle school students' college-going beliefs related to college attendance and college persistence in order to establish the scale (Gibbons & Borders, 2010a). In establishing the content, wording, and length of the survey the researchers took into account the developmental needs of middle school students. The original instrument contained 15 items related to college attendance and 16 items related to college persistence. Experts in the field evaluated the items for readability and relevance. Gibbons and Borders (2010a) then conducted studies with three different samples to establish psychometric properties and usefulness of the scale. They found evidence for the appropriateness of using the scale to measure the college-going beliefs of middle school students. Their studies offered initial support for the internal consistency and reliability over time. Although the instrument contains two subscales, their results suggested that the total score was most appropriate for measuring overall college-going self-efficacy. Their second publication (Gibbons & Borders, 2010b) reports the findings of the first of two studies examining college-going self-efficacy among middle school students. Both studies found that among PFGCS, college-going self-efficacy seemed to be related to the strength of college-going intentions and increase college-going positive outcome expectations while being negatively related to negative college-going outcome expectations.

Gibbons and Borders (2010b) examined 272 seventh grade students from four Southeastern middle schools. They utilized the College-Going Self-Efficacy Scale, the Perception to Educational Barriers Scale, two subscales of the Child and Adolescent Social Support Scale, the College-Going Outcome Expectations Scale, and a

Demographics Survey. The researchers found that PFGCS, as compared to continuing generation students, reported lower college-going self-efficacy, educational attainment goals, and opinions of the likelihood of attending college while reporting more barriers to college attendance. These findings are consistent with the literature on FGCS, college students whose parents do not have a college degree, which has consistently found that this population is typically outperformed academically and in terms of integration into the college environment by students' whose parents attended college (Grayson, 1997; Jenkins, Belanger, Connally, Boals, & Duron, 2013; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, et al., 1996).

Gonzalez, Stein, and Huq (2012) also studied the college-going self-efficacy of adolescents in the Southeastern United States. This study focused on students from Latino communities in this area. The researchers described the communities in this study as less established than those in California and Texas. The participants were 171 seventh to tenth grade students from two middle schools and one high school. The researchers recruited students from the identified schools and administered the College-Going Self-Efficacy Scale, Perception of Barriers, and adapted version of the Multidimensional Inventory of Black Identity, the Acculturation Rating Scale for Mexican Americans—II, and a demographics survey. They found that college-going self-efficacy was positively related to educational aspirations, Anglo-orientation, public regard, and resilience to barriers while being negatively related to economic and person-based barriers (e.g., feeling intellectually inadequate; not being eligible for college admission because of legal status; choosing to continue working instead of seeking college admission; obligations to assist with family problems).

Summary

In general, self-efficacy beliefs provide important information about people's self-perceptions and likelihood to attempt or persist at a task. It is influenced by several sources including mastery experiences, vicarious experiences, verbal persuasion, and emotional states. Not only have sources been identified, many researchers have also found significant correlations between different domains of self-efficacy and relevant factors of success. Three primary domains are represented in the most recent literature pertaining to middle school students' self-efficacy: academic, risky behavior, and physical activity. The college-going domain, although scarcely researched, has proven to be related to positive outcome expectations and higher educational aspirations.

Two studies have examined college-going self-efficacy among middle school students. Both were situated in the SCCT framework. While these studies explored more predictive measures about the students' college-going beliefs (e.g., barriers, outcome expectations), they do not offer anything in terms of understanding the students as middle school students and other possible factors that may be influencing (currently or in the future) the students' beliefs and behaviors. The current study will address this gap by exploring middle school students' college-going self-efficacy in relation to their race, college-generational status, academic self-concept, and perceived college-going culture.

Race and Education in the United States

Race and Middle School Students

In examining the literature pertaining to race and middle school students the most relevant articles address the achievement gap. In this area of research eight pertinent articles emerged. The picture that is painted by this recent literature within the last 10

years shows that a defined achievement gap between White and non-White students, such that African American and Hispanic students are represented in the studies and there is not a substantial representation of other racial groups for comparison. The gap that is identified is most notable in testing data where White students scores are.7 to 1.1 standard deviation higher than African American students (Lee, 2004).

With a substantiated history of evidence of the gap, recent literature attempts to explain the sources of the gap and possible solutions. Woolley and Bowen (2007) found that White students reported the lowest risk level, highest social capital levels, and the highest school engagement indexes as compared to Black and Hispanic students. In this study, risk and social capital levels were indicative of school engagement with lower levels of risk and higher social capital being positively related to school engagement (Woolley& Bowen, 2007). A different study that found no overall difference in test scores of students who attended traditional versus block scheduling, found that there were higher percentages of Black and Hispanic students who earned pass/advanced scores at schools adhering to block scheduling (Gill, 2011). A separate study with a sample showing Black students as scoring an average of seven points lower on standardized reading tests found that family and demographic characteristics (e.g., free/reduced lunch eligibility, parental education, transient status)were the most important explanatory factors in achievement differences (Beck & Muschkin, 2012). This study found that school factors (e.g. cohort size, retention rates, student diversity, peer parental education level, teacher experience, faculty diversity) also contributed to explaining the gap and that a substantial portion of the gap remained unexplained even after exploring several levels of factors (Beck & Muschkin, 2012). A separate psychological concept, race-

acting, has also begun to emerge as an explanatory factor in the achievement gap (Burrell, Winston, & Freeman, 2013; Nsamenang, 2013). "Race-acting" refers to the notion that the pursuing and excelling in education is generally expected and appropriate for members of the dominant culture. Furthermore, this phenomenon suggests that the practices that typically result in academic achievement are most closely aligned with the "master narrative" of what means to "act White." This line of reasoning may undermine the value of education for some adolescents. While this sector of literature has not been examined empirically in terms of its connection to the achievement gap, the introduction of this construct gives weight to the notion that non-white students' self-perceptions may be influencing achievement outcomes. In terms of examining best practices for addressing the gap, one meta-analysis of 12 studies found that Comprehensive School Reform programs, described as the institution of externally developed, scientifically-based, school-wide comprehensive programs, were effective in shrinking the black-white achievement gap (Gorey, 2009). The same study found that schools implementing Title I programs, which are typically internally developed by school districts and enacted as diverse pull-out programs, did not experience a significant narrowing of the gap (Gorey, 2009). While pronounced and detrimental at the middle school level, the achievement gap has lasting effects into adulthood and is most evident by college-going rates. The present study will address the gap in literature on racial differences in middle school students on variables related to college-going beliefs and behaviors.

Race and College-Going

According to the U.S. Census Bureau (2012) White and Asian adults over the age of 25 are more than twice as likely to have attended and graduated from college as

compared to African Americans and Hispanics. This suggests that race is a crucial variable in understanding college-going beliefs and behavior. In education in general, researchers typically have found that students of color are overrepresented in special education programs that address deficiencies in academic or social skills, while being underrepresented in more achievement oriented programs such Gifted and Talented (Losen & Orfield, 2002; McBee, 2010; Worrell, 2007). At the college level, White and Asian students have consistently attended and graduated from college at considerably higher rates than African-American, Latino, and Native American students (Aud et al., 2013; Choy, 2001). Most recently, Kim and Nuñez (2013) examined a national sample and found that Asian students had the highest enrollment rates at four year institutions. White students had the second highest enrollment rates. African American and Latino students' enrollment rates lagged behind as third and fourth respectively. In this study of high school graduates 65% of Asian students enrolled, 57% of White students, 46% of the African American students, and only 31% of Latino students. At 2-year institutions Latino students (38%) had the highest enrollment rates while Asian students' rates (28%) were the lowest. This study found that being Latino was negatively related to college enrollment, and after controlling for several variables (e.g. family income, parental educational level, parental educational level expectations, mathematics courses taken) African American students were as likely to enroll in college as white students (Kim & Nuñez, 2013).

Summary

The state of education as it relates to race has been fairly consistent over the past several decades. While there has been progress in narrowing it, the achievement gap still

exists. White and Asian students consistently outperform African American, Hispanic, and other minority students. This gap is seen among middle school students as well as college graduates.

The achievement gap has been well documented and studied in relation to many variables. The study of race among middle school students has been limited, particularly as it relates to their career-related self-efficacy. The proposed study will address this gap in the literature in that it will examine race as it relates to college-going self-efficacy of middle school students. Having evidenced a connection between race, academic achievement, and college-going, it is imperative to examine the possible variables that play a role in the divide. This study will add to our understanding of differences between middle school students of different races and their beliefs and attitudes pertaining to themselves, their environment, and college-going.

College Generational Status

College generational status is a very common variable in education literature related to achievement. It is sometimes framed as students' generational status, and at other times it is described as parents' educational attainment. The construct is often examined in relation to students' socioeconomic status. Three levels of education attainment are typically recognized: no college education/training, some college education, and college degree obtained. Students are then categorized into two broad categories as first-generation and non-first-generation college students (NFGCS). Throughout the literature, FGCS have been defined a number of ways. The most commonly cited definitions are as follows: a student whose parents have not attended college (Billson & Terry, 1982; Choy, 2001; Pike & Kuh, 2005), students whose parents

have not earned a bachelor's degree (Murphy, 2006), students whose parents' highest level of education is a high school diploma or less (Nailor, 2008), students whose parents have no formal education beyond high school (Gibbons & Borders, 2010b), or students whose immediate family members have not attended college (Hicks, 2003; Inman & Mayes, 1999). NFGCS, also termed continuing-generation, traditional (Terenzini et al., 1996), or second-generation college students (Billson & Terry, 1982; Pike & Kuh, 2005), have been defined as students who have at least one parent who has completed a college degree (Ramos-Sanchez & Nichols, 2007), students who has a parent who has earned a bachelor's degree or higher (Hicks, 2003), or as students who have at least one parent that has attended college. Most studies have compared only two groups, FGCS and NFGCS (Gibbons & Borders, 2010b; Hicks, 2003; Pike &Kuh, 2005; Terenzini et al., 1996); others have differentiated between those who are first-generation, non-first-generation, and those whose parents attended but did not graduate from college (Bui, 2005; Choy, 2001; Horn & Nuñez, 2000). Despite the differences in delimitations in defining these groups, findings have been overwhelmingly consistent.

First-Generation College Students

Most of what has been studied about the role of college generational status is related to studies involving college students. In a literature review, the author found research on FGCS from as early as the 1980s (Billson & Terry, 1982; London, 1989).Yet significant differences between those whose parents attended college versus those whose parents did not attend college are still prevalent and alarming (Jenkins et al., 2013; Pascarella et al.; 2004;Terenzini et al., 1996). FGCS and NFGCS often differ greatly in terms of preparation for college, their personal expectations of outcomes from attending

college, their roles and experiences while enrolled in college, and their actual outcomes while attending. Some of these differences are seen as early as seventh grade.

Empirical Studies Involving FGCS

Research pertaining to FGCS often describes the discrepancy between their achievement and success in college and that of their continuing generation peers. FGCS characteristics in terms of educational preparation and expectations seem to influence their performance once arriving at college (Horn &Nuñez, 2000; Pascarella et al., Terenzini et al., 1996).FGCSs typically feel less confident in their ability to do well in college; that is, these students frequently report lower self-efficacy than NFGCSs (Ramos-Sanchez & Nichols, 2007; Wang & Castaneda-Sound, 2008). FGCSs often report lower educational attainment goals (Inman & Mayes, 1999; Pike &Kuh, 2005) not only expecting to earn a lower degree but also expecting to need more time to complete the degree (Terenzini et al., 1996) and report lower expectations of the benefits of education (Fiebig, Braid, Ross, Tom, & Prinzo, 2010).

Additional differences between these two groups are related to academic achievement. FGCS are less likely to enroll in and graduate from college (Warburton et al., 2001). They are more likely to earn fewer credit hours during the semester (Choy, 2001; Warburton et al., 2001). These students have been found to be less likely to take academic courses during their first year or to major in math, science, humanities, arts, or social sciences (Chen, 2005). These students are more likely to choose job-specific programs, i.e. accounting, criminal justice. This may be due to FGCS increased likelihood, as compared to NFGCS, to place value on job specific skills and view the primary, if not solitary, purpose of college as being a means to obtaining higher-paying

and more stable employment (Billson &Terry, 1982). They also are more likely to take remedial classes and earn a lower GPA during their first year of college (Chen, 2005). In addition to academic challenges, FGCSs also seem to face many psychosocial challenges related to their new environment (Brooks-Terry, 1988).

As the literature demonstrates, FGCS are typically outperformed by NFGCS and they tend to have a more negative college experience in general. For many years, research in this area strictly examined students who were already enrolled in college. However, more recent studies have begun to investigate the differences that appear before students leave high school.

Prospective First-Generation College Students

Although differences between FGCS and NFGCS seem to be related to pre-college characteristics few studies have focused on this population while they are in grades K-12. Researchers who have studied PFGCS, which are FGCS who have not yet attended college, have found similar differences between this group and NFGCS.

