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EXPLORING THE EFFECTIVENESS OF ACADEMIC COACHING FOR ACADEMICALLY
AT-RISK COLLEGE STUDENTS

by

Madeline Kyle Capstick

A Dissertation

Submitted in Partial Fulfilment of the

Requirements for the Degree of

Doctor of Education

Major: Counseling

The University of Memphis

May 2018

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Dedication

This manuscript is dedicated to all
of those who have made me who I am today
and those helping shape me into who I want to become.

Acknowledgements

There are so many people that deserve recognition for their support and encouragement throughout my doctoral studies and the dissertation process. First, to my family. I would like to thank my parents, Colleen and Larry Capstick. Thank you for making my education a priority from the very start. Thank you for helping me overcome academic challenges from a young age and never letting me think that I could not succeed. Thank you for instilling in me a desire to be a trailblazer. To my grandparents, Betty and Alfred Cowles, thank you for providing unwavering support and infinite opportunity. Thank you for instilling in me a love for travel and adventure with a passion to see more, do more, and be more. To my siblings and their spouses, Caroline and Greg Sones and Valerie and Clayton Capstick, thank you for encouraging me and giving me my favorite role as aunt to Parker and Nicholas Sones and Turner and Harper Capstick. It is because of each of you that I have gotten to where I am today.

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resembles. Thank you for allowing me to serve as an academic coach where I developed a passion for coaching and for encouraging me to dream big.

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Abstract

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The purpose of this study was to determine the effectiveness of the Academic Coaching for Excellence (ACE) program for academically at-risk students over the course of five academic semesters from Spring 2015 to Spring 2017. The study utilized archival data from 1,440 undergraduate students using a cohort-based, nonequivalent groups post-tests design. The students were on “academic warning”, meaning they had fallen below a 2.00 GPA in the previous academic semester and were within their first 59 credit hours of college. Results from the study found that full- and part-time students who participated in academic coaching had significant GPA increases, were more likely to earn at least a 2.00 GPA in the intervention semester, completed 76-100% of course credit hours, and were more likely to be retained at the university the following semester. Significant findings draw attention to non-Federal Pell Grant recipients and full-time non-traditional age (at least 25 years old) students’ academic success and persistence, as these students were found to have higher GPAs and complete more course credits compared to their Federal Pell Grant and traditional full-time student (under 25 years old) counterparts. The number of sessions that students attended was also significant for students’ academic performance, persistence in course completion, and retention. Implications are discussed for higher education staff and administration working with academically vulnerable populations and for the counseling community. Considerations for future research and limitations are also provided.

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Chapter 1

Introduction

The purpose of this study was to determine the effectiveness of the Academic Coaching for Excellence (ACE) program at a mid-sized, urban research university in the southeastern United States with academically at-risk students during Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters. Chapter 1 introduces the study by reviewing the applicable literature to the topic and the research problem. This chapter is organized into the following sections: (a) background information, (b) statement of the problem, (c) conceptual framework, (d) purpose of the study, (e) research questions, (f) significance of the study, (g) delimitations, (h) assumptions, (i) definition of terms, and (j) organizations of the study.

Background

College persistence and retention have been areas of focus in higher education for decades (Shapiro et al., 2016; Stewart, Lim, & Kim, 2015; Tinto, 1993), and as a result the implementation of student support services to aid in degree completion has become an area of interest for higher education administration. With only 10% of full-time bachelor's degree-seeking students at public institutions finishing in the traditional four-year timeframe, students are instead completing in five-years (39.3%) and six-years (50%) (Shapiro et al., 2016). These statistics are alarming as higher education state funding has shifted to an outcome-based model (National Conference of State Legislatures [NCSL], 2015; Tennessee Higher Education Commission [THEC], 2015) creating a greater pressure to ensure students' academic success and retention more than ever.

Prior to the past decade, most public higher education institutions' funding was allocated based primarily on the institution's enrollment rate (NCSL, 2015). This funding model meant

that the more students that attended an institution, the larger the sum of money the institution received from the state (Ordway, 2015). However, since 2010, many states began to implement performance-based funding which utilizes an outcome-based formula to reward institutions for retaining students as well as for students' progression toward degree completion (NCSL, 2015; Ordway, 2015; Sanford & Hunter, 2011; THEC, 2010). With this new formula in place, many publicly funded state universities have directed their focus and attention to retention and persistence efforts by creating and implementing more student success resources.

Academic success and retention is particularly of interest for vulnerable student populations such as academically underprepared students (DeNicco, Harrington, & Fogg, 2015), first-generation college students (FGCS) (Atherton, 2014), racial minority students (Niu, 2015), low socioeconomic status (SES) students (Sandoz, Kellum, & Wilson, 2017), males (Lee, Flores, Navarro, & Munoz, 2015), and non-traditional age students (Rabourn, Shoup, & BrckaLorenz, 2015). Numerous studies have explored these student populations and their success, experiences, and academic retention at postsecondary institutions. Each of these topics is explored in detail in the following chapter.

Both immutable variables (i.e., first-generation status, gender, etc.) and mutable variables (i.e., mental health, academic skill) are student demographic factors that impact their college experience (Speer, 2017; Strand & Council of Independent Colleges, 2013; Salzer, 2012; Lotkowski, Robbins, & Noeth, 2004). Research assessing the importance of these variables on academic success and retention is extensive as is research on those efforts colleges and universities have adopted to support students. Specific programs such as summer bridge programs (Tomasko, Ridgeway, Waller, & Olesik, 2016), living-learning communities (Arendsdorf & Naylor-Tincknell, 2016), and course-based retention models (Hoops & Artrip,

2016) have been extensively examined. An area lacking in research, however, is a newer student support intervention called academic coaching. As a new intervention on many college and university campuses (University of Memphis, n.d.; Miami University, n.d.; Stanford University, n.d.; University of Cincinnati, n.d.), literature is needed to support its effectiveness within the academic community to potentially broaden the reach of this approach across university campuses.

Academic coaching is characterized as a collaborative relationship between an academic coach and student that focuses on the student's personal and professional goals through the development of self-awareness, strength building, academic planning, and defining one's purpose, interests, and values to aid in academic degree completion (National Academic Advising Association [NACADA], 2017; Southern Association of Colleges and Schools Commission on Colleges [SACSCOC], 2015). Minimal research has been done on academic coaching, (Mitchell & Gansemer-Topf, 2016; Bellman, Burgstahler, & Hinke, 2015; Perez, 2014; Franklin & Franklin, 2012; Bettinger & Baker, 2011; Field, Parker, Sawilowsky, & Rolands, 2010; Robinson & Gahagan, 2010), specifically with academically at-risk students. Academically at-risk refers to those students that have fallen below a 2.00 grade point average (GPA) within their first 59 credit hours. This stage is the precursor to academic probation and academic suspension, respectively (Center for Academic Retention and Enrichment Services, 2017).

Bettinger and Baker's (2011) research supports the validity of utilizing academic coaching with students, finding that undergraduate students who participated in coaching showed an increase in retention from one academic year to the next, implying that academic coaching aids in a student's overall degree completion. Additionally, Field and colleagues (2011)

suggested that students from academically vulnerable populations (i.e., students with attention deficit hyperactivity disorder) who participated in academic coaching developed their time-management, study skills, organizational abilities, and self-confidence. In addition to skill development and self-improvement, Robinson and Gahagan's (2010) study reported that students that participated in academic coaching showed an increase in their GPA and had high retention rates. These findings provide a foundation for the implementation of academic coaching programs on college and university campuses.

Statement of Problem

Both, Bettinger and Baker's (2011) and Field and colleagues' (2011) studies assessed the effectiveness of academic coaching with undergraduate students. However, these efforts reviewed programs utilizing telecommunications or online services for coaching opposed to face-to-face, one-on-one coaching practices. Franklin and Franklin (2012) explored face-to-face peer coaching programs and also found that students who participated in coaching increased their academic performance compared to those students who did not receive coaching. Yet, this work utilized peer coaches (other undergraduate students) through the means of distributed materials and manuals, as opposed to trained coaches (graduate students or on-campus professionals) for one-on-one coaching (Franklin & Franklin, 2012). Robinson and Gahagan (2010) utilized a small sample size from one semester of coaching that indicated promising results but is limited due to its small sample. Thus, there remains a need to evaluate the effectiveness of a large sample, face-to-face, one-on-one academic coaching program conducted by trained academic coaches working with academically at-risk undergraduate student populations utilizing multiple semesters of the intervention.

Theoretical Framework

Part I. Challenge and Support Theory. Challenge and Support Theory, developed by Nevitt Sanford (1966), was utilized as the framework for viewing student development. Sanford's theory suggests that the amount of challenge a student can tolerate is a function of the amount of support available. Then, in turn, the amount of challenge students experience influences the amount of student growth and development that occurs. Therefore, if students encounter too many challenges, then they can regress to less adaptive behaviors (i.e., procrastination, lack of studying) or even ignore the challenge altogether (i.e., skipping classes, not completing assignments). If they encounter too little challenge, they limit their growth and do not reach their developmental potential. If the environment the student is facing in college, whether it is academic, peer relationships, family dynamics, or adjustment to change, is challenging the need for support is necessary. This theory can be applied to academic coaching as the academic coach works with the student to assess their level of challenge within the college environment and then provides the student with the appropriate level of support needed to increase their student development and personal growth (Patton, Renn, Guido, Quaye, 2016; Ward, Trautvetter, & Braskamp, 2005; Sanford, 1966).

Part II. Person-Centered Theory. Academic coaching utilizes a person-centered approach to support when working with students. The person-centered framework was developed by Carl Rogers (1957) as a therapeutic approach to working with clients focusing on the individual needs of the person seeking assistance. Roger's identified three main concepts to the helping relationship: empathy, unconditional positive regards, and genuineness. (Rogers, 1957). Academic coaches particularly pull from these core concepts of counseling when working with

their students in a one-on-one collaborative relationship. This framework was the foundation of the academic coaching intervention utilized for this study.

Thus, this study utilized the framework of Sanford's Challenge and Support Theory for student development (Sanford, 1966) in evaluating the effectiveness of a person-centered approach (Rogers, 1957) to working with academically at-risk students through academic coaching at a mid-sized, urban research university in the southeastern United States.

Purpose of the Study

The purpose of the study was to evaluate archival data to determine the effectiveness of the Academic Coaching for Excellence program at a mid-sized, urban research university in the southeastern United States with academically at-risk students during Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters. Information from this study may be used to assist in the development of academic coaching programs within higher education to work with academically at-risk student populations, expand college persistence and retention literature, and identify specific student populations where individualized support is most helpful to academic success.

Research Questions

Given this purpose, a single research question drove this work: What is the effectiveness of the Academic Coaching for Excellence program on students' academic success and retention? From this general research question, the following study-specific research questions were examined:

- (1) How do students on academic warning who did not attend academic coaching sessions compare to students who did participate in academic coaching sessions in terms of academic success, persistence, and retention?

- (2) How do student demographics (first-generation status, race, SES, gender, age), enrollment status (full time, part time), high school performance (high school GPA and ACT score), and number of academic coaching sessions explain student academic success for students who participated in the academic coaching program?
- (3) How do student demographics (first-generation status, race, SES, gender, age), enrollment status (full time, part time), high school performance (high school GPA and ACT score), and number of academic coaching sessions predict student persistence and retention who participated in academic coaching?

Significance of the Study

This study contributes to the literature in the areas of higher education retention and persistence, college preparedness, and academically at-risk student academic experience by describing the effectiveness of the academic coaching practices based on demographic indicators and a descriptive summary of academically at-risk students participating in the program. Distinguishing the differences that exist among the students based on the first-generation status, race, SES, gender, and age enables academic coaches and higher education administrators to tailor their efforts appropriately when working with or developing programs for diverse student populations. These professionals are also able to understand the effectiveness of a one-on-one, in-person academic coaching program to help with determining applicable retention and success programs for their college or universities' students. Apart from the university where the study was conducted, this study has implications across higher education institutions as the student population continues to grow in diversity and student retention and persistence efforts are needed.

Delimitations

The following delimitations were noted with regard to the study:

- (1) Timeframe: Data were collected between January 2015 and May 2017.
- (2) Location: Data were collected from students participating in the Academic Coaching for Excellence (ACE) program at a mid-sized, urban research university in the southeastern United States.
- (3) Sample: Students on academic warning participating in the Academic Coaching for Excellence (ACE) program at a major southeastern research university during the Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters.
- (4) Selection Criteria: Archival data from students on academic warning who participated in the Academic Coaching for Excellence (ACE) program during Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters were analyzed for the study.

Assumptions

The following three assumptions were made in this study:

- (1) The sample of academically at-risk students who participated in the Academic Coaching for Excellence (ACE) program during Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters had accurate academic data inputted by instructors representing their grade point averages.
- (2) The sample of academically at-risk students who participated in the Academic Coaching for Excellence (ACE) program during Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters answered each question upon admittance to the university honestly (pre-college data will be considered in the analyses).

- (3) The sample of academically at-risk students who participated in the Academic Coaching for Excellence (ACE) program during the Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters were properly tracked for the number of sessions attended by the academic coaches inputting the session into Appointment-Plus and then recorded by the director of the ACE program.

Definition of Terms

- (1) Academically at-risk students: College students who are referred to the Academic Coaching for Excellence program at the University due to their previous semester's grade point average falling below 2.00 and considered on academic warning.
- (2) Academic success: Semester grade point average has increased to a 2.00 or above.
- (3) Academic warning: Students at the University who have fallen below "Good Standing" after completing a minimum of seven hours of coursework with an overall combined GPA is below a 2.00 (Center for Academic Retention and Enrichment Services, 2017).
- (4) Academic Coaching for Excellence (ACE): A one-on-one intervention program designed to work with academically at-risk students to focus on their strengths, goals, study skills, engagement, academic planning, and overall college performance (SACSCOC, 2015).
- (5) Coaching sessions: A session is considered a recorded meeting time between student and academic coaching at the ACE program office.
- (6) First-generation college student (FGCS): The definition for FGCS used for this study is a student whose parents have not obtained a post-secondary degree (CollegeBoard, 2017; K. Nixon, personal communication, August 31, 2017; First Scholars, 2016).

- (7) Retention: Student is enrolled and completes the following semester at the University following the intervention semester.
- (8) Persistence: The student's earned hours completed towards their academic degree in the intervention semester.
- (9) Non-traditional/traditional student: The non-traditional student is considered 25 years or over, whereas traditional student is under the age of 25 (Musu-Gillette, et al., 2017).
- (10) Pell Grant/Non-Pell Grant: Students are identified as Pell Grant recipients when they are receiving financial assistance based on their financial need and estimated family contribution. Students are considered Non-Pell Grant recipients if their financial need or estimated family contribution is too high based on the formula of the student's estimated family contribution, combined with the cost of the student's institution and enrollment status such as full-time or part-time (Federal Student Aid, 2017b).

Organization of the Study

The study is organized into five chapters followed by a list of references. In this first chapter, an introduction to the study, the purpose and significance of the study, the preliminary introduction of the research questions, a discussion of the study's assumptions and delimitations, and the definition of terms is provided. The second chapter provides a review of the literature significant to the topic and variables explored. The third chapter presents the research design, methodology, sample, data collection, and data analysis procedures. The fourth chapter will detail the results of the study. The fifth chapter will provide a discussion of the major findings with implications and recommendations based on the study's findings.

Chapter 2

Literature Review

Academic success, college persistence, and retention are serious issues for the national and global workforce (Dennehy & Dasgupta, 2017; Davidson, 2014; Lotkowski, Robbins, & Noeth, 2004), higher education institutions (Kerby, 2015; Dougherty, et al., 2014), and the individual student (Bjorklund-Young, 2016; Baum & Payea, 2005). Retention and degree attainment has a particular impact for select groups of students such as academically underprepared students (Westrick, et al., 2015; DeNicco, Harrington, & Fogg, 2015; Jackson & Kurlaender, 2014), first-generation college students (Petty, 2014; Lightweis, 2014; Strand & Council of Independent Colleges, 2013), racial minority students (Shapiro, et al., 2017; Niu, 2015; Museus & Liverman, 2010), low socioeconomic status students (National Center for Education Statistics [NCES], 2017; Sandoz, Kellum, & Wilson, 2017; DeAngelo & Franke, 2016), male students (NCES, 2016; Lopez & Gonzalez-Barrera, 2014) and non-traditional aged or adult learner students (Austin & Lockmiller, 2016; Trenz, Echlund-Flores, & Rapoza, 2015). These issues have led to efforts to provide a variety of programs to increase retention and aid in degree completion for these academically at-risk students. These programs are numerous and widespread, at least on paper, yet the outcomes for these students has not changed substantially in the last 20 years (ACT, 2015).

A plethora of variables have been considered for their impact on academic success (Aydin, 2017; Dennehy & Dasgupta, 2017; Sandoz, Kellum & Wilson, 2017; Austin & Lockmiller, 2016; Barton, 2016; DeAngelo & Franke, 2016; Hoops & Artip, 2016; Allan, Garriott, & Kenne, 2016; Eisenberg & Lipson, 2016; Garg, Levin, & Tremblay, 2016; Ishitani, 2016; Mitchell & Gansemer-Topf, 2016; Radunzel & ACT, 2016; Xu, 2016; Bellman, et al.,

2015; Bennett, 2015; Ben-Yehuda, 2015; Conte, 2015; Flynn, 2015; Hanyak, 2015; Orange & Hodges, 2015; Adams, 2014; Atherton, 2014; Crosnoe & Muller, 2014; Ezeala-Harrison, 2014; Jackson & Kurlaeder, 2014; Lightweis, 2014; McNeil, Long, & Ohland, 2014; Petty, 2014; Rubin, 2014; Baker, 2013; Barnes & Slate, 2013; Cabrera, Miner, & Milem, 2013; Dunn & Dean, 2013; Kruisselbrink Flatt, 2013; Strand & Council of Independent Colleges, 2013; Zafar, 2013; Franklin & Franklin, 2012; Leedy & Smith, 2012; Salzer, 2012; Bettinger & Baker, 2011; ACT, 2010; Adams & Corbett, 2010; Combs, et al, 2010; Field, et al, 2010; Goldrick-Rab & Pfeffer, 2009; Inkelas, 2008). Some of these variables are immutable student demographics (e.g., race, first-generation status); others are mutable student demographics (e.g., mental health, academic skills). Increasingly a small set of core variables have been found to be particularly relevant for urban research universities. These include first generation status (Allan, Garriott, & Keene, 2016; Radunzel & ACT, 2016; Atherton, 2014; Lightweis, 2014; Petty, 2014; Strand & Council of Independent Colleges, 2013; Engle & Tinto, 2008; Ishitani, 2006, 2003), race/ethnicity (Musu-Gillette, et al., 2017; Eatmon, Staley, & Dixon, 2015; Knaggs, Sondergeld, & Schardt, 2015; Slade, 2015; Niu, 2015; Baker, 2013; Yearwood & Jones, 2012; Museus & Liverman, 2010), SES (Sandoz, Kellum, & Wilson, 2017; Crosnoe & Muller, 2014; Goldrick-Rab & Pfeffer, 2009), gender (Dennehy & Dasgupta, 2017; Speer, 2017; Lee, Flores, Navarro, & Munoz, 2015; Gemici & Wiswall, 2014; Morgan, Gelbgiser, & Weeden, 2013; Zafar, 2013; Combs et al., 2010), and age (Warden & Myers, 2017; Austin & Lockmiller, 2016; Rouborn, et al., 2015; Trenz, et al., 2015; McNeil & Long, 2014; Adams & Corbett, 2010). Therefore, in the dissertation that follows, I will define these variables and detail the relevant research on academic success and retention at four-year public universities. Then I will explain the efforts a

midsized, urban research university have taken to work specifically with these academically at-risk students through an intervention called Academic Coaching for Excellence.

College Persistence, Retention, and Graduation

Due to changes in funding formulas, higher education institutions have shifted their focus from enrollment numbers to college persistence and retention rates in order to increase degree completion (Shapiro, et al., 2016; Tennessee Higher Education Commission [THEC], 2015; Davidson, 2014; Dougherty, et al., 2014; Miao, 2012). Thus, the following sections will discuss relevant changes in the state funding of higher education and related statistics relevant to retention and graduation.

Higher education funding. College and university funding has been under the microscope for some years as states begin to inquire about the return on their investment. Former President Barack Obama pushed for the U.S. to be the top global nation in college graduates by 2020 (Executive Office of the President, 2014). With this goal in mind, lawmakers have implemented policies in which higher education institutions receive funding according to a performance-based funding model compared to the previous enrollment-based system (National Conference of State Legislatures [NCSL], 2015). This outcome or performance-based model is now recognized as Quality Assurance Funding model in the state of Tennessee (THEC, 2015). The original enrollment model provided incentives to institutions for providing wider access to postsecondary education to a larger number of full-time equivalent students; yet, this enrollment model did not hold institutions accountable for ensuring those students completed their degree programs (NCSL, 2015) and in turn were able to contribute to the U.S. labor market and economy.

For the U.S. to maintain global and national financial stability, an increase in college degree completion is critical as the United States' presence in the global market is declining (Davidson, 2014). According to the NCSL (2015), 32 states currently have policies in place utilizing a performance-based funding formula, and five additional states are transitioning into performance funding programs within the next legislative term. This funding model means that institutions are being held accountable for performance indicators such as students' course achievement, their time to degree completion, the overall number of degrees awarded each semester, or the number of low-income and minority students the institution graduates when assessed by the performance-based funding formula (NCSL, 2015). With these changes in higher education funding, institutions have implemented substantial changes in their overall policies and practices (Dougherty et al., 2014). Thus, student academic success programs and student retention efforts have been a primary focus for many state-funded colleges and universities to ensure that they move their students towards degree completion.

Higher education statistics. In the most recent report from the National Student Clearinghouse Research Center, researchers found that only 10% of full-time bachelor degree-seeking students at public four-year institutions completed their degree within four years; when five and six year timeframes were considered, 39.3% and 50% of students graduated, respectively (Shapiro et al., 2016). Shapiro and colleagues' research accounted for students who solely pursued a bachelor's degree within the past 10 years. The sample included institutions utilizing National Student Clearinghouse, a higher education enrollment and degree verification organization, widely used across the country by colleges and universities, thus inclusive of diverse institutional environments. This report utilized almost 1.5 million bachelor's degree-seeking students in their progress towards degree completion and found that the average time

enrolled, actively in courses, for a bachelor's degree was 5.1 years for all four-year public, private, non-profit and for-profit institutions and 5.7 years for time elapsed, meaning the total time it took the student from initial enrollment to degree attainment. Shapiro and colleagues further examined the data regarding traditional and non-traditional aged students. When considering persistence towards degree attainment in four-year public institutions, students of traditional college age were found to be actively enrolled in courses for an average of 5.2 years, with an elapsed time of 5.3 years until degree completion. Non-traditional aged students (i.e., those entering college at the age of 20 or older) were actively enrolled for 4.9 years, but took 8.9 years from original enrollment towards degree completion. Stopping out, or time when the student was not actively enrolled in courses, accounts for a much higher rate for those students that took significantly longer to complete their degree compared to those closer to the "on time" four-year time mark. Shapiro and colleagues found that 73.1% of the students with five academic years had no stop outs; whereas with the students that took eight or more academic years only 23.9% had no stop outs; slightly over half (51.3%) had two or more stop outs (Shapiro et al., 2016). These findings on degree attainment draw attention to the need to focus on retention and student support to find ways to better assist students towards college graduation.

Focusing on the first-year experience and examining first- to second-year retention has resulted in a negative trend according to the ACT Institutional Data Questionnaire. The ACT compiles retention rates by institution types from 2,500 institutions from both two- and four-year institutions and has tracked this annually since 1983 (ACT, 2015). According to the ACT's findings, the national first- to second-year retention rate for four-year public institutions was 64.2% in 2015. When compared to the retention from 2000, the first- to second-year retention for four-year public institutions was 68.2% (ACT, 2010), with 2004 having the highest retention at

70% (ACT, 2015). This slightly negative trend raises concern for higher education institutions given research on the impact of first-year performance on subsequent retention and graduation. Westrick and colleagues (2015) note that students' first-year academic performance is the best predictor of college persistence for their second and third academic years. These researchers performed a meta-analysis utilizing ($n = 189,612$) students at 50 different institutions (Westrick et al., 2015). This study is supported by research conducted by DeNicco and colleagues (2015), that tracked ($n = 1,800$) students from their freshman year at a community college through their finishing at a public four-year institution. They found that students' first-year performance was a strong predictive factor to their retention the following academic year. These researchers also found that first-year earned credit hours was statistically significant to the students' overall retention the following year and was noted as the strongest influence on their progress towards degree completion (DeNicco, Harrington, & Fogg, 2015). Therefore, in an effort to better help support students in their degree attainment, colleges and universities have begun focusing their efforts on the student's initial start in order to increase retention and student academic success (Hoops & Artrip, 2016; Ishitani, 2016; Mertes & Jankoviak, 2016; Olson-McBride, 2016; Wathington, Pretlow, & Barnett, 2016; Xu, 2016; Gajewski & Mather, 2015; Kerby, 2015; Lytle & Gallucci, 2015; Dunn & Dean, 2013; Valentine et al., 2011).

Personal Variables Impacting Academic Success and Retention

The immutable student demographics include variables that are inherently bestowed upon students based on their parents, familial status, or primary and secondary education available to them in their upbringing. These variables include academic preparedness, first-generation college student, race/ethnicity, SES, gender, and age. The following sections will provide relevant research for these variables in the context of academic success and retention.

Immutable student demographics. The last several decades have seen significant shifts in the college population nationwide, and these shifts are on-going. College populations are no longer predominately White, 18 to 21-year-old, middle- to upper-class, males (NCES, 2016). Recent reports indicate that the numbers of students over the age of 25 have increased by 16% from Fall 2004 to Fall 2014 (NCES, 2016). Traditional aged students (i.e., those under 25 years old) are still the majority on college campuses, but the percentage of non-traditionally aged students (i.e., those over 25 years old) continues to grow. From Fall 1976 to Fall 2014, there was a significant decline in the percentage of White students from 84% to 58%. At the same time, the numbers of racial and ethnic minority students, including Hispanics, Asians and Pacific Islanders, African Americans, American Indians and Alaskan Natives, have increased substantially. Hispanic college students have seen the largest increase from 4% to 17% (NCES, 2016). Although those students who identify as White still hold a slight position in the majority on college campuses, racial minority growth on campuses is likely to continue. The U.S. Census Bureau projects that by 2020 more than half of the children 18 or younger will belong to a minority race or ethnic group in the U.S. (Colby & Ortman, 2015), implying that this growth on college campuses will likely continue to grow as the nation's diversity does so as well.