Empirical Studies involving PFGCS

Relatively little has been done with PFGCS as opposed to studying the same population as college students. One study used archival data to describe the students retrospectively, studying only those who had entered college, citing differences such as the less likelihood of these students taking Algebra in the eighth grade (Terenzini et al., 1996). Another used data from a longitudinal study including data from eighth grade to eight years post high school and found that middle school variables, such as teacher absenteeism and the presence of a Gifted and Talented Program, influenced college attendance of FGCS while NFGCS seemed to be less influenced by middle school

variables (Bui, 2002). This same researcher completed a study based on longitudinal data from a national sample and found that as parents' educational levels increased so did the students' likelihood of attending college; standardized reading, math, and science test scores; grade point averages; and educational averages (Bui, 2005). These results suggest that students whose parents have lower levels of education would see lower scores in all of these areas.

More recent studies have examined PFGCS prior to them leaving high school. Gibbons and Shoffner (2004) initially wrote a conceptual piece advocating for the use of SCCT with PFGCS. To date, two peer-reviewed articles have reported findings for studies involving PFGCS using this framework. For example, seventh grade PFGCSs were likely to have lower educational attainment goals, lower college-going self-efficacy, more perceived barriers, and lower opinion of their likelihood of going to college (Gibbons & Borders, 2010b). A different study examined 341 high school students participating in TRIO programs (e.g. Upward Bound) which targets students who are underrepresented in higher education (Garriott, Flores, & Martens, 2013). They explored paths consistent with SCCT which examined the high school students' self-efficacy, perceived barriers, and college-going expectations as they relate to careers in math and science. The data that they collected did not support the intended paths. Specifically, in this study perceived barriers did not predict self-efficacy, outcome expectations did not significantly predict interests, and self-efficacy did not significantly predict career goals. The researchers concluded that their findings suggest supports may be of greater importance than perception of barriers in this particular model. They also noted that theirs was the first study within the literature examining the math/science domain related

to the SCCT model in which the path from self-efficacy to goals was not significant (i.e. self-efficacy was not a significant predictor of goals).

Summary

Even after studying FGCS for decades, there is still uncertainty about effective interventions and timing. The scarcity of empirical work done on PFGCS is particularly problematic considering that interventions must be done before these students enter college in order to be most effective. A clearer understanding of pre-college characteristics and needs will increase the likelihood of discovering and implementing more effective interventions. The present study will address this gap by examining middle school students' college-generational status as it relates to their level of college-going self-efficacy. This study will add to the limited number of empirical studies that have researched this population during this most vital stage of development as their college-going beliefs and attitudes are forming.

Academic Self-Concept

Conceptualization and Definition of Academic Self-Concept

While self-efficacy refers to people's beliefs about their ability to achieve a specific task or goal, self-concept is more closely related to the evaluation of self in a specific area based on past experiences and achievement (Schunk & Pajares, 2005). Self-concept beliefs were primarily based on social comparison and a better predictor or mediator for affective and motivational variables. Self-efficacy beliefs were more goal-referenced and the better predictor or mediator for academic achievement. One study found that academic self-concept and academic self-efficacy represent distinct judgments of self-perceived competence even when studied in the same domain (Ferla, Valcke, &

Cai, 2009). More specifically, academic self-concept is based on one's beliefs about his or her competence in academics. For example math self-concept strongly impacted math self-efficacy beliefs, but the math self-efficacy beliefs did not have the same effect on math self-concept.

Although originally thought to be one dimension falling under the overarching general self-concept, academic self-concept has proven to be a combination of math and verbal self-concepts (Marsh, 1990). These two subsets of self-concept differ greatly and therefore need to be combined to more accurately describe the academic dimension of self-concept (Marsh, Byrne, & Shavelson, 1988). Marsh, Byrne, and Shavelson's (1988) article reports the findings of a series of studies that support the multifaceted nature of academic self-concept. Their results supported prior research that found that academic self-concept consists of at least two higher order factors, including math and verbal self-concepts. The third factor which may add validity when measuring the construct is school self-concept. Based on their findings they recommend that researchers include at least math and verbal self-concept when measuring as a measure of academic self-concept.

Several researchers have found connections between academic self-concept and various other constructs including ability grouping, achievement, anxiety, and self-esteem. In the literature pertaining to student achievement and academic self-concept, the Big Pond Little Fish Effect (BPLFE) theory is commonly cited (Makel, Lee, Olszewki-Kubilius, & Puttallaz, 2012; Marsh, 1991; Preckel, Gotz, & Frenzel, 2010). BPLFE is a phenomenon in which high-ability students are expected to experience lower academic self-concepts in educational contexts in which other students are high-

performing (Marsh, 1991). Contrary to this theory, students were twice as likely to maintain their academic self-concept even when placed in environments with high achieving students (Makel, Lee, Olszewki-Kubilius, & Puttallaz, 2012). Consistent with this theory, researchers found that ninth grade male students' math self-concepts did decrease upon their initial placement among high-ability students (Preckel, Gotz, & Frenzel, 2010). Others expected to find that average-ability school environments would negatively affect student achievement found that academic self-concept and educational aspirations mediated the effect of the school context (Marsh, 1991).

Various researchers have examined academic self-concept in relation to other student characteristics such as anxiety, academic achievement, self-esteem, and motivation. A reciprocal relationship between math self-concept and math anxiety was found among seventh grade students (Ahmed, Minnaert, Kuyper, & van der Werf, 2012). Specifically, as students' math anxiety increased their math self-concept decreased and as students' self-concept increased their anxiety decreased. Wang and Xu (2005) found that academic self-concept had a predictive effect on academic achievement. In examining German middle school students, Trautwein, Ludtke, Koller, and Baumert (2006) found reciprocal relationships among academic self-concept, self-esteem, and academic achievement with increased self-concept leading to increased self-esteem. During educational transition years, middle school students' perceived competence seemed to be directly related to motivation with increased levels of perceived competence resulting in increased intrinsic motivation and decreased levels predicting declines in intrinsic motivation (Harter, Whitesell, & Kowalski, 1992).

Summary

Academic self-concept measures individuals' self-perceptions of their competence in academic subjects and environments. Research supports that the construct is comprised of students' math and science self-concepts. It is similar to self-efficacy in that both are self-perception constructs. However, self-concept is based on past performance in a particular area while self-efficacy is based on one's approximations about future success in completing a task or obtaining a goal. Researchers found mixed results in terms of school context impacting academic self-concept. In some cases high-ability environments did not influence students' self-concepts, while other researchers found that students who were placed in high-ability environments experienced decreased academic self-concepts upon initial placement. On the contrary, students' academic self-concept, along with their educational aspirations, seemed to guard them against contextual influence (e.g. socioeconomic status, students' school structure, access to social capital in terms of preparing for college). Similarly, as academic self-concept increases, so does achievement and intrinsic motivation while anxiety decreases.

The research to date suggests that academic self-concept is relevant in multiple realms even beyond achievement that assist educators in understanding student behavior and motivation. While academic self-concept has been examined among middle school students in relation to achievement and self-evaluative measures such as self-esteem, it has not been studied in relation to college-going self-efficacy. The proposed study seeks to address this gap in the literature by exploring the relationship between academic self-concept and college-going self-efficacy.

Perceived College-Going Culture

Conceptualization and Definition of College-Going Culture

A college-going culture is one in which all students are prepared and expected to consider college as a postsecondary option (College Board, 2006; McClafferty, McDonough & Nuñez, 2002). Students' perceptions of their abilities and beliefs related to college-going will likely be influenced by their access to those things that make up a college-going culture. Students who have access to a college-going culture are also typically exposed to supportive adults (e.g. teachers, counselors, parents, and mentors) who believe in their ability to attend college, have high expectations for academic achievement, and college knowledge (i.e. information about and preparation for applying to and attending college).

Much of the literature related to college-going culture is conceptual in nature. Many authors have described what college-going cultures entail and offered information on how to create and maintain those cultures (McClafferty, McDonough, & Nuñez, 2002; Weinstein & Savitz-Romer, 2009). These scholars pull from social capital theory and organizational theory to help explain the importance of college-going cultures in secondary schools (McDonough, 2005; Weinstein & Savitz-Romer, 2009). Social capital refers to the resources that are accumulated and transmitted through social structures over time. Students have access to these structures based on their social networks which are largely dictated by the families and social conditions to which they are born. Organizational theory helps to explain schools' role and opportunity in allowing students to access social networks that they may not be privy to otherwise. When organizations, such as schools, have clear goals and objectives and plans or procedures for meeting

those goals they are able to create an environment of collaboration and consistent communication.

Empirical Research Related to College-Going Culture

The perceived benefits and wide-spread support of creating a college-going culture (sometimes referred to as "college culture") is evident through handbooks and government funding, but empirical work in the area is sparse. The empirical work done on college-going culture typically describes efforts to create a college-going culture (Jarsky, McDonough, & Nuñez, 2009; Newell, 2013; Radcliffe & Bos, 2013) and the researchers' evaluation of its effectiveness in improving student perceptions (Knight-Diop, 2010; Radcliffe & Bos, 2011).

As early as 1984, there was evidence that school culture had an impact on students' college enrollment (Falsey & Heyns, 1984). This examination of archival data revealed that students attending private schools were more likely to enroll in college even after controlling for academic track, ability, aspiration, and socioeconomic background. The researchers concluded that it was the culture of the school including its organizational policies, staff attitudes concerning students' college-going, and efforts to inform and prepare students for attending college that influenced the students' likelihood of college enrollment (Falsey & Heyns, 1984).

Educators in secondary and post-secondary institutions have attempted to create and sustain college-going cultures in an effort to increase higher education attainment of a more diverse student body. One study found that schools with smaller enrollments were more likely to sustain elements of a college-going culture, including college talk, students who regularly met with school counselors, and counselor/teacher advocacy

(Holland & Farmer-Hinton, 2009).Another found that students and parents perceived the Early College High School as having more of a college-going culture than the comprehensive high school (Harris, Tucker, & Willis, 2008). While most efforts focus on college networks, rigorous curriculum, and college exposure, some schools have found it beneficial to focus on the social-emotional needs of students in order to support a college-going culture (Knight-Diop, 2010; McKillip, Godfrey, & Rawls, 2012).

Methods for Assessing College-Going Culture

Although educators have taken on the task of creating college-going cultures within schools, evaluating culture in terms of effectiveness or relative level in secondary schools has not been studied in any particular systematic way. Two methods have emerged in the literature: surveying those who take part in the culture and assessing the college-going behaviors of high school graduates from that same school or state (Kim & Nuñez, 2013). Researchers have found support for considering student characteristics (e.g. demographics, college generational status, family income, parental involvement in education) in a particular school as those characteristics explained by a majority of the variance in students attending two- and four-year schools upon graduation (Kim & Nuñez, 2013). The second most explanatory factor was that of school context namely college-going behavior of graduates from the school and student-teacher ratio (Kim & Nuñez, 2013).

A search for literature related to the measurement and/or assessment of a college-going culture yielded no published articles. Although several studies have cited “college-going culture” as a variable, there is not a standard measurement or assessment of the construct. It has been measured by various qualitative and quantitative means including

surveying students, parents, and school staff (Harris, Tucker, & Willis, 2008; Radcliffe & Bos, 2011; Radcliffe & Bos, 2013; Radcliffe & Stephens, 2008; Radcliffe & Stephens, 2010); observing school operations (Holland & Farmer-Hinton, 2009); interviewing the relevant parties (Jarsky, McDonough, & Nuñez, 2009; Knight-Diop, 2010); using administrative data pertaining to graduation and college attendance rates (Engberg & Gilbert, 2014; Falsey & Heyns, 1984). While the variety of measurements in college-going culture has contributed greatly to the understanding of school environments, the lack of consistency has undoubtedly limited the understanding of what it means to create and maintain this type of culture.

Summary

While the idea of a "college-going culture" is not completely concrete, there are some general tenets that researchers have used to describe it. In general, the college-going culture is one that expects and supports all students' preparation in attending a post-secondary education institution upon graduation from high school. Typical strategies that have been implemented to support this type of culture include academic support, college knowledge (or information pertaining to the necessary steps to gain college attendance), and social-emotional support through mentoring relationships. Typically the implementation of the culture has been evaluated by students' perception of college as opposed to their perception of the actual environment. When evaluated, programs have resulted in increased favorable perceptions of college and college-going.

While much of the literature on college-going culture is related to the culture of the high school and focuses on one vantage point, a student's perceived college-going culture may occur before reaching high school and expand into their family life and

interactions outside of the educational environment. This study will measure the students' perceived college-going culture as a middle school student. Additionally, while most measures evaluate one aspect of the culture (e.g. students' expectations and understanding as they relate to college, staff perspective of the school environment or outcome data such as college enrollment of past graduates), this study will assess the students' perception of the culture including their interactions with staff, understanding of college-going information, and family influence as it relates to college-going. This is a more holistic view of the college-going culture as it is experienced by the student.

One clear gap in the literature is a consistent or substantiated method for assessing college-going culture. The present study will contribute to the current literature by duplicating the use of the revised version of the College-Going Culture Survey which was based on the Sample Needs Assessment Survey for students from the College Board's (2006) *Creating a College-Going Culture Guide* and later used by Harris and Willis (2008) and Harris, Tucker, and Willis (2008). These researchers reported psychometric properties and suggestions for the revised version based on the data they collected. The present study used the same instrument and reports the relevant psychometric properties to further substantiate the usefulness of this instrument.

Summary and Conclusions

This chapter outlined the relevant literature pertaining to the key concepts of this study. Specifically, literature in the areas of self-efficacy, college-going self-efficacy, race and college-going, college-generational status, academic self-concept, and college-going culture are examined. The current state of education supports the widely accepted belief that we must identify and address barriers to broad equity and access in education.

There remain many unknown factors in addressing these barriers particularly for underrepresented students, such as racial minorities and FGCS. There is evidence that self-efficacy is related to career and educational choices and that college-going behaviors formed as early as middle school; however, the literature on college-going self-efficacy of middle school students is sparse. More specifically, this construct has not been examined in relation to students' race, academic self-concept, or perceived college-going culture.

In an effort to better understand middle school students' college-going beliefs and self-perceptions, this study will examine factors related to college-going self-efficacy of middle school students. This will be the first study to examine co-occurring contextual factors, namely students' race, academic self-concept, or perceived college-going culture. Furthermore, this will be the first study to replicate the use of a commonly used measure/instrument of college-going self-efficacy which will enable the researcher to further establish the validity and reliability of that measure.

CHAPTER III: METHODOLOGY

Introduction

The purpose of this study was to examine the relationship between middle school students' college-going self-efficacy and their race, college generational status, academic self-concept, and perceived college-going culture. The following sections of this chapter describe the participants, data collection procedures, instrumentation, research design, and data analysis procedures that were used in this study.

Description of Participants

One hundred seventy middle school students of approximately 750 students attending one middle school (grades 7 and 8) in a small district in a rural area of southeastern United States participated in the study. All students who were attending the school were eligible for the study. Only students who returned a signed informed consent (see Appendix A) granting permission from one of their parents or guardians, offered assent (see Appendix B), and were present on the data collection dates participated in the study. A minimum of 129 student participants were required to detect a medium effect size (Huck, 2008).

Data Collection Procedures

Upon receiving approval from the school's principal and the University of North Carolina at Charlotte's Institutional Review Board, the researcher visited classes during the school's lunch period to share the explanation of the study (see Appendix D), invite

students to participate, and answer questions pertaining to the study. The explanation provided a general overview of the research study and procedures including that students who participate in the study would do so voluntarily, confidentially, and anonymously. During the classroom visit, the researcher also distributed the informed consent forms (see Appendix A) to be taken home by students. Students' parents or guardians were asked to sign the informed consent indicating that they agree to the student participating and understand the risks and expectations of the study. All students who returned a signed informed consent received a treat, their choice of a snack or school supply, regardless of whether or not consent was granted. The Informed Consent Form outlined the purpose, risks, benefits, and inclusion criteria of the study. It stated that students would participate in the study voluntarily and that they would be able to discontinue at any time without penalty. In addition to the informed consent, parents or guardian consenting to their students participating were asked to complete the parent survey (see Appendix E), which accompanied the informed consent form.

The students who returned informed consent forms (see Appendix A) granting permission from their parent or guardian were invited to complete the survey in a small group setting. Prior to beginning the survey, students were presented the Student Assent Form (see Appendix B). This form briefly explained the study and reminded students that their participation was voluntary and could be ended at any time. Students signed the form to communicate their willingness to participate in the study. Students who did not want to participate communicated that verbally. Students who agreed to participate completed electronic versions of the instruments used in the study. Groups of 10 or fewer students completed the surveys (see Appendices F-I) during the school day on

computers housed in the library. The researcher was present while students completed the survey to address any of the students' clarification questions. Students worked at individual stations and the researcher only approached students' computers when answering a question in order to maximize student privacy during the survey administration.

Instrumentation

The four instruments used in the study (see Appendices F-I) were combined to create one electronic form using the Google Docs application. The creators of each of the pen-and-paper instruments granted permission for the researcher to create electronic versions of the instruments. Students responded to a self-reported survey comprised of electronic versions of the following instruments: Demographics Survey (see Appendix G), College-Going Self-Efficacy Scale (see Appendix H), the academic subscales of the Self Description Questionnaire II—Short Version (see Appendix I), and the College-Going Culture Survey Revised (see Appendix J). The following section includes descriptions of each of these instruments.

Informed Consent (see Appendix A)

In order to be eligible to participate in the study, students were required to return an informed consent form (see Appendix A) signed by their parent or guardian granting permission for them to participate. The informed consent described the study, data collection procedures, risks, and benefits of the study.

Parent Survey (see Appendix E)

Upon granting consent the students' parents or guardians were asked to complete the parent survey (see Appendix E), which assessed the students' college generational

status by asking for the parents' educational level. These forms were sent home with the informed consent form (see Appendix A). Students who reported no parent with education beyond high school were classified as prospective first-generation college students (PFGCS). All other students were classified as non-first generation college students (NFGCS).

Demographics Survey (see Appendix G)

The Demographics Survey (see Appendix G) was created specifically for this study to assess the respondents' demographic information, which will be pertinent for descriptive statistics and some of the independent variables. The survey contains seven questions that ask participants' age, grade level, race, gender, and college generational status. The question pertaining to parental education level was utilized to determine students' college generational status when the data from the parent survey was missing.

College-Going Self-Efficacy Scale (CGSES)

The CGSES (Gibbons & Borders, 2010a) measures middle school students' confidence in their ability to acquire college attendance (i.e. be accepted) and persistence (i.e. continue successfully once there). This instrument was created by Gibbons and Borders (2010a) in an effort to learn more about middle school students' likelihood to aspire towards college attendance based on their confidence in being able to successfully accomplish the tasks necessary to reach those goals. The instrument contains two subscales with a total of 30 individual items. The items are on a 4-point Likert-type scale (1 = not at all sure, 4 = very sure). Fourteen of the items make up the college attendance subscale and relate to college access (e.g., "I can make an educational plan that will prepare me for college"). The college attendance items reflect various dimensions of

attendance including financial (e.g., “I can find a way to pay for college”), academic (e.g., “I can get good grades in my high school math classes”), family (e.g., “I can have family support for going to college”), decision-making (e.g., “I can choose a good college”), and overall college-going (e.g., “I can go to college after high school”). These items were based on literature related to college attendance beliefs. Sixteen items make up the college persistence subscale and relate to college persistence (e.g., “I could do the class work and homework assignments in college classes”). The college persistence items addressed similar dimensions including financial (e.g., “I could pay for each year of college”), ability items (e.g., “I could do the classwork and homework assignments in college classes”), family (e.g., “I could get my family to support my wish of finishing college”), and life skills (e.g., “I could set my own schedule while in college”) as well as overall college persistence (e.g., “I could fit in at college”).

The scale was developed, tested for readability and reliability, and validated using a sample of diverse middle school students representing various races and college generational statuses (Gibbons & Borders, 2010a). Upon creation the instrument was grounded in empirical research on college-going beliefs and judged to reflect that literature by expert reviewers who also deemed it appropriate for middle school students. Further empirical work supported the readability and appropriateness for middle school students (Gibbons & Borders, 2010a). During this process one of the items was deleted resulting in making the originally 31-item instrument a total of 30 items. Following the initial study, the researchers tested the instrument using seventh grade students who were targeted because they attended schools with a high likelihood of having PFGCS (i.e. students whose parents have not received formal education beyond high school). The

reliability for the college attendance subscale was .89 and .90 for the college persistence subscale. The total scale had a coefficient alpha of .94. In addition to supporting two distinguishable subscales within the instrument, there was also a high level of overlap in the two factors, so the researchers suggested using a total score to represent overall college-going self-efficacy. The researchers also tested the reliability over time using a test-retest bivariate analysis with data from a small group of different seventh grade students. The reliability coefficient of this analysis was .88, which indicates an acceptable level of consistency over time. Based on this the researchers suggested that college-going self-efficacy is a relatively stable construct.

Data from phase 1 of Gibbons and Borders' (2010a) study provided support for the validity of the CGSES. Examination of the creation and review of the instrument suggested that it has construct and content valid. The instrument was created based on empirical literature on college-going beliefs and by the standards set forth in creating self-efficacy scales. Expert reviewers confirmed that the items were sound in those regards in addition to confirming that they were developmentally appropriate for the intended age group. A readability analysis also suggested that the instrument is developmentally appropriate for the intended population.

For the purposes of this study, a total score derived from the two subscales was used to describe the students' college-going self-efficacy. Higher scores indicate higher levels of self-efficacy or confidence related to students' self-perception of their ability to attend and persist in college.

Self Description Questionnaire II—Short Version (SDQII-S)

Academic self-concept was measured using the SDQII-S (Marsh, Ellis, Parada, Richards, & Heubeck, 2005). This instrument is a short version of the Self-Description II (SDQII; Marsh, 1992). The SDQ-II was developed to measure both academic and non-academic dimensions of self-concept for adolescents, grades 7-10. It is made of 102 items divided into 11 subscales. The 11 subscales are divided into three academic subscales (mathematics, verbal, and general school), seven non-academic subscales (physical ability, physical appearance, opposite-sex relations, same-sex relations, parent relations, honesty-trustworthiness, and emotional stability), and one general self-concept subscale. All items are measured on a 6-point Likert-type scale, ranging from 1 = false to 6 = true. In order to reduce response bias, half of the items are negatively worded. The SDQII is based on the multidimensional and hierarchical description of self-concept from the Shavelson, Hubner, and Stanton (1976) model. The internal consistency for the SDQII ranged from .83 to .91 based on a sample of 5,494 students in Grades 7-12 for scores on all 11 subscales (Marsh, 1992).

The SDQII-S was carefully constructed from the SDQII to provide a shorter version of the survey while preserving optimal psychometric properties (SDQII-S; Marsh et al., 2005). The shortened version consists of 51 items on the same 11 subscales.

In order to measure academic self-concept, the present study will utilize the three academic subscales (Verbal, Mathematics, and School) specifically. This will include a total of 13 items: Verbal (5), Mathematics (4), and School (4). All negatively worded items were reversed scored.

College-Going Culture Survey Revised (CGCS-R)

The CGCS-R (Willis, 2013) was used to assess students' perceived college-going culture. The CGCS is based on the Sample Needs Assessment Survey for students from the College Board's (2006) *Creating a College-Going Culture Guide*. It was designed to measure the college-going culture of urban high school students (Harris, Tucker, & Willis, 2008). Although the survey was originally used in an unpublished manuscript (Harris & Willis, 2008), the psychometric properties were first explored and reported in a dissertation which analyzed the same data set (Willis, 2013). This study supported a revised version of the summary using only 10 of the original 15 items. Each item is measured on a 5-point Likert-type scale ranging from 1 ("very true of me") to 5 ("not very true of me"). The CGCS-R was recommended over the original instrument because it had a higher inter-item correlation coefficient than the CGCS. The reliability measures reported for the original instrument were an unstandardized Cronbach α of .48 and a standardized Cronbach α of .56. Using explanatory factor analysis and a minimum Cronbach α of .70, 10 items were retained and comprised two latent factors: Verified College Potential and College Capital Awareness. Items from the revised instrument yielded an overall unstandardized Cronbach α of .77 and standardized Cronbach α of .78. A total score from this measure was used to describe students' perceived college-going culture. Higher scores are evidence of a stronger sense of college-going culture for the student.

Research Design

Multiple regression analyses have one of two goals: to predict or explain a variable in relation to two or more different variables (Tabachnick & Fidell, 2007). In

this study a hierarchical multiple regression analysis was performed to explain the dependent variable of middle school students' college-going self-efficacy using four independent variables: race, college generational status, academic self-concept, and perceived college-going culture. The independent variable of race was entered into the regression model first as it is a characteristic with which the participant was born. Secondly, college generational status was entered as it is also demographic in nature and not easily manipulated. Academic self-concept was the third variable entered as it is also personal and specific to participants but can be manipulated by outside forces. The last variable entered and most easily influenced was the students' perceived college-going culture.

Research Questions

The research questions for this study are:

1. How much variance can be accounted for in college-going self-efficacy by race?
2. After controlling for race, how much variance can be accounted for in college-going self-efficacy by college generational status?
3. After controlling for race and college generational status, how much variance can be accounted for in college-going self-efficacy by academic self-concept?
4. After controlling for race, college generational status, and academic self-concept, how much variance can be accounted for in college-going self-efficacy by perceived college-going culture?

Data Analysis

The data was downloaded from the electronic form and entered into the data analysis software. The Statistical Package for the Social Sciences (SPSS, 2012) was used

to screen the data, provide descriptive statistics, and conduct the hierarchical multiple regression analysis.

Screening Data

Prior to the major analyses, the data was screened to ensure that all statistical assumptions were met or addressed. The screening process addressed accuracy of data entry, missing data, outliers, normality of distribution, and other assumptions specific to multiple regression analyses (e.g., multicollinearity, homoscedasticity; Tabachnick & Fidell, 2007).

Descriptive Statistics

Descriptive statistics were used to describe the participants in the study. Using the SPSS (2012) software package, the researcher examined and reported demographic variables including students' age, race, gender, and college generational status.

Data Analysis

The IBM SPSS (2012) package was used to screen the data and perform a hierarchical multiple regression analysis to analyze the data collected in this study. SPSS EXPLORE was used to screen the data and address necessary assumptions including: ratio of cases to independent variables, missing data, normality, linearity, homoscedasticity, outliers, multicollinearity, singularity, and outliers in the solution. Variables were transformed as necessary before conducting the major analysis. SPSS REGRESSION was utilized to perform the hierarchical multiple regression. Each independent variable was entered into the model separately. Race was entered first, followed by college generational status, then academic self-concept, and lastly perceived college-going culture was entered. The amount of variance accounted for by each

variable has been reported in Chapter 4 as well as the overall variance accounted for by the set of independent variables.