Race and age are not the only changes seen on college campuses in the past decade. Gender differences have also increased in recent years. The NCES reports that 56% of postsecondary enrollment in 2014 were female students (NCES, 2016). Then, regarding socioeconomic status, greater accessibility is continuing to be a focus of politicians and policy reform (Tennessee Reconnect Act, 2017; Executive Office of the President, 2014; Tennessee Promise, 2014). There has been an increase in the Federal investment in Pell Grants and college tax credits with reforms made to student loans under President Obama's administration, which

has increased the college accessibility to lower socioeconomic status American citizens (Federal Student Aid, 2017b; Executive Office of the President, 2014). From 1975 to 2012, the U.S. Census Bureau showed a 19.7% increase in low-income students enrolling in college (U.S. Department of Commerce, Census Bureau, 2013), with expected increases as new policies continue to develop. Amongst all of these variables, the landscape of students and the needs of the student body differ more than ever before. Lawmakers in Tennessee have specifically focused their attention on increasing the degree attainment within the state through programs and policies (THEC, 2015).

Tennessee Policy. Specifically, in Tennessee, the governing body of higher education for the state, the Tennessee Higher Education Commission (THEC), has implemented a master plan for 2015 to 2025 focusing primarily on adult learners, low-income students, and academically underprepared students. This plan promotes existing policy and strategies to help increase the overall enrollment of these populations such as Drive to 55 and Complete College Tennessee Act of 2010. Drive to 55 is Tennessee Governor Bill Haslam's initiative to increase the state's postsecondary education attainment rate to 55% by 2025, launching programs such as Tennessee Promise, Tennessee Reconnect, and Labor Education Alignment Program (LEAP). The Complete College Tennessee Act of 2010 implemented the nation's first outcomes-based funding formula that directly ties state funding to the institutional outcomes rather than the institution's enrollment as previously explained. This Act has instilled the development of the Tennessee Transfer Pathways to assist in the students' transition from community college to public universities in creating greater ease in transferring credits to move students towards degree completion. Additionally, with the state's new Quality Assurance Funding, the Seamless Alignment and Integration of Learning Support (SAILS) program has expanded aiding in

remediation for high school seniors to begin taking credit-earning hours for courses earlier to again aid in moving them towards degree completion more quickly. The THEC master plan specifically includes pre-baccalaureate certificates, associate's degrees, and bachelor's degrees. It encompasses public universities, community colleges, colleges of applied technology, independent, not-for-profit schools, and for-profit or proprietary schools (THEC, 2015). Due to these initiatives and utilizing data from a Tennessee four-year public institution for this study, a focus will be given to adult learners, low-income status students, and academically underprepared students. Yet, also with the changing landscape of students on college campuses, higher education institutions are looking for ways to close the existing gaps in educational attainment and achievement through programming and supports for all students. Academically underprepared students, first-generation college students, racial minority students, low socioeconomic status students, gender differences, and non-traditional student populations will all be explored in further detail regarding academic success, college persistence, and retention.

Academically underprepared students. In 2010, President Obama reauthorized the Elementary and Secondary Education Act (ESEA) which called for new college- and career-ready standards and assessments (Aud, Fox, & KewalRamani, 2010). This new focus for ESEA was in response to his statement that “by 2020, the United States will once again lead the world in college completion” (Executive Office of the President, 2014). With this new focus in mind, research on college readiness has become more pertinent. A collaborative effort between Anneberg Institute for School Reform at Brown University, the University of Chicago Consortium on Chicago School Research, and the John W. Gardner Center for Youth and their Communities conducted a comprehensive study utilizing data from five urban school districts (San Jose Unified School District, Pittsburg Public Schools, School District of Philadelphia, New

Visions for Public Schools in New York City, and Dallas Independent School District) to identify factors that predict students' readiness for college from the student, school, and district or partner levels (Annenberg Institute for School Reform, Brown University; John W. Gardner Center for Youth and their Communities, Stanford University, & University of Chicago Consortium on Chicago School Research [CRIS], 2014). This research explored three areas of college readiness: academic preparedness, academic tenacity, and college knowledge. In this research, academic preparedness was defined as "academic knowledge and skills necessary to succeed in college-level courses"; academic tenacity as "beliefs, attitudes, and values that prioritize success in school and drive student engagement and work; behaviors of active participation, and perseverance through adversity"; and college knowledge as "knowledge, skills, and behavior apart from academic content that allow students to successfully access college" (CRIS, 2014, p. 12).

Utilizing these three domains, the researchers then identified indicators in each to help understand college readiness. In choosing effective indicators, four main characteristics were considered: "valid for the intended purpose, actionable by schools, meaningful and easily understood by practitioners, and aligned with the priorities of the district and schools" (CRIS, 2014, p. 4). The academic preparedness tenants were Advanced Placement, International Baccalaureate, Honors courses, standardized test score (ACT/SAT), performance on high school exit and benchmark exams, GPA, no failures in core subjects, maintaining a level of achievement in transition years, and completion of X-level math and science courses. Academic tenacity indicators that were identified included attendance, self-discipline, disciplinary infractions, and master orientation. Finally, college knowledge indicators included SAT/ACT participation, knowledge of admission criteria, application process, and financial requirements for college,

completion, and submission of an application to college that constitute a good match, independent study skills, and meeting with college adviser and having post-graduation plan (CRIS, 2014). From these identified indicators, the report suggests that students' college readiness can be assessed and determined.

The report found that an increasing number of students leave high school unready to be successful in their postsecondary academic endeavors as evidenced by the high rates of placement in remedial courses and low rates of college completion. Not only do these students lack the necessary skills or attitude to be successful, but they are also not equipped with the knowledge to navigate the financial or application process of higher education (CRIS, 2014). This indicates that students who are ill-equipped to navigate the college environment or academic demands may be college eligible, but lack college readiness or proper preparation in taking the next step in their education. Yet, students who lack the proper preparation are entering college and are met with academic hardship and social or financial obstacles upon their arrival to campus.

Many studies have explored how high school performance is related to student success at the college level (Westrick, et al., 2015; Jackson & Kurlaender, 2014; Radunzel, Noble, & ACT 2012). Westrick and colleagues (2015) conducted a meta-analysis of a large sample of students ($n = 189,612$) from 50 colleges to determine the relationship between the students' ACT composite scores, high school GPA, and socioeconomic status (SES) to the students' college academic performance throughout their college journey. Findings from this study indicated that socioeconomic status was a weak predictor of student success and retention; however, both high school GPA and ACT composite scores were strong indicators of first-year academic success (Westrick et al., 2015). These findings support the importance of academic preparedness before

entering the college environment from the secondary level to determine if students will likely be successful in college or not.

Jackson and Kurlaender (2014) utilized the nation's largest four-year public institution system, the California State University System (CSU), to investigate college readiness. The data were obtained from 23 CSU institutions with students from urban, suburban, and rural areas within the state and included six academic years of data including two entire cohorts of students. Findings from this research indicated that less than half of all the students ($n = 84,313$) were considered college ready at their entry into college based on the definition of college readiness as "whether the student is ready for college-level math and English courses, respectively" (Jackson & Kurlaender, 2014, p. 955). The study also suggested that of the study's participants ($n = 84,080$), high school GPA is considered a strong predictor of college success, and potentially more predictive than the college readiness variable. The researchers explain that high school GPA is an indicator of both the students' academic effort and motivation, and thus more predictive of the students' success compared to standardized tests that are primarily knowledge-based. Additionally, even when the researchers controlled for the demographic measures of race/ethnicity, gender, and socioeconomic status and campus variables the students who were identified as college-ready had better outcomes compared to the students deemed not college ready (Jackson & Kurlaender, 2014). This study supports the notion that a large number of students are arriving at college with a lack of academic preparedness and are in need of support upon arrival on campus to be academically successful.

Additional research supports the notion that the lack of academic preparedness impinges upon the students' overall college academic support as well. Radunzel and colleagues (2012) examined the effectiveness of the ACT composite score and high school GPA as a predictive

measure for long-term college success. The variables utilized as outcome measures included cumulative earned hours, degree completion, and cumulative GPA at a six-year marker for four-year institutions and three-year marker for two-year institutions. The study utilized ($n = 190,000$) ACT-tested students enrolled in college for the first-time between Fall 2000 and 2006 at over 100 two-year and four-year institutions. The results of the study found that both ACT composite and high school GPA were effective measures for predicting long-term college success at both types of institutions. When assessing outcomes, ACT was a higher accuracy of prediction compared to high school GPA (Radunzel, Noble, & ACT, 2012). This report helps to support that high school academic preparedness as a correlational measure for the overall college retention and academic success.

From these extensive studies, the support for high school GPA and ACT scores as a strong predictive measure of students' academic success and retention is substantial. Additionally, these studies provide evidence that academically underprepared students require additional supports and programming to aid in their navigation of the college journey. Thus, in the current study, high school GPA and ACT scores will be utilized to determine the predictive factors of students referred to academic coaching services following their first 59 credit hours of college (see Chapter 3). Academically underprepared students are often made up of a diverse population of student backgrounds including first-generation students, racial or ethnic minorities, varying socioeconomic statuses, both male and female students, and any age student. Each of these demographic variables will now be explored regarding the students' academic success, persistence, and retention.

First-generation college students (FGCS). The definition for FGCS I will use is a student whose parents have not obtained a postsecondary degree (CollegeBoard, 2017; First

Scholars, 2016; Engle & Tinto, 2008). In 2011 to 2012 academic year, 34% of college undergraduate students identified as the first in their family to attend college, with an additional 28% of college undergraduates to have parents with some college, but no degree attainment. Of this student population, in 2011 to 2012 academic year, only 25% of these FGCS attended four-year institutions, compared to 48% who enrolled in two-year institutions (NCES, 2014). Thus, FGCS are a much smaller minority group in four-year institutions than in two-year ones, causing concern for their overall support system and ability to navigate the college process on their own.

The student profile of FGCS is complex in nature, as these students often have additional demands or expectations they are also navigating. FGCS are more likely to attend college part-time, work while attending school, be a commuter or online student, and earn a lower first-year grade point average (GPA) compared to multigenerational students (Postsecondary National Policy Institute, 2016; Strand & Council of Independent Colleges, 2013; Engle & Tinto, 2008). They also enter college more academically underprepared than their multigenerational student counterparts and as a result are often required to take one or more remedial courses to help bring their foundational academic knowledge to a higher collegial level (Postsecondary National Policy Institute, 2016; Strand & Council of Independent Colleges, 2013; Engle & Tinto, 2008). It is also this student population that is most likely to drop out of college after their first year, and of those who continue onto their second and third year, they are likely to complete fewer credit hours with a lower GPA compared to their multigenerational student counterparts (Strand & Council of Independent Colleges, 2013). This research points to the need for the academic component to be addressed with the students to ensure that they are equipped with study skills, test taking techniques, and time management strategies to navigate their demanding new college schedule and expectations.

Atherton (2014) examined students' academic outcomes and student subjective self-reported rating of academic preparedness for FGCS compared to multigenerational students. The study utilized ($n = 6,280$) first-year students who completed the Cooperative Institutional Research Program survey which ranges in topics from academic preparedness, financial concerns, demographic characteristics, attitudes, and student goals. The data were from a four-year public university in Southern California which identified as a diverse student population and holds the Hispanic Serving Institution (HSI) status. The academic outcomes used for this study include academic preparedness, math, and verbal SAT scores, and reported high school GPA. The self-reported rating variables include the students' perception of their overall academic, writing, and mathematical abilities identified as above average, average, or below average. Atherton also defined FGCS like this study where "students reported that neither of their parents graduated from college" (Atherton, 2014, p. 826). The study found that 39% of their participants were considered FGCS of the total study's population.

Findings from this study included evidence that the students who had parents that had attended college reported a higher level of academic preparedness compared to FGCS. Additionally, students with two college degree holding parents were found to have higher SAT verbal test scores than students with only one parent with a college degree and FGCS (Atherton, 2014). These findings lead one to believe that students with two college-educated parents are more academically prepared for the college environment based on their upbringing, and who will thus have greater ability to navigate the collegiate academic demands. This may also mean that students with two college-educated parents have a greater confidence in their abilities because of having greater academic support growing up or a greater comfort in their abilities to navigate the academic component of college compared to their FGCS counterparts. This idea also held true

when looking at high school GPA. Students with two college degree holding parents had higher high school GPAs than both FGCS and students with only one college graduate parent.

Interestingly, there was no significant difference between FGCS and students with only one college degree holding parent in terms of high school GPA. Finally, this study showed that there was no significant difference between the relationship between FGCS and the students' self-reported ratings of their overall academic, writing, or mathematical abilities (Atherton, 2014). This finding may be most significant as it indicates that FGCS may not find their abilities able to excel at the postsecondary level.