Summary

The purpose of this chapter is to outline the research methodology that was utilized in this study. The previous sections detailed the participants, pertinent variables, research questions, research design, instrumentation, and data analysis used in this study. Hierarchical multiple regression was utilized to examine the variance accounted for in middle school students' college-going self-efficacy by their race, college generational status, academic self-concept, and perceived college-going culture as individual variables added to the model sequentially.

CHAPTER IV: RESULTS

The purpose of this study was to examine the relationship between middle school students' college-going self-efficacy and their race, college generational status, academic self-concept, and perceived college-going culture. The amount of variance accounted for in college-going self-efficacy by four variables was examined leading to four specific questions pertaining to the relationship among these variables. The first question examined the amount of variance accounted for by race in college-going self-efficacy. The second question examined the amount of variance accounted for by college generational status in college-going self-efficacy after controlling for race. The third question examined the amount of variance in college-going self-efficacy accounted for by academic self-concept after controlling for race and college generational status. The fourth, and final, question examined the amount of variance in college-going self-efficacy accounted for by students' perceived college-going culture after controlling for race, college generational status, and academic self-concept.

This chapter presents the results of the study in relation to the aforementioned research questions. The first section in this chapter provides a description of the participants in the study. The second section presents information regarding instrument reliabilities. The third section will describe the screening procedures and findings, which demonstrate the appropriateness of the use of this data in terms of assumptions of the

statistical analysis used. The fourth section will outline the results of the major analysis of this study. The chapter concludes with a summary of the information included.

Description of Participants

Approximately 700 students were invited to participate in the study. A total of 162 students completed the survey resulting in a participant response rate of 22%. A total of 174 informed consent forms were returned. Ten informed consent forms were returned indicating that students did not have permission to participate in the study. Of the students who returned informed consent forms granting parent/guardian permission to participate, two students did not grant assent and therefore did not participate in the study.

Frequencies and percentages of the participants' demographic variables in this study are reported in Table 1. Demographic data indicated that of the total number of participants 60% were female and 40% were male. The participants self-identified in terms of race as being Caucasian (37%), African American (28%), Hispanic or Latino (25%), Multiracial (8%), Asian (.8%), and Native American (.8%). One student did not report a race or ethnicity. For the purposes of the analysis, race was dummy coded (0 = non-White, 1 = White), and the two groups were compared. Non-White students included all students who did not report Caucasian as their race. Students ranged in age from to 12 to 15. One participant did not report an age. Thirty-four percent of participants were in seventh grade and 66% were in eighth grade. Of the participants 37% were identified as being prospective first-generation college students (PFGCS) while 60% had at least one parent who had attended college (i.e. non-first-generation college students, NFGCS). Five participants were missing the data for this question from

the parent and student surveys. Due to the missing demographic information that also served as predictor variables, 156 participants were included in the major analysis. Similar to race, college generational was also coded into two groups for the purposes of the analysis; '0' represented NFGCS, and '1' represented PFGCS.

Table 1: Demographic variables, totals, and percentages

Variable	Number	Percentage
Gender		
Male	64	39.5%
Female	98	60.5%
Grade		
7th	55	34.0%
8th	107	66.0%
Race		
White	60	37.0%
African American	45	27.8%
Hispanic or Latino	41	25.3%
Native American	1	0.6%
Asian	1	0.6%
Multiracial	13	8.0%
College Generation Status		
Prospective first-generation college student	60	37.0%
Non-first-generation college student	97	59.9%

Reliability of Instruments

This section will outline reliability of the instruments used based on the data collected. Cronbach α internal consistency measures were used to estimate the reliability of the College-going Self-efficacy Scale (CGSES), the subscales used from the Self-Description Questionnaire Short Version (SDQII-S), and the College-Going Culture Survey Revised (CGC-R). The means, standard deviations, number of items, and alpha coefficients for each of the three instruments are included in Table 2.

CGSES

Total scores were used for the analysis of the CGSES. There were 30 items measured on a Likert-type scale ranging from 1 (Not at all sure) to 4 (Very sure) for this instrument. Participant scores could range from 30-120 with higher scores indicating higher levels of college-going self-efficacy. The Cronbach's reliability estimate for the college-going self-efficacy instrument yielded an alpha coefficient of .94.

SDQII-S

A composite score from three subscales of the SDQII-S were used to measure students' academic self-concept. There were 13 items measured on a Likert-type scale ranging from 1 (False) to 6 (True). Participant scores could range from 13-78. Higher scores indicate a stronger sense of academic self-concept. The Cronbach α reliability for the academic self-concept measure yielded an alpha coefficient of .82.

CGS-R

The CGS-R was used to measure students' perceived college-going culture. This instrument was comprised of 10 items measured on a Likert-type scale ranging from 1 (Very true about me) to 5 (Not at all true about me). For the purposes of this study the

scores were reversed so that higher scores would indicate a stronger sense of college-going culture (i.e. 5 would indicate a "very true about me" response to the positively worded items). Scores could range from 5-50. The Cronbach's reliability for this instrument yielded an alpha coefficient of .67.

Table 2: Cronbach alpha, number of items, means, and standard deviations for each Instrument

Instrument	Coefficient α	Items	*M*	*SD*
CGSES	.943	30	93.13	14.71
SDQII-S	.822	13	59.03	10.08
CGSR	.670	10	37.40	4.34

Data Screening

SPSS (2012) was used to analyze the data. Prior to running the analysis, all variables were examined for outliers, missing data, normality, linearity, and homoscedasticity of residuals, and collinearity. Outliers were examined and considered to be acceptable and retained in all analyses. Missing data from each instrument comprised only 3% or less and showed no evidence of a pattern. Participants who were missing data related to the demographic variables that were used in the major analysis were removed. To address data missing from individual questions within the instruments, imputation, in which average scores was used to replace missing values for individual assessments, was used to insure the inclusion of the optimal number of

participants in the analysis. Kurtosis and skewness did not indicate major departures from normality. The kurtosis and skewness for each variable is shown in Table 3.

Table 3: Skewness and kurtosis measures for each variable

Variable	Skewness	Kurtosis
College-going Self-efficacy	-.59	.46
Race	.50	-1.77
College Generation Status	.48	-1.79
Academic Self-concept	-.19	-.40
Perceived College-going Culture	.03	-.16

Scatterplots were examined to ensure that the assumption of homoscedasticity and multivariate normality were met. Bivarate correlations were examined to evaluate possible concerns of multicollinearity or singularity. Although significant correlations were found, no variables were highly correlated (i.e. $r \geq \pm.8$) indicating that each variable measures a separate phenomenon. Pearson correlations were performed using the predictor and outcome variables. The correlation matrix is displayed in Table 4. All of the predictor variables were significantly correlated with the dependent variable. There was not a significant correlation between race and perceived college-going culture; nor was the correlation between academic self-concept and college generational status significant. All other variable combinations resulted in significant correlations.

Significant correlations were found among each of the predictor variables and the outcome variable. Race was significantly correlated with college-going self-efficacy (r =

.258, p = .001) indicating that white students were most likely to have higher self-efficacy scores. College generational status was significantly correlated with college-going self-efficacy (r = -.288, p < .001) indicating that prospective first-generation college students reported lower self-efficacy scores. Academic self-concept was significantly correlated with college-going self-efficacy (r = .495, p < .001) indicating that students with higher levels of academic self-concept also reported higher levels of college-going self-efficacy. Perceived college-going culture was also significantly correlated with college-going self-efficacy (r = .368, p < .001). This indicates that students with higher levels of perceived college-going culture also reported higher levels of college-going self-efficacy.

There were also several significant correlations among the predictor variables. Race and college generational status were significantly correlated (r = -.345, p < .001) which indicates that White students were less likely to be PFGCS as compared to their peers in this sample. Race and academic self-concept were significantly correlated (r = .290, p < .001) suggesting that White students reported higher levels of academic self-concept. College generational status and perceived college-going culture were significantly correlated (r = -.139, p < .05) which indicates that students who were categorized as NFGCS reported higher levels of perceived college-going culture. Academic self-concept and perceived college-going culture also yielded a significant correlation (r = .220, p < .01). This indicates that students who reported high levels of academic self-concept also reported high levels of perceived college-going culture.

Table 4: Correlation coefficient for the outcome and predictor variables

Variable	College-going Self-efficacy	Race	College Generation Status	Academic Self-concept
College-going Self-efficacy	---	---	---	---
Race	.258**	---	---	---
College Generation Status	-.288**	-.345**	---	---
Academic Self-concept	.495**	.290**	-.112	---
Perceived College-going Culture	.368**	-.012	-.139*	.220**

Note. **Indicates a significant correlation at $p < .01$. (1-tailed).
*Indicates a significant correlation at $p < .05$ (1-tailed).

Hierarchical Multiple Regression Analysis

A hierarchical multiple regression was conducted to examine college-going self-efficacy and the variance accounted for by race, college generational status, academic self-concept, and college-going culture. The predictor variables were ordered into the analysis based on the nature of each variable. The ordering allowed the researcher to examine how much variance the predictor variables added after the previous variable was entered into the equation. Analysis was performed using SPSS REGRESSION.

The overarching aim of the study sought to examine if middle school students' college-going self-efficacy relate to their race, college generational status, academic self-concept, and perceived college-going culture. To answer the main question, four questions were addressed, and the following variables were ordered into the equation based on each step of the hierarchical multiple regression. The results of the hierarchical multiple regression analysis are presented in Table 5.

The first question examined was: How much variance can be accounted for in college-going self-efficacy by race? After entering race into step one, results indicated that the variance accounted for (R^2) equaled .07 (adjusted R^2= .06), which was significantly different from zero ($F_{(1, 154)} = 10.96$, $p = .001$). Therefore, the results indicate that approximately 7% of variance in college-going self-efficacy is accounted for by race.

The second research question analyzed was: After controlling for race, how much variance can be accounted for in college-going self-efficacy by college generational status? To answer the research question, college generational status was entered into the regression equation in the second step after accounting for race variance. The results indicated that the variance accounted for (R^2) equaled .12. The change in variance accounted for ($\Delta R^2 = .05$) was a statistically significant increase in variance accounted for over the model in step one ($\Delta F_{(1, 153)} = 7.78$, p = .006). Therefore, middle school students' college generational status adds 5% variance to the prediction of their college-going self-efficacy after controlling for race and accounting for approximately 12% of the variance.

The third research question addressed was: After controlling for race and college generational status, how much variance can be accounted for in college-going self-efficacy by academic self-concept? To answer this question, academic self-concept was entered into the regression equation in the third step after accounting for race and college generational status. The results indicated that variance accounted for (R^2) equaled .30. The change in variance accounted for ($\Delta R^2 = .19$) was a statistically significant increase in variance accounted for over the model in step two ($\Delta F_{(1, 152)} = 41.53$, $p < .001$).

Therefore, academic self-concept adds 19% variance to the prediction of college-going self-efficacy after controlling for race and college generational status and the model accounts for about 30% of the variance.

The last research question analyzed was: After controlling for race, college generational status, and academic self-concept, how much variance can be accounted for in college-going self-efficacy by perceived college-going culture? To answer this question, perceived college-going culture was entered into the model after controlling for academic self-concept, college generational status, and race. The results indicated that the variance accounted for (R^2) equaled .36. The change in variance accounted for (ΔR^2 = .06) was a statistically significant increase in variance accounted for over the model in step three ($\Delta F_{(1, 153)} = 14.54$, $p < .001$). Therefore, students' perceived college-going culture adds 6% variance to the prediction of their college-going self-efficacy after controlling for race, college generational status, and academic self-concept, and this model accounts for approximately 36% of variance in college-going self-efficacy.

Table 5: Hierarchical multiple regression analysis evaluating predictors of college-going self-efficacy

Independent Variables	Step 1	Step 2	Step 3	Step 4
Race (0 = nonwhite, 1=white)	.26**	.18*	.05	.09
College Generational Status (0= NFGCS, 1= PFGCS)		-.23**	-.22**	-.18*
Academic Self-concept			.46**	.39**
Perceived College-going Culture				.26**
R^2	.07**	.12**	.30**	.36**
ΔR^2		.05**	.19**	.06**

Note. **Indicates significance at level $p < .01$.
*Indicates significance at level $p < .05$.

The unstandardized regression coefficients (*B*) and intercept, the standardized regression coefficients (β), for the full model are reported in Table 6. In the final step, three of the four predictor variables contributed significantly to the explanation of college-going self-efficacy. Although race initially produced a significant change in variance, within the complete model race was no longer a significant predictor $\beta = .09$, $p > .05$. College generational status ($\beta = -.18$, $p = .01$), academic self-concept ($\beta = .39$, $p < .001$), and perceived college-going culture ($\beta = .26$, $p < .001$) all contribute significantly to the model accounting for varying degrees of variance in college-going self-efficacy.