Atherton's (2014) study provides an interesting point that students may not be aware of the connection between their high school GPA and standardized test scores regarding their academic abilities at the collegiate level. Strand and the Council of Independent Colleges (2013) supported this by noting that FGCS have lower expectations for success and less confidence in their academic skills than their multigenerational student counterparts. Thus, FGCS have difficulty making the connection between high school variables and college attainment. Atherton argues that the lack of awareness of academic outcomes may lead to frustration and difficulty in transitioning to college and noted the importance of addressing academic preparedness issues with FGCS through programming specific to this student population (Atherton, 2014). If accurate, these conclusions support the need for more one-on-one academic support and focusing on the specific needs of this student population.

Additional support for these assumptions is found in the work of Ishitani (2003) who defined FGCS like this study including "those whose parents did not graduate from college" (p. 433). Ishitani described various difficulties that FGCS face including less guidance from parents, lower high school academic achievement, and less confidence in their academic abilities.

Utilizing a cohort of undergraduate students ($n = 1,747$) at a four-year public university over the course of five consecutive academic years, the research found that students considered high risk due to their characteristics for departure had a higher chance of dropping out during their first and third academic year compared to students with low-risk characteristics for departure counterparts. Ishitani (2003) described these characteristics as race, gender, high school GPA, and family income. FGCS were 71% more likely to have issues with attrition compared to students with two college-educated parents, which over a decade later is still evident in Atherton's study (Atherton, 2014; Ishitani, 2003). This research helps support the notion that students that are considered FGCS require additional support in college to help with student attrition and navigating the college system. Thus, there is a need to find effective interventions and support systems to aid FGCS toward degree completion.

Therefore, utilizing the research from Strand and the Council of Independent Colleges' (2013) study focusing on the FGCS experience, Atherton's (2014) study on FGCS academic preparedness and academic self-perception, and Ishitani's (2003) study regarding FGCS retention helps to expose the needed area of support for this population. Thus, since academic success and retention are known characteristics with which FGCS, providing these students with accountability, academic support, and strategies to help them navigate the college culture will likely benefit this population of students.

Low socioeconomic status (SES) students. Mitchem and Mortenson (2016) noted that 80% of 18 to 24-year-olds from the top income quartile (i.e., those families earning \$116,466 and above per year), were enrolled in higher education. At the same time, only 45% of those from the bottom quartile (i.e., those families earning less than \$34,933) were enrolled. Although disparate, these figures none the less represent a significant improvement for those in the bottom

quartile. Indeed, collegiate participation from the bottom quartile increased from 28% in 1970 to 45% in 2014 (Mitchem & Mortenson, 2016). Although encouraging, this increase also indicates the potential need for additional financial assistance and may, in turn, explain the rise in student loan debt.

To increase student aid for higher education, the Obama Administration doubled the Federal investments in Pell Grants and reformed student loan and tax credits (Kena et al., 2014). Federal Pell Grant eligibility is based on family income, size, and number of family members attending college, amongst other factors. The purpose of the Pell Grant is to assist low-income families and independent students from a low-income status with financial assistance for higher education. Students are eligible to receive assistance based on their residency requirements, ability to show sufficient financial need, and by being enrolled at an institution participating in the Federal Pell Grant Program. To determine the student's financial assistance awarded, the student's estimated family contribution is combined with the cost of the student's institution and enrollment status such as full-time or part-time. The student's grant increases as the estimated family contribution decreases (Federal Student Aid, 2014). In the 2017-2018 academic year, the maximum award was up to \$5,920 (Federal Student Aid, 2017a).

Research on students from low-income status families reveals challenges and obstacles that this population faces compared to their higher income counterparts. Goldrick-Rab and Pfeffer (2009) utilized a large sample ($n = 4,716$) of college students to explore the socioeconomic differences in the college transfer rate. Their results indicate that students from less-educated families are more likely to transfer from four-year to two-year colleges, referred to as a reverse transfer, compared to college-educated families. When SES was taken into account, students from advantaged backgrounds were more likely to transfer laterally from a four-year

college to another four-year college. The researchers suggest that the reverse transfers are likely due to academic performance, whereas the lateral transfers are likely due to individual preferences rather than a reaction to their academic performance. The students who made lateral moves were more likely to complete their bachelor's degrees compared to the students that made reverse transfer moves and then moved back to four-year institutions (69% to 49% respectively). The researchers found that students from the bottom two quartiles were less likely to choose a four-year college compared to a two-year community college at the start of their college careers. Additionally, students from the bottom SES were three times more likely to transfer reversely if they had originally started at a four-year institution compared to the top SES that was predominately transferring laterally. Students from the lowest income level and those that identified as working-class were at the highest chance of reverse transferring (Goldrick-Rab & Pfeffer, 2009). This is concerning when considering students from low-income levels retention at a specific university and how these rates of transfer may impact the university's enrollment.

DeAngelo and Franke (2016) found that parental income affected first-year students' college retention when students were determined less-ready for college. Students who were less-ready were students who had high school GPAs falling below a B+ average and not having completed the expected combination of high school courses which the researchers determined by using the college readiness definitions adopted from Higher Education Research Institute (HERI) and National Association of Education Progress (NAEP). This means that the students who have considered less-ready academically for college, showed increased retention as their family's income rose (DeAngelo & Franke, 2016). This finding indicates that students from low-incomes are often academically underprepared for the college academic demand and that they are at greater risk of being retained.

To assist in student retention, persistence, and academic success for low-income students, Sandoz and colleagues conducted a study that utilized an Acceptance and Commitment Training (ACT) approach to a student support intervention to aid in the students' academic success (Sandoz, Kellum, & Wilson, 2017). The results from this small pilot study ($n = 14$) found that students who received a half-day ACT workshop and attended the optional six follow up two-hour booster sessions demonstrated significant improvements in their academic performance compared to those students that did not attend. When the researchers compared these students with students of similar academic struggles, the participants in the academic support program showed greater improvement in the academic performance. Most significantly, the researchers found that students who participated in the ACT intervention graduated at a rate of 57% within a six-year timeframe (Sandoz, Kellum, & Wilson, 2017), a rate higher than the national graduation rate at the same six-year timeframe of 50% (Shapiro et al., 2016). This implies promising results for low-income students who are provided with individualized attention and support to assist in their academic demands.

The research from Mitchem and Mortenson (2016), Goldrick-Rab and Pfeffer (2009), DeAngelo and Franke (2016), and Sandoz and colleagues (2017) verify that retention and academic success are characteristics with which students from low SES backgrounds struggle. Therefore, providing students with accountability, academic support, and tools to help navigate the college culture will likely benefit this population of students. Thus, for this study, a collaborative, one-on-one academic support program will be explored.

Racial and ethnic minority students. Outside of Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs) in the United States, students of color and ethnic minorities are underrepresented on public four-year university campuses.

However, students from racial and ethnic minority backgrounds have steadily increased over the recent years and now comprise 41.7% of the total college student population (NCES, 2016). The historical data supports this trend for two- and four- year colleges and universities. In 1980, 28% of the U.S. population ages 18 to 24 who identified as White were enrolled in colleges and universities. In 2008, this increased by 16 percentage points to 44% of the White population between the ages of 18 to 24 enrolled in higher education. Similar growth has been seen in racial and ethnic minority groups. In 1980, 20% of the U.S. population ages 18 to 24-years-old who identified as Black were enrolled in colleges and universities. This increased by 12 percentage points in 2008 to 32% of the Black population between the ages of 18 to 24 enrolled in higher education. Additionally, this growth was seen in the Hispanic population for ages 18 to 24. In 1980, 16% of the Hispanic population this age were enrolled in colleges and universities. This increased by 10 percentage points in 2008 when 26% of the Hispanic population 18 to 24 years of age were enrolled in higher education (Aud, et al., 2010).

More recently, in 2015, the data show a slowing in growth for all racial and ethnic populations as the higher education enrollment has only grown by 8% from 1990 to 2015 for the total U.S. population (32% in 1990 to 40% in 2015). However, of this enrollment, the 2015 data showed that Asians 18 to 24-year-olds had the highest rate of total population enrolled in higher education at 63%. The 18 to 24-year-old population enrolled in colleges and universities for White was 42%, Hispanic at 37%, Black at 35%, Pacific Islander at 24%, and American Indian/Alaska Native at 23% (Musu-Gillette et al., 2017). This indicates that from the 2008 statistics to the 2015 statistics, the White population decreased in enrollment, yet the racial and ethnic minority groups all increased both minimally and substantially (3% Black and 21% Hispanic) between 2008 to 2015 academic years (Musu-Gillette et al., 2017; Aud, et al., 2010).

Niu (2015) utilized data from the College Board SAT and found that students of color were less likely to send their SAT scores to and attend out-of-state colleges or universities compared to their White student counterparts. Likewise, White students were less likely to only send scores to in-state colleges or universities (Niu, 2015). This indicates that White students applied to more diverse college options compared to their racial minority counterparts regarding college or university location. In addition to students of color primarily staying in-state for higher education, characteristics of this population include increased likelihood of identifying as a FGCS (Postsecondary National Policy Institute, 2016). This student population also often is in higher need of financial assistance to attend higher education compared to their White counterparts (Musu-Gillette et al., 2017).

With the growing population of racial and ethnic minority students, higher education institutions must take a closer look at the specific needs of these students. Often, racial and ethnic minority students come from academic backgrounds that have not set them up for success within higher education's academic and social culture (Flynn, 2015). Flynn (2015) conducted a study utilizing a small sample of ($n = 62$) urban college students on academic probations taking part in an academic support intervention. These students identified as 64.5% African Americans, 22.6% Hispanic Americans, 9.7% West Indian American, and 3.2% other. Flynn found that students were able to increase their GPA after participating in the academic support intervention. The intervention focused on the unique psychological, sociocultural, and communal aspects of at-risk urban college students to provide a more personalized and culturally appropriate approach. This included working collaboratively with the students and celebrating students' academic successes throughout the semester. Additionally, there was a focus on protecting the students' self-image throughout the semester to avoid academic humiliation (Flynn, 2015). This

specific intervention utilized needed supports that allowed these students to overcome academic and cultural barriers and instead find success in their higher education experience.

Identifying programs and academic areas that racial and ethnic minorities are needing assistance and growth is important to address across campus diversity. Museus and Liverman (2010) note that underrepresented racial minorities earn college degrees in the field of science, technology, engineering, and mathematics (STEM) at a lesser rate than their racial majority counterparts. Their study utilized select administrators and staff ($n = 34$), and racial/ethnic minority students ($n = 31$) based on their affiliations with various campus environments, programs, and practices in addition to their experiences of racial/ethnic minority students on their campus. Their study looked at the institutional factors that contribute to underrepresented racial minority students' retention and found that four factors influence minority college students' persistence and attainment: elements of campus culture, holistic and integrated support systems, sense of belonging to the campus community, and engagement in educationally purposeful activities (Museus & Liverman, 2010). This indicates that racial/ethnic minority students need to be engaged in the campus community with relevant supports that can guide them in establishing a sense of belonging and navigate the campus culture.

Baker's (2013) study of African American and Latino/a college students ($n = 3,924$) from 28 selective colleges and universities explored the influence of on-campus personal support on academic performance. The study utilized data from the National Longitudinal Survey of Freshmen (NLSF) which focused on the first two years of the college experience. Academic performance was assessed based on the student's college GPA, and the on-campus support assessed included peer support, co-ethnic peer support, faculty support, and co-ethnic faculty support. In addition to the NLSF, Baker utilized interviews with 13 African American students

and 14 Latino/a students to explore students' perceptions of their social support on their academic performance (Baker, 2013).

Results indicated that when looking at peer support on campus, Black females and Latinas are more likely than their male counterparts to identify having peer support on campus. However, co-ethnic campus peer support is much more likely for Black females and males compared to Latino and Latina students. Yet, Baker found that peer support and co-ethnic peer support does not significantly affect the students' academic performance. This indicates that having close friends at college does not denote one's academic performance during the first two years of college. In addition to peer support, faculty support was identified as the highest for Black female students. This faculty support was found to positively impact the students' GPA for all groups of students, except for Black males. Even more so, when the faculty are the same race as the minority students, there is a greater influence on the students' academic performance, for all minority groups, except Black males (Baker, 2013). This influence on students' academic performance may be attributed to mentorship and seeing professors and faculty of the same minority racial or ethnic status as a role model to their academic or professional pursuits.

With this knowledge from Nui (2014), Flynn, (2015), Museus and Liverman (2010), and Baker's (2013) studies, a greater attention to these minority students' needs is vital in helping to create an inviting, accepting, and safe space for students to grow intellectually and socially. Providing space for students to have faculty or staff support may contribute to the increased academic success and in establishing a sense of belonging on campus. Thus, engaging students in an atmosphere of support and providing them with an individual on campus to hold them accountable for one-on-one collaboration would likely increase their academic and social success within their new college environment.

Gender. According to the NCES, female student enrollment in higher education has steadily increased in the last three decades (NCES, 2016). The number of female students rose 15%, and male enrollment rose 19% between 2004 and 2014. Even with the larger increase in male enrollment in recent years, female enrollment is still the overall majority at 56% of 2014 college students (NCES, 2016). In 1994, first-time, first-year college enrollment in the U.S. the fall semester after high school graduation was 63% of females and 61% for males. When reassessed in 2012, the percentage changed drastically for female students; some 71% percent of female students enrolled in college upon high school graduation; male enrollment stayed unchanged at 61% (Lopez & Gonzalez-Barrera, 2014). When exploring possible reasoning for this increase, Lopez and Gonzalez-Barrera (2014) posit that the evolving labor market and the barriers women once faced has now lowered. Thus the benefit for women to attend higher education has increased for the job opportunities that they can obtain.