Table 6: Unstandardized regression coefficients (*B*) and intercept, the standardized regression coefficients (β), t-values, and p-values for variables as predictors of college-going self-efficacy

Variables	*B*	β	*t*-value	*p*-value
Intercept	27.65		2.93	< .05
Race	2.58	.09	1.18	.24
College Generational Status	-5.40	-.18	-2.6	< .05
Academic Self-concept	.58	.39	5.64	< .001
Perceived College-going Culture	.87	.26	3.81	< .001

Summary

This chapter summarized the results of the study including demographic data, instrument reliability, data screening information, and results of the statistical analysis used to answer the research questions. The purpose of this study was to examine the relationship between middle school students' college-going self-efficacy and their race, college generational status, academic self-concept, and perceived college-going culture.

The participants in this study were 162 seventh and eighth grade students ranging in age from 12-15 attending one middle school in the southeastern United States. Students represented several ethnicity and races. Sixty percent of the students were NFGCS; while 37% of them were PFGCS.

Four instruments were used in the study: a demographic survey, the College-going Self-efficacy Scale (CGSE), 13 questions from the Self-Description Questionnaire II-Short Version (SDQII-S), and the College-going Survey Revised (CGS-R).The alpha coefficients yielded for each instrument suggested that they were reliable. The Cronbach

α for the CGSE was .94. The questions from the SDQII-S yielded a .82 reliability estimate, and the CGS-R had an alpha of .67.

The research questions asked specifically how much variance was accounted for by race, college generational status, academic self-concept, and college-going culture in respect to college-going self-efficacy. The variance was evaluated by adding each variable into the model one step at a time. SPSS FREQUENCIES and EXPLORE were used to evaluate the appropriateness of the data for the hierarchical multiple regression analysis in terms of statistical assumptions. SPSS REGRESSION was used to analyze the variance accounted for by the predictor variables. The analysis suggested that each added variable accounted for additional variance after controlling for the previous variables. Specifically, as a complete model college generational status, academic self-concept, and perceived college-going culture account for approximately 36% of the variance in middle school students' college-going self-efficacy.

CHAPTER V: DISCUSSION

This study examined the relationship between middle school students' college-going self-efficacy and their race, college generational status, academic self-concept, and perceived college-going culture. The sections within the chapter discuss an overview of the study, the results and conclusions, predictors of college-going self-efficacy, contributions of the study, limitations of the study, recommendations for future research, and implications for school counseling and education.

Overview of the Study

The importance of going to college is becoming increasingly evident in our society. Projected education requirements are steadily on the incline. Researchers project that 63% of the 47 million job openings in 2018 will require workers with at least some college education (Carnival, Smith, & Strohl, 2010). Even without higher education being expressly required to enter the workforce, it is certainly desirable that one obtains training and education beyond high school to reach personal and professional goals that often exceed the social status of generations past. In addition to vocational and economic benefits, higher levels of education are also directly tied to higher job satisfaction, lower levels of public assistance dependency, higher reports of health quality, and increased participation in volunteerism and leisure activities (Baum, Ma, & Payee, 2010; Pena, 2005; Vila, 2000). Broadly speaking, college education is desirable on the individual and societal levels. It is often seen as the key to social class

advancement and obtainment of the “American dream” particularly for those who are from lower socioeconomic backgrounds.

While the positive nature of higher education is widely accepted, the accessibility and equity of educational opportunities cannot be taken for granted by all who desire it. Research highlights an achievement gap and college-going differences related to race and family background (Gorey, 2009; Kim & Nuñez, 2013). Specifically, white students tend to outperform non-white students, students from lower income statuses are usually outperformed by students from higher income backgrounds, and non-first-generation students (NFGCS) more likely to attend and succeed in college (Moises & Vohra-Gupta, 2007; Perna & Thomas, 2008; Strayhorn, 2006).

Educational professionals encourage students and families to begin preparing for and planning post-secondary education as early as the middle grades noting that career interventions and college preparation are most effective for this impressionable age group (Bangser, 2008; Wimberly & Noeth, 2005). Similarly, schools are structured in a way that requires students, families, and schools to make decisions that largely influence students’ postsecondary trajectory including class selection as early as middle school. However, schools rarely focus on college-going until late high school, and most of the literature to date regarding college-going examines high school and college students. It is imperative that we learn more about middle school students and their college-going beliefs. Added information will better equip educators, particularly school counselors, to devise more effective interventions and ways of working with students in preparation for postsecondary success. These findings suggest that there are social-emotional factors, in addition to academic ability and achievement considerations, that influence students’

college readiness. Effective use of this information may positively impact the achievement and opportunity gaps in education, which would help in expanding the educational opportunities for a larger range of demographics leading to a more diverse workforce. Furthermore, these efforts will assist in the efforts to ensure equity in and access to higher education.

The purpose of this study was to add to that understanding, specifically as it pertains to middle school students by exploring their college-going self-efficacy. Social cognitive career theory (SCCT) and the role of habitus guided the premise of this study. SCCT, and specifically the concept of self-efficacy, supports that students' college-going self-efficacy and self evaluative measures (e.g. academic self-concept) are relevant in understanding student's likely college-going behavior. The concept of habitus suggests that students' familial make up, including college generational status, and environment influence them greatly as they consider career development including evaluating postsecondary options (Dumais, 2002). There have been theoretical and conceptual writings on these topics (i.e. college-going, middle school students, college-going culture); however the empirical research in this area is extremely limited. This study was motivated in part by the importance of these concepts as they relate to students' futures and also by the dearth of research related to college-going beliefs of middle school students, particularly those who would potentially be the first in their families to attend college.

There were four instruments used in the study: a demographics survey, the College-going Self-efficacy Scale, the three academic subscales of the Self Description Questionnaire II—Short Version, and the College-going Culture Survey Revised.

Seventh and eighth grade students completed these instruments in an electronic form after returning informed consents granting parental permission to participate in the study. The following section will describe the results and the conclusions drawn from them.

Results and Conclusions

Demographic Data

The 162 middle school students who participated in this study were predominantly female (60%) eighth graders (66%). Study participants' racial makeup mirrored the makeup of the school. The participants were 37% White students, 27.8% Black, 25.3% Hispanic or Latino, .6% Native American, .6% Asian, and 8% multiracial students. Most students were NFGCS (60%). As operationally defined in this study, these students have at least one parent that has at least some education beyond high school.

Pearson's Correlations

A Pearson correlation analysis was performed using college-going self-efficacy, race, college generational status, academic self-concept, and college-going culture. All of the pairings, except two, produced significant correlations. The significantly correlated pairs offer information about PFGCS, academic self-concept, college-going culture, and college-going self-efficacy. The following paragraphs discuss these findings.

There were three significant correlations related to college generational status. College generational status and race were positively correlated indicating that PFGCS were more likely to be racial minorities as compared to their peers in this sample. This is consistent with what has been found among other samples in that first-generation college

students are most likely to be racial minorities (Billson & Terry, 1982; Chen, 2005; Lundberg, Schreiner, Hovaguimian, & Miller, 2007). College generational status and perceived college-going culture were negatively correlated indicating that PFGCS were likely to perceive lower levels of perceived college-going culture as compared NFGCS. Lastly, college generational status and college-going self-efficacy were negatively correlated indicating that PFGCS reported that they feel less confident in their ability to attend and persist in college. This finding confirms Gibbons' and Borders' (2010b) work that also found that PFGCS reported lower levels of college-going self-efficacy as compared to NFGCS.

The remaining significant correlations were related to academic self-concept, college-going culture, and college-going self-efficacy. Race and academic self-concept were significantly and positively correlated indicating that White students tended to see themselves more favorably in terms of academic achievement. Prior studies involving academic self-concept have not considered it in relation to race. These results suggest that such inquiry may be warranted as it may serve useful in understanding the achievement gap among students from different races. Perceived college-going culture was also positively correlated with academic self-concept. This indicates that students who reported a higher sense of being a part of a culture that fosters college-going also reported seeing themselves more favorably in terms of academic achievement. These two variables have not previously been examined together, but the findings are consistent with other studies in which students experienced improved academic perceptions after being exposed to a college-going culture (Radcliffe & Bos, 2011).

All of the predictor variables in this study were significantly related to college-going self-efficacy. As mentioned previously, identification as a PFGCS was associated with lower levels of college-going self-efficacy. Students who reported higher levels of academic self-concept reported higher levels of college-going self-efficacy. The same was true of students who reported higher levels of college-going culture. In other words, students who viewed themselves more positively in regards to academics reported feeling more confident in their ability to attend college. Similarly, students who reported higher scores in regards to being a part of a culture that promotes and expects college-going also felt more confident in their ability to attend college. College-going self-efficacy is a relatively new construct and has not been examined in relation to these variables previously. These findings suggest that college-going self-efficacy is a relevant variable in considering students' self-perceptions as they prepare for college-going.

The remaining two pairs of variables were not significantly correlated. First, race and perceived college-going culture were not significantly correlated suggesting that race and perceived college-going culture are not related. Perceived college-going culture refers to the degree to which students perceive their current environment, including home and school factors, as one that expects and promotes college-going. The results here indicate that students' race was not related to how they perceived their environment in terms of supporting college-going. The literature concerning college-going culture has been largely conceptual in nature, describing the components of the culture and encouraging schools to adapt such a culture. Related empirical research has evaluated the impact of college-going cultures. For example, Radcliffe and Bos (2011) found that students gained positive perceptions and aspirations for college-going after being exposed

to a college-going culture that included mentoring and exposure to college knowledge. The current study adds to the literature base by exploring this phenomenon empirically as a factor in students' confidence in their ability to go to college in addition to how it relates to race. The exploration of students' perceived college-going culture is limited to one dissertation study (Willis, 2011) in which the researcher explored the students' hidden perceptions about college-going culture in an effort to increase the understanding of and promotion of college-going cultures in Texas high schools. Although the relationship between race and perceived college-going culture has not been studied empirically, some researchers have investigated school factors that promote college-going in relation to race. These researchers found that minority and low income students are more likely to attend schools that lack college-going culture components including high percentages of students engaged in college preparatory curriculums, high rates of students taking advanced placement courses, or high rates of students who actually enroll in college upon graduation (Adelman, 2006; Greene & Forster, 2003; Kim & Nuñez, 2013; McDonough, 2004; Wimberly, 2002).

The second pair that was not significantly correlated included college generational status and academic self-concept. This indicates that students' status in terms of whether or not they would be the first in their families to attend college is not related to how students view themselves academically. Whereas this is the first study to examine middle school students' college generational status and academic self-concept, these findings are contrary to a study that found a significant correlation between students' science self-efficacy and their parents' educational levels (Senlar & Sungur, 2009). It is possible that other studies have found similar results but have not published the findings due to their

lack of significance. While statistically insignificant, it is important to note that these findings suggest that the gap, in terms of college-going and academic achievement, between FGCS and NFGCS are likely based on factors outside of the students' academic self-perceptions.

Predictors of College-going Self-efficacy

Following the examination of the correlation matrix, the main analysis of the data was performed. A four-step hierarchical multiple regression analysis was used to analyze the data. The variables were entered into the model based on the nature of each variable in relation to the personhood of the participants. The steps allowed the researcher to determine how much unique variance each variable added to the equation. The outcome was that college generational status, academic self-concept, and college-going culture as a model accounted for 35% of the variance in middle school students' college-going self-efficacy. Each of the steps in the regression will be discussed below.

Step 1: Race and College-going Self-efficacy

In the first step, race was entered into the equation to predict college-going self-efficacy. In this analysis, race was statistically significant and accounted for 6% of the variance in college-going self-efficacy. Various studies (e.g. Culpepper & Davenport, 2009; Good, Masewicz, & Vogel, 2010; Kim & Nuñez, 2013; Walton & Cohen, 2011) support achievement and college-going gaps between White and non-White college students, and the results of the first step of this analysis suggests that that students' self-efficacy in being capable to attend and persist in college is significantly influenced by the students' race even at the middle school level.

Step 2: Adding College Generational Status to predict College-going Self-efficacy

In the second step, the researcher added college generational status. After controlling for race, college generational status accounted for 12% of the variance in college-going self-efficacy. The current findings are similar to those of Gibbons and Borders (2010b) who also found that students' college generational status played a significant role in explaining their college-going self-efficacy. Specifically, both this and the previous study found that PFGCS reported lower levels of college-going self-efficacy. There is a body of research pertaining to college students and college generational status; however there is a dearth of literature related to these students before they are enrolled in college. This means that there is extremely limited information about the students who do not attend college. Nonattendance may be related to the differences between these populations. This lack of information also means that there is very little known about these students during a period of their development during which they could possibly be most influenced or most significantly impacted in terms of their college-going beliefs and preparedness. The results from the current study confirm that students' college generational status contribute to the beliefs about their capability of going to college. Because actual college attendance cannot be measured at this age, understanding perceptions that undoubtedly inform student behavior and aspirations is invaluable.

Step 3: Adding Academic Self-concept to predict College-going Self-efficacy

Academic self-concept was added for the third step of the model. After controlling for race and college-generational status, academic self-concept accounted for 30% of the variance in college-going self-efficacy. This step accounted for an additional 19% of variance over the model that only included race and college-generational status.

In other words how a student sees themselves academically or their ability to do well in academics accounts for 30% of the variance in how confident they feel in their ability to go to college when holding things constant in terms of students' race and college generational status. These findings suggest that understanding, or even intervening to influence, students' academic self-concept may also impact the students' confidence in their ability to go to college.

Step 4: Perceived College-going Culture to predict College-going Self-efficacy

For the fourth, and final, step of the analysis, the researcher added perceived college-going culture. After controlling for race, college generational status, and academic self-concept, perceived college-going culture accounted for 36% of the variance in college-going self-efficacy. The addition of perceived college-going culture accounted for an additional 6% of the variance in middle school students' college-going culture. Although Gibbons and Borders (2010b) did not investigate college-going culture specifically when they studied college-going self-efficacy in a middle school sample, they found support for the importance of the school environment in that there was a direct relationship between school personnel support and students' outcome expectations. College-going culture has been examined exclusively at the high school level. When examined, researchers (Engberg & Gilbert, 2014; Jarsky, McDonough, & Nuñez, 2009; Radcliffe & Bos, 2013) have found that there are many different components that contribute to a college-going culture and that such a culture has various positive effects on students who are engaged in it. Most literature pertaining to college-going culture describes the phenomenon and makes suggestions for implementing the culture within high school (McClafferty, McDonough, & Nuñez, 2002; Newell, 2013). The significance

of the variable in this study suggests that it is important to examine college-going culture at the middle school level and possibly earlier. The importance of instituting such a culture among earlier grade levels is also evident.

Summary

The results confirm that college generational status, academic self-concept, and perceived college-going culture combined are significant predictors of college-going self-efficacy accounting for 36% of its variance. College generational status differences are consistent with prior research suggesting that the achievement gap between FGCS and NFGCS may be influenced by factors present as early as seventh grade. The relationships between college-going self-efficacy and students' academic self-concept and perceived college-going culture have not been studied previously, but the results here suggest that students' perceptions of their academic ability and environment play noteworthy roles in their perceived capability of college attendance and persistence.

Contributions of the Study

In many ways the current study represents new research. It is one of three studies to examine college-going self-efficacy in middle schools students and only the second to examine it in a racially diverse sample and in relation to students' college generational status (Gibbons & Borders, 2010b, Gonzalez, Stein, & Huq, 2012). This is the first study to explore race, college generational status, academic self-concept, and college-going culture as predictors of college-going self-efficacy. Although it is rarely done, exploring college-going beliefs of adolescents provides invaluable information for school counselors, other educators, and educational researchers. Considering the differences found among college students and graduates, exploring race and college generational

status differences at this age is also very important. In examining a sample of middle school students, this research provides a more comprehensive view of students in terms of college going (i.e. it includes information regarding students who may or may not go to college). School counselors can use this information to target populations within schools, as well as structure various interventions, to positively influence these students. This information can also be used to educate staff creating a heightened sense of awareness in regards to students' needs and their self-perceptions. Families may benefit from psycho-educational programming that explores and influences these variables as well.

Limitations of the Study

While the findings are notable, there are some limitations that may influence generalizability. First, the sample was drawn from a single middle school. This fact makes the results less likely to be generalizable to a broad range of middle school students. Secondly, the sample was drawn from the same state as the previous college-going self-efficacy study, which means that even collectively the results may not be very informative about students from other states or regions of the U.S.

In addition to the possible sampling issue, there is a possibility that the relatively low response rate, 22%, serves as a limitation. The multistep informed consent process (i.e. students had to take forms home, have them signed, and return them to school) no doubt influenced the response rate. Expanding the targeted sample, methods of soliciting participants, and the data collection period are possible ways to improve the response rate for future studies with similar objectives.

Thirdly, results were based on self-report responses to surveys. Students may have been inclined to give socially desirable answers. The researcher attempted to address this limitation by explaining prior to students participating that there were no wrong or right answers and that their answers would be kept confidential. Students were encouraged to be honest in order to provide insight to educators about the variables being studied. While this is a limitation, the nature of the research questions required that the data be self-reported.

Implications of the Findings

The main purpose of this study was to explore college-going self-efficacy particularly in relation to the specific factors of race, college generational status, academic self-concept, and college-going culture. The results support that these factors are significant in explaining the variance related to college-going self-efficacy. This knowledge has several implications in practice and theory.

First, theoretically these findings suggest that as early as middle school, students' social-emotional characteristics vary in ways that may affect their likelihood to attend college. These variations influence students' confidence in their ability to attend and persist in college. This new knowledge lends important information that will allow educators and parents to be influential in new and proactive ways. While in middle school, students are beginning to make many important decisions that will likely influence college-going (e.g. course selections, extracurricular activity involvement, study habit development); therefore, information gathered at this time allows for more effective and influential interventions to be put into place. For example, understanding that the school's culture impacts students' confidence in being able to attend college may

influence school leaders and parents to advocate for a shift in their current climate that supports college-going for all students.

The results support Gibbons' and Border's (2010b) findings that as early as seventh grade students' college generational status is a relevant factor in college-going. This suggests that it is imperative to put interventions in place early in students' educational experience (i.e. middle school or earlier). The results allow for informed interventions while students are making decisions that may greatly influence their ability to go to college. Intervening at this point can also have a short-term (e.g. increased engagement in middle/high school) and long-term (e.g. attendance and persistence in college) impact. The results of this study support the establishment of school-wide interventions to create and support a college-going culture as a means to increase students' confidence in their ability attend college. Other interventions include small group counseling that target prospective first-generation college students (PFGCS) or students with low levels of academic self-concept. School counselors may also provide individual counseling sessions to address students' areas of concern or areas in which they lack confidence. These are all ways that school counselors could start to better-position students for postsecondary success.

Additional implications that are especially useful for school counselors include an enhanced understanding of diverse student populations and influential factors that impact students' self-perceptions in regards to college-going. These findings uncover the social-emotional factors that may be influencing students' college-going beliefs. For example, in light of this information counselors may more accurately interpret what seems to be a student's apathy as their lack of confidence in their ability to attend college following

high school graduation. It will be important for school counselors to be cognizant of these variables that influence students' beliefs and that may be influencing their willingness to strive towards the goal of college attendance as well as the ways that the school environment can and may be influencing those factors. School counselors can also use this information to inform their specific practices in ways that reach diverse students. For example, facilitating small counseling groups that target PFGCS to enhance their college-going self-efficacy may be an effective way to support middle school students. Another example of school counselors using this information to support students is to incorporate activities that promote a college-going culture (e.g. field trips to local college campuses, hosting college fairs on middle school campuses, consistently sharing college knowledge with all students).

Further, this study has implications for counseling training programs in that counselor educators can support the development of future school counselors by ensuring that they understand student development in regards to postsecondary education. Specifically, it is important that counselors-in-training examine the many ways that race, college generational status, academic self-concept, and perceived college-going culture may have an impact on college-going self-efficacy. In terms of using school data this study informs several ways to disaggregate data and target specific subgroups within a school to best support students' career exploration including college-going expectations and plans. Counselor educators can support future school counselors in their understanding of obtaining and using the data to create effective programming for diverse students. This understanding and use of data are important to several school counselor roles including educational leader and student advocate particularly as they pertain to

assisting students in becoming career and college ready. This study suggests that training counselors about the student and contextual factors that impact student development is vital in preparing them to effectively serve in those roles.

Recommendations for Future Research

This research contributes to the literature regarding factors related to college-going self-efficacy. It is most useful for professionals who work with students. This is particularly true of school counselors who are uniquely positioned to lead the efforts in preparing students' college and career readiness. As the results provide insight, they also inspire new questions or lines of research to be addressed in order to better understand and serve students.

First, future research should expand the sample or variables to add to this area. The current research was conducted in a single school and the same region of the U.S. as the previous study that explored college-going self-efficacy among a diverse sample of middle school students. Future research should examine these factors using a national sample to be more inclusive and descriptive of the student experience. Comparing student data by schools or regions may also be informative in regards to the impact of school culture, and the addition of achievement variables (e.g. GPA) may also help to more fully describe the student experience.

Secondly, longitudinal studies that connect college-going self-efficacy and college-going behavior may be a fruitful line of research. Researchers should measure students' college-going self-efficacy over time and eventually compare those data to the students' college enrollment statuses upon graduating from high school. This inquiry would help to substantiate the empirical link between college-going self-efficacy and

actual college-going as the current link is solely theoretical. Additionally, comparing college-going culture measures with actual college-going rates from particular schools could connect students' perceived college-going culture and college-going behavior of those schools. This type of research would allow educators to identify specific school climate factors that empirically relate to college- going.

Thirdly, researchers should create and test interventions, such as small groups or school wide college promoting activities, aimed at influencing students' college-going self-efficacy as an effort to positively influence students' college readiness. Establishing worthwhile interventions is an important step in equipping students for postsecondary success and closing the achievement gap. Research that involves pre- and post-tests using the instruments from this study along with an intervention will offer useful information in ways to influence students' self-perceptions as they relate to college-going.

Lastly, conducting similar research with even younger students may provide insight into the PFGCS experience in terms of when differences appear and what the relevant differences exist. To date, college generational differences among students younger than seventh grade have not been studied. Establishing the age at which difference appear will better equip those who work to intervene and minimize the impact of those differences.

Concluding Remarks

In general, students report a desire to attend four-year universities upon high school graduation (Gibbons & Borders, 2010; Johnson, 2000; Kelpe-Kern, 2000; Wimberly, 2002). Educational leaders, particularly school counselors, have a

responsibility to support students in reaching this goal. Furthermore, college attendance and persistence have lasting effects not only for the student but also for their families and society as a whole. The current study suggests that there are several student and contextual factors in the realm of social-emotional development that explain the variance in students' confidence in being able to attend and persist in college. Continued research, along with tested interventions, in this area will better equip practitioners who work with this population to effectively impact diverse students and increase college and career readiness in more targeted and efficient ways. This impact has the potential to enhance student achievement as well as our workforce and standing as a global competitor.

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APPENDIX A: INFORMED CONSENT

UNC CHARLOTTE

Department of Counseling
9201 University City Boulevard, Charlotte, NC 28223-0001
t/ 704-687-8960 f/ 704-687-8960 http://education.uncc.edu/counseling

Dear Parent/Guardian,

I am writing to invite you and your student to participate in an important research study.

Purpose of the Study
The purpose of this study is to learn more about how middle school students feel about being able to attend school after graduating high school. In this study, "school" refers to any type of postsecondary education including community colleges, vocational schools, and 4-year universities.

Investigator
This study is being conducted by Dia Harden, the 8th grade school counselor at KMS and doctoral student in the Department of Counseling at the University of North Carolina at Charlotte, as part of the requirements for a doctoral degree. The responsible faculty member is Dr. Phyllis Post, Department of Counseling, UNCC.

Description of Participation:
You will be asked to complete the short Parent Survey that is attached to this form. If you agree to participate, please return this form and the Parent Survey to Dia Harden in the KMS Guidance Department.

Your child will be asked to complete an online questionnaire that asks for students' demographic information, ratings of their confidence in their ability to attend college, ratings of their perspective of their academic ability, and ratings of their perceived college-going culture. The student questionnaire will be completed during the school day at a time that does not disrupt instruction (e.g., during 4th block). Your and your student's participation will be kept confidential. Students will not include their names or student numbers on their surveys. Students' responses will be kept in a secure web portal and/or locked electronic drive only accessible to the primary researcher. Any written documents for the study (e.g., this form) will be kept in a locked file cabinet only accessible to the primary researcher. Information that you, or your student, share will be destroyed after three years. All paper storing written data will be shredded, and electronic data will be dismantled and/or rendered useless.

Length of Participation:
Your participation (completing this and the attached Parent Survey) will take approximately 5 minutes. Your child's participation in this project will take place sometime in February-April 2014 while enrolled in Kannapolis Middle School (KMS). The completion of the survey will take approximately 30minutes. Students will take the survey in small groups of 10-15 students in the computer lab. The researcher will be available for questions during that time. Collection of data will end April 2014. Your child is one of approximately 750 students being invited to participate in this study.

Risks and Benefits of Participation:
POTENTIAL RISKS: The risks for participating in this study are minimal. It is possible, as with any survey, that some of the questions may raise concerns in the participant. If you experience discomfort in completing the survey, please discontinue the survey. If your student experiences any discomfort during his/her participation the researcher, who is also one of the school counselors at KMS, will be available to answer any questions during or after the survey. The other KMS school counselor will be available to address any concerns as well.

POTENTIAL BENEFITS: This study will provide needed information about the college-going beliefs of middle school students. This information may help educators, parents, and others to better understand and talk with students about going on to college or other educational settings after completing high school. In addition, the results of this study may help create programs designed to address barriers to attending college after high school.

Volunteer Statement:
You and your student are volunteers. The decision to participate in this study is completely up to you and your student. If you and your student decide to be in the study, you or your student may stop at any time. Neither, you or your student, will be treated any differently if either of you decide not to participate or if either of you stop once you have started.

Confidentiality:
The data collected by the Investigator will be kept confidential to the extent possible. The following steps will be taken to ensure this confidentiality:

- Participants will not put their names on the survey.
- No participant will ever be mentioned by name in the reported results.
- Participants can end their participation at any time.
- Participants can choose not to respond to any question.
- Only the principal investigator and her research committee will have access to the raw data. All gathered raw data will be stored in a locked cabinet, electronic file, and/or secure web portal and on a password protected computer.

Fair Treatment and Respect:
UNC Charlotte wants to make sure that you are treated in a fair and respectful manner. Contact the University's Research Compliance Office (704-687-1871) if you have any

questions about how you are treated as a study participant. If you have any questions about the project, please contact Dia Harden at 704-932-4102 ext. 8114 or dharden2@uncc.edu or Dr. Phyllis Post at 704-687-8961 or ppost@uncc.edu.