When exploring gender differences about college readiness and academic preparedness, Combs and colleagues conducted a study in 2010 utilizing a large sample size ($n = 1,099$) of high school graduating seniors from Texas (Combs et al., 2010). Utilizing reading and math scores from the Texas Education Agency's database and standardized testing for both the SAT and ACT to determine gender differences, they found that 51% of female students were college-ready based on their reading scores, compared to only 39% of their college-ready male counterparts. However, the opposite was found when looking at the students' math scores. Here 53% of males were considered college-ready compared to 44% of female students. It should be noted that when looking at the math and reading scores together, slightly less than one-third of all of these students were considered college-ready (Combs et al., 2010). Additionally, this lack of college-readiness for the sample is concerning as it contributes to the portrait of lack of

academic preparedness seen across the nation as students finish high school before making their next step into postsecondary education or the job market.

Another study utilized standardized testing and additional assessments to explore how students select majors with a focus on gender differences. Speer (2017) utilized the Armed Services Vocational Aptitude Battery (ASVAB), Armed Forces Qualifying Test (AFQT), and the SAT or ACT with a large sample of undergraduate students ($n = 2,406$). The study aligns with Combs and colleagues (2010) research regarding reading and math topics, as Speer (2017) found that a higher number of women were in humanities, social science, and education intensive fields and men in math, science, and business intensive fields. A study by Morgan and colleagues (2013) supported Speer's findings and indicated that high school students' occupational plans are a strong predictor of the students' initial college major selection (Morgan, Gelbgiser, & Weeden, 2013). Morgan and colleagues utilized a large sample size ($n = 5,996$) of students from a national database who had declared a major and explored work-family goals as additional variables in their study. They found gender differences regarding "having children" and "having lots of money". Females were 10% more likely to indicate that it was very important to their future to have children compared to the "somewhat important" male students' response. Yet, male students were 14% more likely to indicate that having lots of money was very important to their future compared to "somewhat important" female response (Morgan et al., 2013). These findings indicate that students' future plans dictate their major choices in the flexibility of the career options and financial support that the subject area careers can provide.

Zafar (2013) also examined gender with regard to college major utilizing a small sample of college sophomores ($n = 161$) from a selective university in the northwest U.S. In an attempt to understand how students select their majors, Zafar found that both male and female students

selected their major primarily because of enjoying the coursework. The second determining factor for males was the social status of the jobs that are a result of the major, and a third factor was parental approval of their major selection. For female students, the second most important factor in determining a major is enjoying the work at the job as a result of the major, and finally, like the male students, parental approval of their selection (Zafar, 2013). These findings are important to note as they may shed light on important variables students are weighing as they make major selections. Thus, in guiding students with their academic choices, it is important to learn the variables that they identify as important to their major choices, as it is likely pertinent to their overall college and career success.

Lawrence and colleagues (2006) looked more specifically at students' confidence level and self-esteem to gather a better understanding of the students' emotional experience in college. The researchers utilized ($n = 160$) undergraduate students between 18 and 20 years old in the United Kingdom, as they sought to explore differences in coping strategies based on gender in first-year undergraduate students and how these strategies impact student self-esteem and academic ability. There were several important gender differences in the students' engagement in coping skills and academic attainment. In the study, the female students' final grade was significantly higher than their male student counterparts. Thus, revealing that gender determined academic success for this sample. Yet, when looking at the coping styles and self-esteem variables, gender differences were also observed. Males exhibited higher self-esteem than their female counterparts and were noted as "bottling up" their emotions and detaching their emotions for the situation (Lawrence, et al., 2006, p. 279). These findings indicate that supporting students academically and emotionally can look different based on the student's gender.

Therefore, utilizing the research of Combs and colleagues' (2010) study acknowledging the difference in college readiness based on gender, Speer (2017) and Zafar's (2013) study on major selection based on gender, Morgan and colleagues' (2013) study on gender differences in future desires and direction of the students, and Lawrence and colleagues' (2006) study on the self-esteem and confidence in their academic ability based on gender it is apparent that there is needed support to help aid in the academic success and retention of both male and female students. Thus, providing students with programming to help guide students and teach them ways navigate the college cultures is important to their overall success.

Age. According to the NCES, traditional-aged students, or those students under the age of 25, accounted for 89% of full-time students at four-year, public institutions (NCES, 2017). For part-time enrollment, that number substantially decreases to only 55% of part-time students. This means that 11% of full-time students and 45% of part-time students are considered 25 years of age or over and are commonly referred to as "adult learners" (Musu-Gillette et al., 2017). These adult learners might be pursuing a degree for the first time, returning after a stop out, or returning to college for another credential. The experience of these adult learners differs from those of their traditional-aged counterparts in some crucial ways that impact enrollment, continuation, and graduation (Austin & Lockmiller, 2016; Trenz, et al., 2016; Rabourn, et al., 2015). Awareness of these differences is critical to productively supporting these students towards degree completion and academic success. As reviewed below, perceived stress, ways of managing stress, mental health concerns, and level of engagement have all been found to be unique to traditional and non-traditional student populations. Below I review the research in this area and the implications of these studies on efforts to increase student performance and facilitate student success.

Austin and Lockmiller (2016) studied a small sample ($n = 39$) of both non-traditional and traditional-aged students. Twenty of the students were identified as traditional-aged students (i.e., 24 years old and under), whereas 19 students were considered non-traditional aged, or 25 years old and over. They explored the perceived stress of each of these student populations and the coping strategies they utilized to manage their stress. The results indicated that traditional-aged students had significantly greater perceived stress compared to their non-traditional peer counterparts (Austin & Lockmiller, 2016). This indicates that the college adjustment and time of life transition may impact the younger students more than the non-traditional aged students. Trezn and colleagues (2015) explored life stress, anxiety, depression, and alcohol use from a large sample of ($n = 1,187$) undergraduate students. They found that non-traditional aged students had significantly higher life stress compared to their traditional-aged counterparts (Trezn, et al., 2015). These findings indicate that adult learners likely have additional variables to consider while attending college to a greater extent than their traditional age counterparts. These variables might be work commitments, caregiving responsibilities for either children, aging parents, or a spouse/family member, or financial needs and responsibilities amongst other concerns. Additionally, educational differences and needs such as paper writing, study strategies, and time management likely look different based on maturity or ability. Traditional students are more likely to have attended school more recently than their non-traditional student counterparts and thus certain academic skills may be easier to develop and utilize for these students. Ultimately, we should recognize that there is a high level of stress present from either life or college for both non-traditional and traditional-aged students and thus, all students on college campuses are in need of additional support to help navigate their stress.

When Austin and Lockmiller explored how students coped with the stress of college, the traditional-aged students noted that listening to music was their main stress management technique, whereas non-traditional aged students utilized exercise to manage their stress levels (Austin & Lockmiller, 2016). Students' coping strategies may vary as this is a small sample size ($n=39$); regardless variation in coping needs and abilities is apparent between the two age populations. In addition to coping strategy differences, mental health differences have emerged from in the literature in terms of age. Trenez and colleagues (2015) found that non-traditional students had significantly higher anxiety and depression than traditional-aged students (Trenz, et al., 2015). The anxiety measure that the researchers utilized included the Beck Anxiety Inventory that scores more physical rather than mental symptoms of anxiety. It is possible that traditional-age students may not encounter or may lack a physical awareness of the anxiety symptoms compared to how non-traditional counterparts experience anxiety. Additionally, the depression scale that was utilized included the Center for Epidemiologic Studies Depression scale that explores symptoms of depression over the past week. This scale, although high validity, may not capture a realistic timeframe of exposure of depressive symptoms for traditional-aged students. Interestingly, alcohol use did not differ between the two student populations (Trenz, et al., 2015). The measure to assess this variable was the Alcohol Use Disorders Identification-Consumption which is used to identify those with hazardous drinking behaviors or have active alcohol use disorders (Substance Abuse and Mental Health Services Administration [SAMHSA], n.d).

Rabourn and colleagues explored differences in student characteristics and student engagement on campus for both traditional-aged adult learner students. For this study, adult learner students were defined as first-year students who are 21 years or older at the time of the survey participation (Rabourn, et al., 2015). It should be noted that this definition varies from the

research previously discussed and from this study's definition of the adult learner, but exposes an important finding on student engagement based on age. Rabourn and colleagues' (2015) study utilized a large sample ($n = 146,072$) that encompassed students from 977 U.S. institutions with 8% ($n = 12,336$) of the students identified as adult learners. Significant differences were found between traditional and adult learners in both characteristics and engagement. The adult learners were more likely to identify as first-generation students, be more racially diverse, and less likely to pursue advanced degrees compared to their traditional-aged student counterparts. Learners were also more likely to be enrolled part-time and had transferred between institutions. Often these adult learners were enrolled at primarily online campuses or were taking online courses at on-site institutions at a much higher rate than their traditional-aged counterparts. The institutional characteristics preferences also varied between student groups. The adult learners were more often to attend for-profit, not as competitive and online institutions compared to their traditional-aged students (Rabourn, et al., 2015).

Rabourn and colleagues also explored the engagement characteristics of the students in the two age groups. They found adult learners were more engaged in their academics, yet scored significantly lower compared to their traditional-aged counterparts in their collaborative interactions with others (i.e., peers and faculty) and were more likely to report their campus experience as less supportive compared to their peers of traditional age (Rabourn, et al., 2015). These findings indicate that adult students likely have a lower sense of belonging compared to their traditional student counterparts. There are lower numbers of adult learners on campus, and thus these students may not feel they have a community to engage within the same life-stage as them. Providing students with a person on campus with whom to interact may increase their feelings of support and engagement and promote their academic success and retention. Despite

being less involved with their peers and their professors, the adult learners in this sample noted a more positive perception of their teachers and in their intentional interactions with those on campus when compared to traditional-aged students (Rabourn, et al., 2015). This indicates that adult learners may value the material being taught and the one-on-one interactions with others more than their younger student counterparts. With this understanding, helping adult learners navigate ways to be engaged and participate in the classroom would likely be beneficial to their academic success, as professors often utilize participation points within their grading systems.

Noting these age concerns is imperative to understanding the student perspective on campus for both traditional and non-traditional student age groups. It is important for support staff working with adult learners, those considered non-traditional age students, to enter into the conversation and intervention differently from how they work with traditional-aged students. Therefore, utilizing a more individualized and one-on-one approach to assisting both student groups, in general, is likely more beneficial to their overall academic success and retention.

Mutable student demographic variables. Variables that are considered mutable for the context of this study are those that can be changed or learned. These variables include mental health and academic skills. Students can learn ways to effectively cope with stress, anxiety, and depression as well as similar mental health issues, and they also can develop study strategies such as time management, organization, and effective test-taking tips. Therefore, mental health and academic skill are the areas of focus for understanding the landscape of the college student body. Both mutable variables will be discussed in how it relates to college students and their academic success and retention.

Mental health on college campuses. In addition to the personal background variables that the students bring to college with them, the college population is also highly susceptible to

mental health concerns. As the college transition is both exciting and stressful, students' ability to cope and understand their mental health needs becomes increasingly more important. Nearly 43.8 million Americans ages 18 or older experience symptoms associated with diagnosable mental illnesses in any given year. That statistic means approximately one in five adults within the U.S. faces such mental health symptoms (National Alliance on Mental Illness [NAMI], 2015). The average age of onset for the manifestation of symptoms for some of the more common mental health disorders like anxiety, substance abuse issues, schizophrenia, and depression are 18 to 25 years of age (Gruttadaro & Crudo, 2012), with 75% of chronic mental illnesses beginning by the age of 24 (NAMI, 2015). With the traditional student attending college in the U.S. at 18 to 22 years old (Musu-Gillette et al., 2017), it raises questions about the mental health issues manifesting on college campuses.

Due to the average age of onset for many mental disorders, some students enter college with pre-existing mental health problems (Marano, 2015; Cook, 2007), whereas others develop conditions during their post-secondary academic careers (Eisenberg & Lipson, 2016). The Healthy Minds study is an annual report utilized to identify needs and priorities for college counseling centers, establishing benchmarks utilizing other comparative institutions, evaluating policy and practices, helping to plan for future services and programs, and advocating for additional resources based on students' needs. The study utilized data from large to small size institutions with a large sample of participants ($n = 34,217$) across 23 institutions. The study establishes the current landscape of the mental health concerns on college campuses. The percentage of students from the sample that indicated scores resulting in mental health concerns include 25% major to moderate depression, 21% anxiety, 8% eating disorders, 20% non-suicidal self-injury in the past year, and 10% suicidal ideation (Eisenberg & Lipson, 2016). This indicates

that there is a need on college campuses to support students and help them identify resources available to them to aid in their success and develop effective strategies to manage their academic success while coping with their mental health needs.