Participant Consent:
I have read the information in this consent form. I am at least 18 years of age, and I am the guardian or parent for the student for which this informed consent is being signed.

Please check the appropriate box below:
☐ **Yes**, I agree to participate in this study by completing the attached Parent Survey.

☐ I **do NOT** agree to participate in this study.

Parent Consent:
I agree for my student to participate in this research project. I understand that I will receive a copy of this form after it has been signed by me and the Principal Investigator.

Please check the appropriate box below:
☐ **Yes**, I grant permission for my student to participate in this study.
*Please complete the attached Parent Survey and return both forms to Ms. Dia Harden in the KMS Guidance Department.

☐ My student **does NOT** have permission to participate in this study.
*Please return this signed form to Ms. Dia Harden in the KMS Guidance Department.

_____ _____
Student Name (print) Parent Name (print)

_____ _____
Parent Signature DATE

_____ _____
Investigator Signature DATE

This form was approved for use on *March 19, 2014* for a period of one (1) year.

APPENDIX B: STUDENT ASSENT

UNC CHARLOTTE

Department of Counseling
9201 University City Boulevard, Charlotte, NC 28223-0001
t/ 704-687-8960 f/ 704-687-8960 http://education.uncc.edu/counseling

Student Assent for *College-Going Self-Efficacy of Middle School Students: The Roles of Race, College Generational Status, Academic Self-Concept, and Perceived College-Going Culture*

My name is Ms. Harden, and I am one of the school counselors here. I am also a student at the University of North Carolina at Charlotte. I am doing a research study to see how middle school students feel about being able to go to school after graduating from high school.

I would appreciate your help by participating in my study. I will ask you to answer some questions on an online survey. You will not put your name on the survey, and no one besides me will know how you answered any of the questions. If you agree to participate I will enter your participant number in your survey before you begin. There are no right or wrong answers. This is not a test and you will not be graded.

I will be here while you complete the survey and you can ask questions at any time. You do not have to be in the study. If you start the study, you can stop any time you want. I hope that the information that you give me will help school counselors, teachers, and schools understand ways to make middle school students feel more confident about going to college or other educational opportunities after high school. This study will not hurt you.

When I am done with the study I will write a report. I will not use your name in that report or anytime that I talk about this research.

If you would like to participate in the study sign on the line below. I will collect this form. When you are done with the survey or if you decide to stop the survey, click submit at the bottom of the survey. When you are done you will go back to your 4th block class.

_____ _____
Student Name/Signature DATE

_____ _____
Investigator Name/Signature DATE

APPENDIX C: LETTER TO THE PRINCIPAL

Dear [Principal],

This email is to seek your permission to conduct research in your school building. As you know, in addition to being one of the school counselors here, and I am also a doctoral student at The University of North Carolina at Charlotte, conducting a research study with middle school students. I am examining their college-going beliefs and personal characteristics. I would like to invite all of the students in the school to participate in the study.

It is my hope to use this data to better understand the college-going beliefs of middle school students in this district. The results of this study will be made available to you and the district as valuable information in addressing the achievement gap and dropout rate. Specifically, this data will allow us to explore the possible roles of race, college generational status, academic self-concept, and perceived college-going culture in students' confidence in their ability to obtain post-secondary education. I would appreciate your assistance with helping me to gather information by allowing me to collect this data at our school.

In addition to the abovementioned potential benefits, the risks to the students are minimal. I will only administer the survey to students for whom I have obtained consent from their parent or guardian. I will explain to the students that their participation is voluntary and they can stop at any time. I will also be available for questions throughout the administration of the survey as well as afterwards if questions or concerns should arise.

The research would involve administering an online survey which encompasses questions from four relevant instruments to students during an available class period. This process would take approximately 30 minutes. My faculty advisor for this research is Dr. Phyllis Post. She can be contacted at ppost@uncc.edu.

Please indicate your willingness to allow your school to participate via email or I would be happy to schedule a meeting to discuss this project in more detail.

Thank you for your consideration.

Sincerely,

Dia Harden

APPENDIX D: EXPLANATION OF THE STUDY

Read when consent forms were distributed:

The goal of this study is to learn more about how middle school students feel about being able to going to school after graduating from high school. You will answer questions about your confidence to be able to attend and complete college and how you see yourself and your skills in school. I am really interested in what you believe about college. It does not matter what your school grades are or whether you want to go to college after high school. I want everyone's opinions and thoughts.

For this study, the word "school" refers to any type of education or training after high school that could lead to a degree. This might mean a two-year community college or a four-year university. The survey will take about 30 minutes to complete. Your answers will be kept private. No names or id numbers will be collected with the survey, and the permission forms will be kept in a safe place away from the surveys.

There is very little risk in participating in this study. Your answers will help teachers and school counselors work with students when they are making educational decisions for after high school. In addition, the results of this study may help create programs designed to address your specific needs and questions about going to college.

If you choose to participate in this study, you will need to take the permission slip home to your family. This form will need to be signed by your parent or guardian. Return that form to your homeroom teacher.

Everyone in the school has the opportunity to participate, and everyone who returns a signed informed consent form (regardless of whether you have permission to participate in the study or not) will get to choose a snack from my treat bag. If you and your parent or guardian agrees to you participating in the study, you will complete the survey during fourth block.

Thank you very much for considering participating in this study. Your participation will be very much appreciated.

APPENDIX E: PARENT SURVEY

Participant # _____

Parent Survey

Directions: Please answer the following questions about your student's family members.

PLEASE CHECKONLY ONE BOX FOR EACH QUESTION.

Do not put your name or your student's name anywhere on this survey. This will help make sure your answers are not easily linked to you or your student. Please return this survey with the consent form to Dia Harden, 8th grade counselor, in the KMS Guidance Department. Thank you for your participation.

1. Mother's education level – how far the mother of your student went in school:

Some High School □ High School Graduate □
Some College (No Degree) □ College Graduate □
Don't Know □

2. Father's education level – how far the father of your student went in school:

Some High School □ High School Graduate □
Some College (No Degree) □ College Graduate □
Don't Know □

3. If your child has a stepmother, please check how far the stepmother went in school:

Some High School □ High School Graduate □
Some College (No Degree) □ College Graduate □
Don't Know □
No Stepmother □

4. If your child has a stepfather, please check how far the stepfather went in school:

Some High School □ High School Graduate □
Some College (No Degree) □ College Graduate □
Don't Know □
No Stepfather □

Thank You!

APPENDIX F: PARTICIPANT INSTRUCTIONS

Oral presentation read on day of data collection:

As you all know I am one of the school counselors here, and I am also a student at UNCC working on an important research project.

Thank you for agreeing to participate in this study. Please remember that you are not required to participate and you may stop at any time. The purpose of this study is to examine the college-going beliefs of middle school students. You will complete a survey that asks about you, how well you do in school subjects, and your beliefs in your ability to go to college and be successful there. It is very important to remember that, for these questions, the word "college" means any type of school after high school. This might mean a community college like RCCC or it could mean a four-year university like UNC-Charlotte or Duke University.

It also is important that you answer all questions that you feel comfortable answering. Try not to overlook any questions. Remember that there are no right or wrong answers and that I am very interested in what you think. If you become confused about one of the questions, feel free to ask me for help.

Your responses will help me and other people, like other school counselors, teachers, and parents, know how to help middle school students prepare for attending school after high school.

Again, thank you for your help with this study. Are there any questions at this time?

APPENDIX G: DEMOGRAPHICS SURVEY

Demographics

Directions: Please check or write the answer(s) that best describes you.

1. Gender: Male □ Female □
2. Age: 11 □ 12 □ 13 □ 14 □ 15 □ 16 □ Other □
3. Grade: 7^{th} □ 8^{th} □
4. Ethnicity/Race:

Caucasian/White □ African American/Black □ Hispanic/Latino □
Native-American □ Asian American/Asian □ Multiracial □
Other □

5. Who do you live with right now? (Check all that apply)

Mother □ Father □ Brother(s)/Sister(s) □
Stepmother □ Stepfather □ Stepbrother(s)/Stepsister(s) □
Grandmother□ Grandfather □
Aunt □ Uncle □ Cousin(s) □
Other □ _____

6. Did either of your parents go to college?

Yes □ No □ I do not know □

7. If yes, who?

Mother □ Father □
Stepmother □ Stepfather □

APPENDIX H: COLLEGE-GOING SELF-EFFICACY SCALE

College-Going Self-Efficacy Scale
Melinda M. Gibbons, Ph.D., NCC
University of Tennessee

Directions: Please read each of the following questions and answer them as honestly as possible. Circle the response that best describes how sure you feel about each question. There are no right or wrong answers. When answering these questions, remember that college means any type of schooling after high school (community college, four-year university).

How sure are you about being able to do the following?

1. I can find a way to pay for college.

Not at all Sure Somewhat Sure Sure Very Sure

2. I can get accepted to a college.

Not at all Sure Somewhat Sure Sure Very Sure

3. I can have family support for going to college.

Not at all Sure Somewhat Sure Sure Very Sure

4. I can choose a good college.

Not at all Sure Somewhat Sure Sure Very Sure

5. I can get a scholarship or grant for college.

Not at all Sure Somewhat Sure Sure Very Sure

6. I can make an educational plan that will prepare me for college.

Not at all Sure Somewhat Sure Sure Very Sure

7. I can make my family proud with my choices after high school.

Not at all Sure Somewhat Sure Sure Very Sure

8. I can choose college courses that best fit my interests.

Not at all Sure Somewhat Sure Sure Very Sure

9. I can pay for college even if my family cannot help me.

Not at all Sure Somewhat Sure Sure Very Sure

10. I can get good grades in my high school math classes.

Not at all Sure Somewhat Sure Sure Very Sure

11. I can get good grades in my high school science classes.

Not at all Sure Somewhat Sure Sure Very Sure

12. I can choose the high school classes needed to get into a good college.

Not at all Sure Somewhat Sure Sure Very Sure

13. I can know enough about computers to get into college.

Not at all Sure Somewhat Sure Sure Very Sure

14. I can go to college after high school.

Not at all Sure Somewhat Sure Sure Very Sure

<u>If you do go to college</u>, how sure are you about being able to do the following?

1. I could pay for each year of college.

Not at all Sure Somewhat Sure Sure Very Sure

2. I could get A's and B's in college.

Not at all Sure Somewhat Sure Sure Very Sure

3. I could get my family to support my wish of finishing college.

Not at all Sure Somewhat Sure Sure Very Sure

4. I could take care of myself at college.

Not at all Sure Somewhat Sure Sure Very Sure

5. I could fit in at college.

Not at all Sure Somewhat Sure Sure Very Sure

6. I could get good enough grades to get or keep a scholarship.

Not at all Sure Somewhat Sure Sure Very Sure

7. I could finish college and receive a college degree.

Not at all Sure Somewhat Sure Sure Very Sure

8. I could care for my family responsibilities while in college.

Not at all Sure Somewhat Sure Sure Very Sure

9. I could set my own schedule while in college.

Not at all Sure Somewhat Sure Sure Very Sure

10. I could make friends at college.

Not at all Sure Somewhat Sure Sure Very Sure

11. I could get the education I need for my choice of career.

Not at all Sure Somewhat Sure Sure Very Sure

12. I could get a job after I graduate from college.

Not at all Sure Somewhat Sure Sure Very Sure

13. I would like being in college.

Not at all Sure Somewhat Sure Sure Very Sure

14. I could be smart enough to finish college.

Not at all Sure Somewhat Sure Sure Very Sure

15. I could pick the right things to study in college.

Not at all Sure Somewhat Sure Sure Very Sure

16. I could do the classwork and homework assignments in college classes.

Not at all Sure Somewhat Sure Sure Very Sure

APPENDIX I: SELF DESCRIPTION QUESTIONNAIRE II—SHORT VERSION

SELF DESCRIPTION QUESTIONNAIRE – II Short
SDQ II Short

Your Name_____ Circle one: Male Female
School_____ Grade_____
Age_____ Date:_____

This is a chance to look at yourself. It is not a test. There are no right answers and everyone will have different answers. Be sure that your answers show how you feel about yourself. PLEASE DO NOT TALK ABOUT YOUR ANSWERS WITH ANYONE ELSE. We will keep your answers private and not show them to anyone.

When you are ready to begin, please read each sentence and choose an answer. There are six possible answers for each question - "True", "False", and four answers in between. There are six boxes next to each sentence, one for each of the answers. The answers are written at the top of the boxes. Choose your answer to a sentence and put a tick in the box under the answer you choose. DO NOT say your answer out loud or talk about it with anyone else.

Before you start there are three examples below. A student named Bob has already answered the first two examples to show you how to do it. In the third example you must choose your own answer by ticking a box.

EXAMPLES

1. I like to read comic books.....……..1 ☐☐☐☐☐☑

(Bob put a tick in the box under the answer "TRUE". This means that he really likes to read comic books. If Bob did not like to read comic books very much, he would have answered "FALSE" or "MOSTLY FALSE".)

2. In general, I am neat and tidy.....……2 ☐☐☑☐☐☐

(Bob answered "MORE FALSE THAN TRUE" because he is definitely not very neat, but he is not really messy either).