These findings of the current landscape are confirmed by research by Lipson, and colleagues (2015) which examined ($n = 43,210$) undergraduate students from 72 college campuses who participated in the Healthy Minds Study from 2007 to 2013. Findings indicated that 34.4% of the undergraduates designated at least one of the following mental health concerns: anxiety, depression, suicidal ideation, or non-suicidal self-injury. Of the 34.4% of students with the mental health problem, 39.4% were receiving treatment for the mental health concern. Institutional variables were assessed in this study as well and indicated that students on non-residential campuses had a higher rate of depression, anxiety, and suicidal ideation compared to residential campus counterparts. When Lipson and colleagues explored the mental health concerns about campus graduation rates, the campuses with the highest graduation rates had students with lower rates of depression, anxiety, and suicidal ideation compared to the colleges with lower graduation rates which had increased mental health issues. Additionally, students were more likely to utilize treatment for their mental health concerns at small, private, residential institutions compared to large, public, non-residential ones (Lipson et al., 2015). With this knowledge, colleges must decrease the stigma of receiving services and provide students with alternative resources to the standard college counseling center to work with students as they try to navigate the academic demands and their mental health needs.

With the research from Lipson and colleagues (2015) in mind, it is important to consider the landscape of the campus used in this study. The University includes an enrollment size of 17,394 undergraduate students (Office of Institutional Research, 2017), a low graduation rate

(28.3% four-year graduation and 43.6% six-year graduation rate) (Office of Institutional Research, 2016), and is primarily non-residential campus (14% living on campus) (D. Bureau, personal communication, November 2, 2017). These institutional variables would infer that students on this University campus have a higher degree of mental health concerns according to Lipson and colleagues' findings (Lipson et al., 2015). This indicates that providing additional support to students through the study's intervention, academic coaching, is needed to aid in students' mental health, academic success, and retention.

This student landscape from the past decade is cause for concern as students with mental health issues are found to withdraw from school before completing their degrees at a much higher rate than their general population peer counterparts (Wyatt & Oswalt, 2013; Gruttadaro & Crudo, 2012; Salzer, 2012). Salzer's (2012) study of ($n = 449$) college student's mental health issues from 300 colleges found that both former and current students with mental health issues utilized fewer campus facilities and reported poorer relationships with students, faculty, and administration on campus compared to students without mental illnesses. When comparing students with mental illnesses who had graduated to students with mental illnesses that dropped out, the students who graduated had greater overall satisfaction, engagement with faculty and administration, involvement in campus organizations, and use of campus facilities (Salzer, 2012). This research indicates that additional efforts are needed to help with campus engagement and to create social bonds between students, faculty, and administration for students with mental illness and to provide a touchstone on campus. Thus, a structured and relational support service would likely benefit a student with mental health concerns as it would directly provide an individual on campus who provides accountability, encouragement, and guidance.

Wyatt and Oswalt (2013) examined the relationship among stress, mental health, and academic classification (undergraduate versus graduate student) on academic performance and help-seeking behaviors by utilizing a national sample ($n = 27,387$) that responded to the American College Health Association-National College Health Assessment II. The results indicated that there is a difference in the mental health experience of graduate and undergraduate students. Specifically, undergraduate students indicated higher rates of feelings and behaviors related to poorer mental health which had negative implications for their academic performance compared to their graduate student counterparts. When the students recognized their mental health concerns, graduate students were more likely to seek counseling or mental health services compared to undergraduate students (Wyatt & Oswalt, 2013). This study highlights the need to work with undergraduate students in helping them manage and understand their mental health needs, while also illuminating the indirect support that students might need to address their anxiety, depression, stress or other mental health concerns with a college professional since they are not seeking services on their regard.

The impact mental health concerns have on academic success directs researchers to explore the college lifestyle, environment, and campus climate that may be contributing to the overall development of mental health for these students. Gruttadaro and Crudo (2012) aimed to explore these questions by inquiring about the college students' experience and attempting to identify the supports and services the students found necessary for their academic success. The study utilized a sample ($n = 765$) of undergraduate students diagnosed with mental health conditions who were currently or within the past five years enrolled in college. Of the participants, 64% indicated that they are no longer attending college because of a mental health-related reason with many noting that due to their condition they performed poorly on their

academic assignments resulting in lower GPAs and loss of financial aid leading to their dropping out of college. Students indicated that supports that would have helped them stay enrolled included: receiving accommodations (e.g. help with communicating their needs with professors, tutoring, or lower course loads), accessing mental health services and supports to aid in their academic performance, connecting to services earlier, attending peer-run support groups, financial assistance, support with medication management, and getting support from family and friends (Gruttadaro & Crudo, 2012). Many of these supports could easily be provided through university programming and academic support services that could then reduce the dropout rate for students with mental health issues.

Specifically, programming that supports first-time students is critical to retaining students. These first-time students are often expected to adjust to the academic demands, social pressures, and maintain long-distance relationships, while also navigating financial responsibilities, time management, and awareness of self-care (Oswalt, Lederer, & Schrader, 2015; Kruisselbrink Flatt, 2013). Thus, this high level of change and responsibility can undoubtedly cause a great deal of stress in a student's life. Any of these stressors can push a student to need additional support and guidance. Keyes and colleagues (2012) utilized ($n = 5,689$) college students from the Health Minds Study and found that 49.3% of students did not screen positive for mental health disorders, which indicates that slightly more than half of the students did screen positive. They found that depression and anxiety were the most prevalent diagnoses among college students (Keyes et al., 2012). With the knowledge of this high rate of mental health concerns and the limited number of students seeking formal counseling support, the need for additional emotional and academic support for students is apparent. Student support services have begun to increase their presence on college campuses to aid in this effort (U.S.

Department of Education, 2017). These student support services can capture the essence of counseling in a way that helps to eliminate the stigma of mental health concerns, while also providing similar academic and social tools. The hope is that campus resources such as these might be able to offset the additional stressors that come with adjusting to college for some of their at-risk students, while also providing a less stigmatized environment for students to receive help and support. Keeping students in college and working toward degree completion is the goal of higher education especially now with the explicit impact retention has on state funding (NCSL, 2015).

Academic skills needed on college campuses. Students' academic skills such as time management, study strategies, and organization skills are needed components of successfully navigating the college process. Four studies from Kiriakidis and Barber (2011), Hartwig and Dunlosky (2012), Aydin (2015), and Lotkowski, Robbins, & Noeth (2004) will be discussed to illuminate needed academic skills and study habits students should possess to increase academic success.

Kiriakidis and Barber (2011) used ($n = 20$) former honors high school students who then went on to college. They explored how the participants felt upon entering college based on their preparation using a qualitative research approach. As a result of the study, the students indicated the importance of developing critical thinking, problem-solving and study skills before attending college to be better prepared for college (Kiriakidis & Barber, 2011). The findings from this study indicate that students recognize the need for basic academic skills to be successful in college. Thus, when students come from underserved or ill-equipped academic backgrounds they likely are unprepared for the demands of college curriculum and academic strategies. This study may also indicate that arriving at college with content knowledge is helpful to students in their

overall success, yet students' academic skills and ability to adapt to the learning environment with strategy and cognitive thinking is even greater to the students' success in navigating their college journey. Therefore, providing students with these tools such as time-management, critical thinking techniques, problem-solving exercises, and study skills can help them be successful moving forward in their college careers.

Hartwig and Dunlosky (2012) specifically looked at some of these study strategies to see how undergraduate students were utilizing them and how they were impacting students' GPAs. They explored ($n = 324$) undergraduates' study habits and specifically looked at how students scheduled in their studying, the strategies they used to prepare, and their self-testing methods. The most significant finding of this study included the scheduling of study time. Late-night studiers were more likely to be lower academic performers. Additionally, when students study large quantities of materials during one sitting, they utilized fewer study strategies than if they spaced their studying out over time. They also found that self-testing and rereading were effective study strategies that increase the students' performance. Low performing students were particularly likely to indicate that deadlines were the driving factor in getting work done, although this finding was significant for all students (Hartwig & Dunlosky, 2012). This research helps to provides evidence that students often need guidance in time management and in utilizing proper study strategies that will help aid them in their academic performance.

Lotowski and colleagues (2004) utilized a comprehensive review of literature related to postsecondary retention and selected 109 studies that met the following criteria: "examined the relationship between non-academic and academic factors and postsecondary retention; focused on full-time students enrolled in four-year U.S. postsecondary institutions; used standardized measures and reported all of the pertinent study information" (Lotkowski, et al., 2004, p. 5).

Their purpose was to identify which academic and non-academic factors had the most significant effect on college retention and academic performance. Non-academic factors included: academic goals, achievement motivation, academic self-confidence, academic-related skills, contextual influences, general self-concept, institutional commitment, social support, and social involvement. Academic factors utilized included: ACT assessment score, high school grade point average, parents' educational attainment, and family income. Of the non-academic variables, the strongest factors for retention included academic-related skills, academic self-confidence, and academic goals. This study defined academic-related skills as students' ability to utilize time management, study skills, and study habits like note taking, meeting deadlines, and using information resources (Lotkowski et al., 2004). This finding adds to the evidence that students' academic performance and retention is impacted by academic skills that support service professionals can help teach and refine. Lotkowski and colleagues defined academic self-confidence as the students' own belief in their ability to be successful in the academic environment. Academic-goals was explained as the commitment students had to obtain a college degree (Lotkowski et al., 2004). With both academic self-confidence and academic-goals being significant to the student's retention, providing students with resources on campus to help hold them accountable to their educational attainment goals and to assist in building the students' confidence in their academic abilities would likely be beneficial to their academic success.

These studies from Kiriakidis and Barber (2011), Hartwig and Dunlosky (2012), Aydin (2015), and Lotkowski and colleagues (2004) help to support the need for academic support services to work with students in developing and increasing their academic skills. Through supports like academic coaching, students with low academic skill sets will likely increase their

toolbox of academic strategies and study skills, while also refining their time management which in turn will aid in the students overall academic success and retention in at the university.

Programs Utilized to Improve Retention

Student success and retention programs provide support and academic accountability for college and university students (Tomasko, Ridgeway, Waller & Olesik, 2016; Hoops & Artrip, 2016; Gajewski & Mather, 2015; Lytle & Gallucci, 2015; O’Keeffe, 2013). Amongst a myriad of student success programs across the country, a few trends arise as the prominent programs being used to help aid in student retention, such as summer bridge programs, living learning communities, course based models. These programs are implemented in an effort to help students with study strategies and methods that will assist in their college academic careers, while at the same time applied with the intention to aid in the institution’s retention (Hoops & Artrip, 2016; Tomasko, Ridgeway, Waller, & Olesik, 2016; Lytle & Gallucci, 2015; Adams, et al., 2014; Petty, 2014; Wernersback, Crowley, Bates, & Rosenthal, 2014; Dunn & Dean, 2013; Johnson, 2013; Inkelas, Soldner, Longerbeam, & Leonard 2008). The literature of each of these trends is expansive and beyond the scope of this dissertation, but to provide context, a summary of the literature on each is provided below.

Summer bridge programs. Summer bridge programs have been implemented at many colleges and universities as an additional academic support for incoming college students (e.g., University of Memphis, University of Michigan, University of California-Berkley, Pennsylvania State University, University of Texas at Austin, University of South Carolina, George Mason University; University of North Carolina- Chapel Hill) (Summer Success Programs, 2017; Russell, 2015). These programs are often designed to be specific to the student’s major or academic concentration to help ease students into the expectations of their upcoming programs

(Petty, 2014). Tomasko and colleagues (2016) examined a science, technology, engineering, and mathematics (STEM) summer bridge program where ($n = 7,823$) students identifying as an underrepresented minority, female, or first-generation participated in a six-week program prior to their first semester of college (Tomasko, Ridgeway, Waller, & Olesik, 2016). They found that underrepresented minorities and female students had significant gains in their retention within the STEM majors, compared to a previous baseline of incoming students that did not participate in the bridge program. Conversely, the program did not show significant results for first-generation students in their participation in the program. However, they found that the program helped all the students to improve their preparation for college coursework and gave them a sense of belonging on campus. This indicates that connecting students to campus resources early can be beneficial to their academic success and college experience. Also, it shows that programming designed specifically to work with special populations can be influential in students' success.

Living-learning communities. Living-Learning Communities (LLCs) are a community-based retention model many institutions have implemented (e.g., University of Memphis, Elon University, Vanderbilt University, University of South Carolina, Michigan State University) (Residence Life and Dining Services, 2017; U.S. News and World Report, 2017). LLCs provide a space for students to live on-campus and in community with others with similar academic interests. This form of retention program offers students meaningful community-engaged learning experiences (Adams, et al., 2014). Arensdorf and Naylor-Tincknell (2016) utilized a qualitative approach to explore students' opinions on the social and psychological benefits to LLCs. The study utilized ($n = 42$) students from both LLCs ($n = 25$) and non-LLC students ($n = 17$). The students involved in LLCs indicated that they had richer connections to faculty and

students on campus compared to students not involved in LLCs. Additionally, these students also indicated that they had greater social and academic opportunities compared to students that were not a part of the LLCs (Arensdorf & Naylor-Tincknell, 2016). These findings indicated that students living within the community had additional supports and possibly experience an added level of confidence to their sense of belonging on campus that is beneficial to the student's overall success.

Course-based model. A course-based retention model provides students with skills and study strategies, as well as academic support and college guidance within the context of the classroom to help students navigate their new learning environment. Many colleges and universities utilize first-year academic courses to help ease the transition for first-year students (e.g., University of Memphis, University of Minnesota, University of Texas at El Paso, University of California, Los Angeles, Appalachian State University) (ACAD1100, 2017; Griffin & Romm, 2008). Hoops and Artrip (2016), researched a course based retention program which emphasized topics such as motivation, overcoming procrastination, concentration, memory strategies, exam and note-taking methods, reading strategies, asking for help, organizational skills, and connecting to resources on campus. When the students were asked which topics they found to be most impactful for their college experience, time management and motivation were noted as the two most influential learning needs.

These three retention based models have all shown to be helpful and influential for college students. They also show to be impactful for minority and underrepresented students on college campuses. As higher education changes to try to adapt to the ever-evolving world, focusing attention on programs and initiatives that support the students who have additional barriers in their path is necessary and needed. Programs that seem to be missing and lacking in

research are person-centered academic supports. As previous retention programs address either mutable or immutable student variables, an academic support and retention program suited to address both kinds of variables is needed. This intervention is academic coaching.

Academic Coaching Background

A limited amount of research is available on the effectiveness and practice of academic coaching, likely due to its new development as a student support program, and also because there are a variety of uses and approaches to coaching which limits the depth of the research available in one particular area. Coaching has been utilized on college campuses by third-party services (Bettinger & Baker, 2011), as peer coaching through guided materials (Franklin & Franklin, 2012), for special populations such as those with attention deficit hyperactivity disorder (ADHD) (Field, et al., 2010), for those with varying disabilities (Mitchell & Gansemer-Topf, 2016; Bellman, Burgstahler, & Hinke, 2015), and for retention purposes (Perez, 2014; Robinson & Gahagan, 2010). A review of these studies will be provided in the section that follows.

Bettinger and Baker (2011) utilized two years of data from ($n = 13,555$) students across eight universities and two community colleges to explore the effectiveness of a coaching service called InsideTrack offered to students from public, private, and proprietary colleges or universities. The researchers acknowledge the prevalence of student dropout rates and how tailoring support to the students' needs influences the students' ability to perform and discuss coaching as a form of college mentoring. The InsideTrack system matches coaches and students for the retention intervention. The coaches work individually with the student to prioritize their academic demands, pinpoint ways to be successful, and identify barriers hindering their academic success. They also identified outside school factors as leading influencers on students' persistence and degree completion. The researchers found that this aligns with the three

categories commonly discussed between coaches and their students including personal commitments, caregiving responsibilities, and financial demands. The findings of the study confirm that students who completed the coaching program had higher completion and retention rates than the students who did not participate in the program. When the effects were explored after six months, 12 months, 18 months, and 24 months, the coached groups had greater retention than the non-coached groups (Bettinger & Baker, 2011). This research shows that coaching is effective when working with undergraduate students with a third-party service, but fails to evaluate one-on-one, face-to-face coaching with students that are on the same campus as the coaches.

Another approach to coaching that has been explored is peer coaching. Franklin and Franklin (2012) compared two different forms of coaching programs. The first, Preparation, Action, Adaptive Learning (PAAL) focused on preparation for change and adaptive learning. The second was a self-regulation co-coaching program which focused on the development of studying and coping skills. The study consisted of ($n = 27$) participants in the PAAL program and ($n = 25$) the self-regulation program. A control group of over ($n = 2,000$) students who were not participating in either of the coaching programs was also utilized. Students in the PAAL coaching program that focused on adaptive learning and preparing students for change consistently performed better in their academic performance at both the 12- and 18-month review compared to the non-coaching control students. The self-regulation participants also performed higher than the non-coaching control students, yet at a lower rate than the PAAL students (Franklin & Franklin, 2012). The research supports that students gain skills and academic success in participating in programs that provide specific attention to academic strategies and needs. Importantly, these coaching practices were co-coaching by peers utilizing

workbooks rather than individualized programming for student's specific needs or providing a pseudo-mentor on campus for the student to interact with and obtain guidance.

Field and colleagues (2010) explored the effectiveness of the Edge online coaching model, a program aimed to improve student's executive functions and related skills. Working with ($n = 127$) students with attention-deficit/hyperactivity disorder from eight universities and two community colleges across the U.S, they found the Edge coaching model impacted the students' self-regulation, executive functioning skills, and their well-being (Field, et al., 2010). Students' experienced more positive emotional states as a result of receiving academic coaching. Findings from this study also noted an increase in students' study skills, time management, and organizational abilities following participation in the academic coaching model (Field et al., 2010). This research shows that academic coaching is beneficial for special populations, as well as provides support for focusing on study strategies to benefit the students' academic success. This study also supports the emotional benefit of providing academic coaching support.

Robinson and Gahagan (2010) defined academic coaching as "a one-on-one interaction with a student focusing on strengths, goals, study skills, engagement, academic planning, and performance" (p. 27). Additionally, they describe the relationship between the coach and the students to be reflective of the student's strengths and supportive of the student's needed area of growth in academic strategies. The authors describe the coaching practice as a way to provide "students with an intentional way to reflect on their interests, academics, and goals, and implement plans while engaging in a process of integrative learning" (p. 27). The coaches have students complete "Academic Plans" and "Student Engagement Plans" to assist in the creation of realistic goals. Robinson and Gahagan claim that by helping students map out their engagement and academic performance, the program leads to learning, satisfaction, retention, and persistence

to degree completion. The three steps on which this model of academic coaching focuses includes self-assessment (defined as a way to gain baseline information and a starting point for conversations), reflection (defined as a way of coaches to ask open-ended questions to understand the student's interests, goals, and motivations), and goal-setting. The authors discuss that the focus of the sessions all include the self-assessment, reflection, and goal setting components to some degree, but the engagement or academic focus may vary based on the student's needs or student's status in college (i.e., academic probation student or first-semester freshmen student). The coaches work with the student by getting to know their interests and their background. A total of 182 academically deficient students participated in the academic program at their university, and 92% improved their GPA after the intervention (Robinson & Gahagan, 2010). Thus, the research helps promote self-assessment, reflection, and goal-setting, lending itself to self-authorship and increased buy-in and empowerment for students. This programs framework shows that individualized, one-on-one academic coaching benefits the students' academic success and retention at the university. This study is based on a small sample size and one academic semester's results. Thus this current study aims to increase the support for this style of academic coaching by utilizing a large sample size and evaluating a program at a mid-sized, urban research institution called Academic Coaching for Excellence (ACE).

Academic Coaching for Excellence (ACE). To provide a preventative measure to assist in academically at-risk students' academic success and retention, a new student support program has been implemented on some college campuses called Academic Coaching. Seen on such campuses as the University of Memphis, Miami University, the University of Cincinnati, the University of South Carolina, and Stanford University, academic coaching has been implemented for students who have fallen below academic good standing (i.e., below a 2.0 GPA)

their first semester of college. Academic coaching provides one-on-one academic and social support to students helping them to develop tools such as study skills, time management, and goal setting, while also serving as a bridge among available campus resources (SACSCOC, 2015). These individualized coaching sessions provide students with a personalized approach to help them navigate the cumbersome and often confusing college experience while mobilizing them towards academic success to retain them at the institution and keep them on their projected path towards degree completion.

This form of academic support emerged from the positive results found in student mentoring experiences. Specifically, these mentoring relationships showed that students who noted an effective experience with their mentor had better outcomes in and beyond college (Smith, 2009). The mentoring relationship can be recognized as very similar to academic coaching. Where mentoring is often major or career path specific, academic coaching has a broader approach offering the foundational tools to help the student navigate the college environment. Utilizing a collaborative approach, together the coach and the student can identify key barriers that impinge upon the student's academic success, evaluate the skill deficit and needs of the student, as well as provides a space for support and accountability. The combination of regular meetings with a coach, development of social and college cultural skills, and academic and personal support helps to increase the students' persistence and in turn improves their overall academic success.

The ACE program specifically pairs academically at-risk students with an academic coach for individual bi-weekly meetings throughout a semester time frame. Best practices for academic coaching requires the relationship first include an initial assessment to gauge the individual student's needs and personal experience. Second, the program assists in the

development of SMART (specific, measurable, action-oriented, realistic, time-framed) goals individualized to that student's needs are collaboratively made at the beginning and end of the semester. Third, ensure that sessions are regularly scheduled to establish the relationship and create a supportive and safe climate for the student. Fourth, provide feedback and self-reflection on the key learning experiences and achievements noted throughout the sessions to help build the student's motivation and self-concept (SACSCOC, 2015). These individualized coaching sessions provide a true person-center approach to working with the student.

An important component of the ACE program is that the academic coaching relationship serves as a connection on campus that provides the student with a safe space for seeking assistance and support. It is both remedial and preventative by providing a safety net for academically at-risk students, while also screening students for greater mental health concerns that may need to be addressed with additional resources on campus like the counseling center or disability resources for students. The academic coach can serve as a liaison to these campus resources that students may not be aware of, be comfortable reaching out for alone, or know are needed supports for their college journey.

Theoretical Implications of Academic Coaching

Student development is a long-studied concept that researchers have explored for decades (Holland, 1966; Sanford, 1966; Sanford, 1967; Tinto, 1975; Astin, 1984; Schlossberg, 1989; Bronfenbrenner, 1993; Réndon, 1994). One particular student development theory aligns with the work of academic coaching and the student growth seen throughout the coaching relationship: Nevitt Sanford's Challenge and Support Theory. This theory, applied to the person-centered framework developed by Carl Rogers (1957) utilized in academic coaching captures the

essence of the coaching experience. Both Sanford and Roger's work and their relationship to the ACE program will be explained in the following section.

Challenge and support theory. Sanford understood the college experience to be more than a time of academic pursuit, but also a significant time of personal development for the student. Sanford's work distinguished the difference between development and growth or change. He refers to change as an altered condition that may be either positive or negative and growth as an expansion that can be favorable or unfavorable to the individual's overall performance. Here, Sanford notes that development is the "organization of increasing complexity" and recognizes the positive growth process for the student as an integration of different experiences and influences into their student understanding (Sanford, 1967, p. 47). His early understanding of student development emphasized the need for balance between challenging students while supporting them to achieve optimal student growth (Sanford, 1967). This concept laid the foundation for student development theory and catapulted a new understanding of the college student experience.

Sanford describes challenge as a situation where a student does not possess the skills, knowledge, or attitude to cope effectively to manage the experience (Sanford, 1967). This challenge is seen for the student's recommended to academic coaching in their lack of academic skills, their ineffective ways of coping with the stress of college, external factors that impinge on their success, or their overall preparation for college. Sanford then described support as buffers in the environment which help students meet the challenge and learn to navigate it successfully (Sanford, 1967). This support is the academic coach found in the coaching program who works with the student to increase their academic toolbox, learn ways to effectively cope with the demands of college, establish problem solving strategies, or aid in their decision making. Sanford

posits that the amount of challenge that a student can endure is related to the amount of support available (Sanford, 1966). With this in mind, Patton and colleagues note that universities must provide the supports for diverse student population needs to meet the challenges posed by academics, socially, or work dynamics that students encounter during their college tenure to aid in academic success and student retention (Patton, et al., 2016). One way of doing this is through implementing an academic coaching program to work one-on-one with the students based on their individualized needs.

Person-centered framework. Carl Rogers' person-centered framework highlights three components to the helping relationship that the helper embodies: genuineness, unconditional positive regard, and empathy. Rogers described genuineness as the helper's accurate representation of their truest self within the session with the client or the student. Unconditional positive regard refers to the helper's ability to accept the client or student's experiences as being an integral part of their existence. Then finally, empathy, which Rogers describes as the helper's ability to experience the client or student's awareness of their experiences as their own (Rogers, 1957). These three conditions that the helper possesses and brings into the client or student relationship has laid the groundwork for the counseling profession (Kirshchenbaum, 2004).

This person-centered approach is non-directive, meaning that the client or student leads the helper based on their individual needs (Rogers & Carmichael, 1942). This works well in academic coaching as the coach recognizes that students end up academically at-risk based on a myriad of factors that are unique to their own story. Thus, working with the student to identify what has caused academic hardship is important to establishing the building blocks to move them towards academic success. The person-centered framework also focuses on empowering and motivating the client or student within the relationship (Rogers & Carmichael, 1942). This

perspective is powerful when applied to the student population that attends academic coaching because the coach focuses on strengths the student possesses rather than the weaknesses as they move forward within the coaching relationship. The ACE program is preventive in the hope of increasing student academic success and preventing student drop out. This means that the collaborative relationship established between coach and student is key to fostering success.

Conclusion and Study Significance

The review of the literature suggests that few studies have explored coaching with undergraduate students and there remains a need for further evidence to explore how academic coaching benefits academically at-risk undergraduate students. Evidence of differences of experiences with academic coaching also lacks about specific student demographics such as academic preparedness, first-generation status, race/ethnicity, SES, gender, and age. Also, an exploration of differences based on part-time or full-time enrollment status has been to date, absent. Although the implementation of academic coaching on college campuses is growing as a student support program, this study is one of the first to explore the effectiveness of an academic coaching program that is an on-campus, one-on-one, retention program for academically at-risk undergraduate students, while specifically looking at student demographics and high school performance to better explain the benefits of the program as a whole.

The purpose of this study was to determine the effectiveness of the Academic Coaching for Excellence (ACE) program at a mid-sized, urban research university in the southeastern United States with academically at-risk first-year students. The study aimed to add to the literature by exploring how student demographic variables, enrollment status, and high school performance explains academic success, persistence, and retention with academically at-risk students who participated in academic coaching. By addressing this gap in the literature and

eliciting information specifically relevant to academically at-risk first-year students, it was anticipated that specific areas of concern regarding students' academic success, persistence and retention can be identified and subsequently addressed before continued academic struggle or drop out occurs.