3. I like to watch T.V.....……..3 ☐☐☐☐☐☐

(For this sentence you have to choose the answer that is best for you. First you must decide if the sentence is "TRUE" or "FALSE" for you, or somewhere in between. If you really like to watch T.V. a lot you would answer "TRUE" by putting a tick in the last box. If you hate watching T.V. you would answer "FALSE" by putting a tick in the first box. If you do not like T.V. very much, but you watch it sometimes, you might decide to put a tick in the box that says "MOSTLY FALSE" or the box for "MORE FALSE THAN TRUE".)

If you want to change an answer you have marked you should cross out the tick and put a new tick in another box on the same line. For all the sentences be sure that your tick is on the same line as the sentence you are answering. You should have one answer and only one answer for each sentence. Do not leave out any of the sentences. Once you have started, PLEASE DO NOT TALK. Turn over the page and begin.

ID	Surname	First Name	Sex 1 = Male 2 = Female	Year	School	Class	Age	DOB	Date

**1	MATHEMATICS is one of my best subjects…	1	☐	☐	☐	☐	☐	☐	1
2	I have a nice looking face…	2	☐	☐	☐	☐	☐	☐	2
3	Overall, I have a lot to be proud of…	3	☐	☐	☐	☐	☐	☐	3
4	I am honest…	4	☐	☐	☐	☐	☐	☐	4

5	I enjoy things like sports, gym, and dance…	5	☐	☐	☐	☐	☐	☐	5
**6	I am hopeless in ENGLISH classes…	6	☐	☐	☐	☐	☐	☐	6
7	I worry more than I need to…	7	☐	☐	☐	☐	☐	☐	7
8	I get along well with my parents…	8	☐	☐	☐	☐	☐	☐	8
**9	I get bad marks in most SCHOOL SUBJECTS…	9	☐	☐	☐	☐	☐	☐	9
10	I am not very popular with members of the opposite sex…	10	☐	☐	☐	☐	☐	☐	10
11	It is difficult to make friends with members of my own sex…	11	☐	☐	☐	☐	☐	☐	11
**12	I get good marks in MATHEMATICS…	12	☐	☐	☐	☐	☐	☐	12
13	I am good looking…	13	☐	☐	☐	☐	☐	☐	13
14	Most things I do, I do well…	14	☐	☐	☐	☐	☐	☐	14
15	I often tell lies…	15	☐	☐	☐	☐	☐	☐	15
16	I am good at things like sports, gym, and dance…	16	☐	☐	☐	☐	☐	☐	16
**17	Work in ENGLISH classes is easy for me…	17	☐	☐	☐	☐	☐	☐	17
18	I am a nervous person…	18	☐	☐	☐	☐	☐	☐	18
19	My parents treat me fairly…	19	☐	☐	☐	☐	☐	☐	19
**20	I learn things quickly in most SCHOOL SUBJECTS…	20	☐	☐	☐	☐	☐	☐	20
21	I make friends easily with boys…	21	☐	☐	☐	☐	☐	☐	21
22	I make friends easily with girls…	22	☐	☐	☐	☐	☐	☐	22
**23	I have always done well in MATHEMATICS…	23	☐	☐	☐	☐	☐	☐	23
24	Other people think I am good looking…	24	☐	☐	☐	☐	☐	☐	24
25	Overall, most things I do turn out well…	25	☐	☐	☐	☐	☐	☐	25
26	I sometimes cheat…	26	☐	☐	☐	☐	☐	☐	26
27	I am awkward at things like sports, gym, and dance…	27	☐	☐	☐	☐	☐	☐	27
**28	ENGLISH is one of my best subjects…	28	☐	☐	☐	☐	☐	☐	28
29	I often feel confused and mixed up…	29	☐	☐	☐	☐	☐	☐	29
30	My parents understand me…	30	☐	☐	☐	☐	☐	☐	30
**31	I do well in tests in most SCHOOL SUBJECTS…	31	☐	☐	☐	☐	☐	☐	31
32	I have lots of friends of the opposite sex…	32	☐	☐	☐	☐	☐	☐	32
33	Not many people of my own sex like me…	33	☐	☐	☐	☐	☐	☐	33
**34	I do badly in tests in MATHEMATICS….	34	☐	☐	☐	☐	☐	☐	34
35	I have a good looking body…	35	☐	☐	☐	☐	☐	☐	35
36	I can do things as well as most people…	36	☐	☐	☐	☐	☐	☐	36
37	I always tell the truth…	37	☐	☐	☐	☐	☐	☐	37
38	I am better than most of my friends at things like sports, gym, and dance…	38	☐	☐	☐	☐	☐	☐	38

**39	I get good marks in ENGLISH…	39	☐	☐	☐	☐	☐	☐	39
40	I get upset easily…	40	☐	☐	☐	☐	☐	☐	40
41	I do not like my parents very much…	41	☐	☐	☐	☐	☐	☐	41
**42	I am good at most SCHOOL SUBJECTS…	42	☐	☐	☐	☐	☐	☐	42
43	I do not get along very well with boys…	43	☐	☐	☐	☐	☐	☐	43
44	I do not get along very well with girls…	44	☐	☐	☐	☐	☐	☐	44
45	If I really try I can do all most anything I want to do…	45	☐	☐	☐	☐	☐	☐	45
46	I sometimes take things that belong to other people…	46	☐	☐	☐	☐	☐	☐	46
**47	I learn things quickly in ENGLISH classes…	47	☐	☐	☐	☐	☐	☐	47
48	I worry about a lot of things…	48	☐	☐	☐	☐	☐	☐	48
49	I make friends easily with members of my own sex…	49	☐	☐	☐	☐	☐	☐	49
50	Overall I am a failure…	50	☐	☐	☐	☐	☐	☐	50
51	I sometimes tell lies to stay out of trouble…	51	☐	☐	☐	☐	☐	☐	51

**Denotes the items that comprise the academic subscales and were used in this study

APPENDIX J: COLLEGE-GOING CULTURE SURVEY REVISED

College-Going Survey Revised

Circle the number that shows how true the statement is about you.

1 = Very true about me 2 = Somewhat true about me
3 = Neither true nor untrue about me
4 = Not very true about me 5 = Not at all true about me.

1	2	3	4	5	1. I plan to go to college after high school graduation.
1	2	3	4	5	2. I do not think I CAN go to college after graduating.
1	2	3	4	5	3. I have not thought about college for myself.
1	2	3	4	5	4. My teachers believe I can succeed in college.
1	2	3	4	5	5. I know what the SAT and ACT are.
1	2	3	4	5	6. My counselor has talked with me about my future after high school.
1	2	3	4	5	7. My parents expect me to go to college.
1	2	3	4	5	8. I know about financial aid for college.
1	2	3	4	5	9. I will be well prepared in high school for college.
1	2	3	4	5	10. I can make money if I have a college degree.

APPENDIX K: COMPLETE SURVEY

Demographics

Directions: Please check or write the answer(s) that best describes your student.

1. Gender: Male □ Female □

2. Age: 11 □ 12 □ 13 □ 14 □ 15 □ 16 □ Other □

3. Grade level: 7^{th} □ 8^{th} □

4. Ethnicity/Race:
Caucasian/White □ African American/Black □ Hispanic/Latino □
Native-American □Asian American/Asian □ Multiracial □ Other □

5. Who do you live with right now (check all that apply)?
Mother □ Father □ Brother(s) or Sister(s) □
Stepmother □ Stepfather □ Step Brother(s) or Sister(s) □
Grandmother □ Grandfather □ Others □
Aunt □ Uncle □ Cousin(s) □

6. Did either of your parents go to college?
Yes □ No □ I do not know □

7. If yes, who?
Mother □ Father □
Stepmother □ Stepfather □

College-going Self-efficacy Scale

Directions: Please read each of the following questions and answer them as honestly as possible. Circle the response that best describes how sure you feel about each question. There are no right or wrong answers. When answering these questions, remember that college means any type of schooling after high school (community college, four-year university).

How sure are you about being able to do the following?

1. I can find a way to pay for college.
Not at all Sure Somewhat Sure Sure Very Sure
2. I can get accepted to a college.
Not at all Sure Somewhat Sure Sure Very Sure
3. I can have family support for going to college.
Not at all Sure Somewhat Sure Sure Very Sure
4. I can choose a good college.
Not at all Sure Somewhat Sure Sure Very Sure
5. I can get a scholarship or grant for college.

Not at all Sure Somewhat Sure Sure Very Sure

5. I can make an educational plan that will prepare me for college.

Not at all Sure Somewhat Sure Sure Very Sure

6. I can make my family proud with my choices after high school.

Not at all Sure Somewhat Sure Sure Very Sure

7. I can choose college courses that best fit my interests.

Not at all Sure Somewhat Sure Sure Very Sure

8. I can pay for college even if my family cannot help me.

Not at all Sure Somewhat Sure Sure Very Sure

9. I can get good grades in my high school math classes.

Not at all Sure Somewhat Sure Sure Very Sure

11. I can get good grades in my high school science classes.

Not at all Sure Somewhat Sure Sure Very Sure

12. I can choose the high school classes needed to get into a good college.

Not at all Sure Somewhat Sure Sure Very Sure

13. I can know enough about computers to get into college.

Not at all Sure Somewhat Sure Sure Very Sure

14. I can go to college after high school.

Not at all Sure Somewhat Sure Sure Very Sure

<u>If you do go to college</u>, how sure are you about being able to do the following?

1. I could pay for each year of college.

Not at all Sure Somewhat Sure Sure Very Sure

2. I could get A's and B's in college.

Not at all Sure Somewhat Sure Sure Very Sure

3. I could get my family to support my wish of finishing college.

Not at all Sure Somewhat Sure Sure Very Sure

4. I could take care of myself at college.

Not at all Sure Somewhat Sure Sure Very Sure

5. I could fit in at college.

Not at all Sure Somewhat Sure Sure Very Sure

6. I could get good enough grades to get or keep a scholarship.

Not at all Sure Somewhat Sure Sure Very Sure

7. I could finish college and receive a college degree.

Not at all Sure Somewhat Sure Sure Very Sure

8. I could care for my family responsibilities while in college.

Not at all Sure Somewhat Sure Sure Very Sure

9. I could set my own schedule while in college.

Not at all Sure Somewhat Sure Sure Very Sure

10. I could make friends at college.

Not at all Sure Somewhat Sure Sure Very Sure

11. I could get the education I need for my choice of career.
Not at all Sure Somewhat Sure Sure Very Sure
12. I could get a job after I graduate from college.
Not at all Sure Somewhat Sure Sure Very Sure
13. I would like being in college.
Not at all Sure Somewhat Sure Sure Very Sure
14. I could be smart enough to finish college.
Not at all Sure Somewhat Sure Sure Very Sure
15. I could pick the right things to study in college.
Not at all Sure Somewhat Sure Sure Very Sure
16. I could do the classwork and homework assignments in college classes.
Not at all Sure Somewhat Sure Sure Very Sure

Self Description Questionnaire—Short
(Academic Self Concept Scales)

This is a chance to look at yourself. It is not a test. There are no right answers and everyone will have different answers. Be sure that your answers show how you feel about yourself. PLEASE DO NOT TALK ABOUT YOUR ANSWERS WITH ANYONE ELSE. We will keep your answers private and not show them to anyone.

When you are ready to begin, please read each sentence and choose an answer. There are six possible answers for each question - "True", "False", and four answers in between. There are six boxes next to each sentence, one for each of the answers. The answers are written at the top of the boxes. Choose your answer to a sentence and put a tick in the box under the answer you choose. DO NOT say your answer out loud or talk about it with anyone else.

Before you start there are three examples below. A student named Bob has already answered the first two examples to show you how to do it. In the third example you must choose your own answer by ticking a box.

	False	Mostly False	More False than True	More True than False	Mostly True	True
MATHEMATICS is one of my best subjects						
I am hopeless in ENGLISH classes						
I get bad marks in most SCHOOL SUBJECTS						
I get good marks in MATHEMATICS						
Work in ENGLISH classes is easy for me……..						
I learn things quickly in most SCHOOL SUBJECTS…….						
I have always done well in MATHEMATICS……..						
ENGLISH is one of my best subjects……..						

I do well in tests in most SCHOOL SUBJECTS……							
I do badly in tests in MATHEMATICS……							
I get good marks in ENGLISH……							
I am good at most SCHOOL SUBJECTS……							
I learn things quickly in ENGLISH classes……							

College-Going Survey Revised

Circle the number that shows how true the statement is about you.

1 = Very true about me2 = Somewhat true about me3 = Neither true nor untrue about me
4 = Not very true about me5 = Not at all true about me.

1	2	3	4	5	8. I plan to go to college after high school graduation.
1	2	3	4	5	9. I do not think I CAN go to college after graduating.
1	2	3	4	5	10. I have not thought about college for myself.
1	2	3	4	5	11. My teachers believe I can succeed in college.
1	2	3	4	5	12. I know what the SAT and ACT are.
1	2	3	4	5	13. My counselor has talked with me about my future after high school.
1	2	3	4	5	14. My parents expect me to go to college.
1	2	3	4	5	15. I know about financial aid for college.
1	2	3	4	5	16. I will be well prepared in high school for college.
1	2	3	4	5	17. I can make money if I have a college degree.