Chapter 3

Methodology

Introduction

The purpose of this study was to determine the effectiveness of the Academic Coaching for Excellence (ACE) program at a mid-sized, urban research university in the southeastern United States with academically at-risk first-year students. A cohort-based archival dataset of students within their first 59 credit hours and on academic warning from Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters were analyzed for this purpose. Information from this study may be used to assist in the development of academic coaching programs within higher education to work with academically at-risk student populations.

Given this purpose, a single research question drove this work: What is the effectiveness of the Academic Coaching for Excellence program on students' academic success and retention? From this general research question, the following study-specific research questions were examined:

- (1) How do students on academic warning who did not attend academic coaching sessions compare to students who did participate in academic coaching sessions in terms of academic success, persistence, and retention?
- (2) How do student demographics (first-generation status, race, SES, gender, age), enrollment status (full time, part time), high school performance (high school GPA and ACT score), and number of academic coaching sessions explain student academic success for students who participated in the academic coaching program?
- (3) How do student demographics (first-generation status, race, SES, gender, age), enrollment status (full time, part time), high school performance (high school GPA

and ACT score), and number of academic coaching sessions predict student persistence and retention who participated in academic coaching?

Research Design

The study analyzed archival data that came from a cohort-based, nonequivalent groups post-tests design. There were five semester cohorts in the dataset. All students in the dataset qualified to attend academic coaching due to their “academic warning” standing and having completed under 59 credit hours; however, students essentially self-selected into the treatment group by attending academic coaching sessions or not attending.

Participants

The study analyzed data that were collected from academically at-risk undergraduate students referred to the ACE program at the University. This study analyzed archival cohort based data obtained from the referred students during the Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters. The sample was composed of students on “academic warning”, meaning they have fallen below a 2.00 GPA their previous academic semester (CARES, 2017). These students were identified by the Center for Academic Retention and Enrichment Services (CARES) office at the university upon review of their transcripts following the students’ previous semester of courses (M. Brignole, personal communication, October 10, 2017).

Overall sample. The total sample consisted of 1,440 students. The largest semester of students referred to academic coaching was the Spring 2017 cohort ($n = 523$) and the smallest was Fall 2015 ($n = 111$). Of the referred students, 24% ($n = 344$) attended zero academic coaching sessions, 43% ($n = 618$) attended between one and four coaching sessions, and 33% ($n = 478$) students attended five or more sessions. The sample size consisted of 50.5% ($n = 727$)

men and 49.5% ($n = 713$) women and 93.5% ($n = 1346$) were traditional age (under 25 years old) and 6.5% ($n = 94$) non-traditional age (25 years old and over). There were 44.1% ($n = 635$) students considered first-generation college students, 53.3% ($n = 767$) having at least one parent with a college or beyond degree, and 2.6% ($n = 38$) missing information on parents' education. In regard to socioeconomic status, 68.1% ($n = 980$) were Pell-Grant recipients and 31.9% ($n = 460$) were non-Pell Grant recipients. There were 55.8% ($n = 804$) of students in the sample identified black or African American, 34.6% ($n = 498$) as white, with the 9.6% identifying as other ($n = 138$) (Asian, mixed race American Indian, Native Hawaiian, Pacific Islander, or unknown). Of the ($n = 1440$) students, 80.9% ($n = 1165$) were full-time students indicated by their attempt of 12 or more academic credit hours in the intervention semester and 19.1% ($n = 275$) were considered part-time students with 11 or fewer academic credit hours.

These demographics were broken down by semester in Table 1. It should be noted that the University's enrollment is close to 60% non-underrepresented racial minority students and that this sample is over-represented by racial minority students.

Table 1. Overall Sample Demographics by Semester.

Semester	Sample	Gender	Age	Generation Status	SES	Race	Enrollment Status
Spring 2015	$n = 352$	Female: 48.01% ($n = 169$)	Traditional: 94.60% ($n = 333$)	First-Gen: 47.16% ($n = 166$)	Pell Grant: 66.19% ($n = 233$)	White: 42.614% ($n = 150$)	Full Time: 82.67% ($n = 291$)
		Male: 51.99% ($n = 183$)	Non-Traditional: 5.40% ($n = 19$)	Non-First Gen: 50% ($n = 176$)	Non-Pell Grant: 33.81% ($n = 119$)	Black: 48.864% ($n = 172$)	Part Time: 17.33% ($n = 61$)
				Unknown: 2.84% ($n = 10$)		Other: 8.522% ($n = 30$)	

Table 1. Overall Sample Demographics by Semester. (Continued)

Semester	Sample	Gender	Age	Generation Status	SES	Race	Enrollment Status
Fall 2015	<i>n</i> = 111	Female: 53.15% (<i>n</i> = 59)	Traditional: 89.19% (<i>n</i> = 99)	First-Gen: 47.75% (<i>n</i> = 53)	Pell Grant: 66.67% (<i>n</i> = 74)	White: 31.53% (<i>n</i> = 35)	Full Time: 84.68% (<i>n</i> = 94)
		Male: 46.85% (<i>n</i> = 52)	Non-Traditional: 10.81% (<i>n</i> = 12)	Non-First Gen: 50.45% (<i>n</i> = 56)	Non-Pell Grant: 33.33% (<i>n</i> = 37)	Black: 60.36% (<i>n</i> = 67)	Part Time: 15.32% (<i>n</i> = 17)
Spring 2016	<i>n</i> = 227	Female: 44.49% (<i>n</i> = 101)	Traditional: 95.15% (<i>n</i> = 216)	First-Gen: 38.77% (<i>n</i> = 88)	Pell Grant: 66.52% (<i>n</i> = 151)	White: 33.04% (<i>n</i> = 75)	Full Time: 85.90% (<i>n</i> = 195)
		Male: 55.51% (<i>n</i> = 126)	Non-Traditional: 4.85% (<i>n</i> = 11)	Non-First Gen: 58.59% (<i>n</i> = 133)	Non-Pell Grant: 33.48% (<i>n</i> = 76)	Black: 54.63% (<i>n</i> = 124)	Part Time: 14.10% (<i>n</i> = 32)
Fall 2016	<i>n</i> = 227	Female: 56.83% (<i>n</i> = 129)	Traditional: 90.31% (<i>n</i> = 205)	First-Gen: 37.89% (<i>n</i> = 86)	Pell Grant: 63.44% (<i>n</i> = 144)	White: 36.56% (<i>n</i> = 83)	Full Time: 76.65% (<i>n</i> = 174)
		Male: 43.17% (<i>n</i> = 98)	Non-Traditional: 9.69% (<i>n</i> = 22)	Non-First Gen: 58.59% (<i>n</i> = 133)	Non-Pell Grant: 36.56% (<i>n</i> = 83)	Black: 55.51% (<i>n</i> = 126)	Part Time: 23.35% (<i>n</i> = 53)
Spring 2017	<i>n</i> = 523	Female: 48.76% (<i>n</i> = 255)	Traditional: 94.26% (<i>n</i> = 493)	First-Gen: 46.272% (<i>n</i> = 242)	Pell Grant: 72.28% (<i>n</i> = 378)	White: 29.64% (<i>n</i> = 155)	Full Time: 78.59% (<i>n</i> = 411)
		Male: 51.24% (<i>n</i> = 268)	Non-Traditional: 5.74% (<i>n</i> = 30)	Non-First Gen: 51.434% (<i>n</i> = 269)	Non-Pell Grant: 27.72% (<i>n</i> = 145)	Black: 60.23% (<i>n</i> = 315)	Part Time: 21.41% (<i>n</i> = 112)

Procedure

Description of program. The Academic Coaching for Excellence (ACE) program was an academic intervention designed to work with academically at-risk students. The students who were referred to this program were all considered on “academic warning” at the University, which means that the student’s previous semester GPA was below a 2.0 (Center for Academic Retention and Enrichment Services, 2017). The students were then referred to the ACE program at the University to attend bi-weekly coaching sessions with an academic coach who is either a graduate assistant or intern for the ACE program. All coaches were graduate students in counseling, social work, higher education, or related fields. The coaching sessions last approximately 45 minutes. Coaches and students met in a one-on-one setting in the ACE office on the university’s campus, where they focus on the student’s strengths, goals, study skills, engagement, academic planning, and overall college performance (Southern Association of Colleges and Schools Commission on Colleges [SACSCOC], 2015). The intervention was collaborative and individualized to the students’ specific needs. The purpose of the program was to move the students towards academic success to assist in degree completion.

Recruitment. The students on “Academic Warning” following their first semester at the University received an email notification from the CARES office at the University to their University email address informing them of their academic standing status. In this email, the students were informed of their requirement to participate in the ACE program in the next semester. The students then received a follow-up email from the ACE director informing them of the available time options for the students to sign up to meet with an academic coach to begin the retention intervention. ACE was considered the first safety net of support to help increase the students’ academic success towards their degree completion.

Data collection. For the purpose of this study, a secondary analysis of archival quantitative data was utilized to perform a program evaluation of the ACE program. The ACE program director was able to track the students' progression through the number of academic coaching sessions by confirming the number of completed appointments on a software-program called Appointment-Plus. Appointment-Plus is an Internet-based appointment organizing program that the academic coaches used throughout the intervention semester to schedule their academic coaching sessions with their students and then the academic coaches confirmed their attendance after the appointment concluded. If the student did not attend the scheduled appointment, then the academic coach would mark this as a "no show" in the computer system. This tracking system was then exported to the program director's master student database; thus, providing the total number of academic coaching sessions a student attended during the intervention semester in correspondence with the student's University Identification number (UUID). Students' academic information such as previous semester GPA, intervention semester GPA, full-time or part-time status, and attempted and earned academic credit hours for the intervention semester were collected at the conclusion of the students' academic warning semester. Additionally, student personal demographics were also collected including race, gender, age, Pell-Grant funding, parents' education, high school GPA, and ACT score. Upon the completion of the Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters, the data was then de-identified before provided to the researcher. The ACE program director provided a letter of agreement to allow the researcher to utilize the dataset for program evaluation of the ACE program for academic purposes. An Institutional Review Board determination was obtained before analysis of the dataset.

Data Analysis Plan

The overarching research question pertained to the effectiveness of the ACE program in terms of students' academic success, persistence, and retention. This section addresses the method of data analysis for the three specific research questions. Each question has its subsection below.

Research question one. The first specific research question asked how students on academic warning who did not attend academic coaching sessions compare to students who did participate in academic coaching sessions in terms of success, persistence, and retention. Three Pearson's chi-square tests and one repeated measures ANOVA were used to answer the first research question. The first Pearson's chi-square test compared students who participated in coaching sessions versus students who did not participate in coaching sessions and whether their end of semester GPA was a 2.00 or greater. To compare the change in mean GPA of those who participated and those who did not participate in academic coaching, a repeated measures ANOVA was run. The second test compared students who participated in coaching sessions versus students who did not participate in coaching sessions and retention. The third test compared students who participated in coaching sessions versus students who did not participate in coaching sessions and percent of credit hours earned (broken down into 0-25%, 26%-50%, 51%-75%, and 76%-100% groupings) The threshold for the phi effect size was 0.1 (small), 0.3 (medium), 0.5 (large) (Cohen, 1988). Each chi-squared was run separately for full-time and part-time students.

Research question two. The second specific research question asked how student demographics (i.e., first-generation status, race, SES, gender, age), enrollment status (i.e., full time, part time), high school performance (i.e., high school GPA, ACT score), and number of

academic coaching sessions explained student academic success for students who participated in the academic coaching program. Multiple linear regression was used to answer the first component of research question two. In the linear regression model, student GPA at the end of the semester in which they participated in academic coaching was the response variable. Of specific interest was the regression coefficient for the actual count of the number of academic coaching sessions that the students attended, which was utilized to assess how much the students' GPA changes per session attended. Assumptions of linearity of relationships and normality and homoscedasticity of residuals were evaluated. The researcher also assessed for multicollinearity. Both R^2 and standardized regression coefficients were used to evaluate the practical significance (i.e., effect size) of statistically significant results.

To answer the second component of research question two, a logistic regression was utilized. For the logistic regression outcomes, students were classified by their end-of-semester GPA for the semester in which coaching took place, students with a GPA less than 2.00 and students with a GPA greater than or equal to a 2.00. In this model, the number of sessions the student attended were dichotomized into students that attended less than five academic coaching sessions and students who attended five or more academic coaching sessions. This provided the researcher with an odds ratio for evaluating the current practice of recommending five or more coaching sessions to be academically successful. The logistic regression was run separately for full-time and part-time students.

Research question three. The third specific research question asked how student demographics (i.e., first-generation status, race, SES, gender, age), enrollment status (i.e., full time, part time), high school performance (i.e., high school GPA, ACT score), and number of academic coaching sessions predicted student persistence and retention for those who

participated in the academic coaching program. To answer research question three, a logistic regression was utilized. In this model, the response variable was whether students returned to the university the semester following the completion of the coaching sessions. Similar to the logistic regression model for question two, the number of sessions the student attended was dichotomized into students that attended less than five academic coaching sessions and students who attended five or more academic coaching sessions. This provided an odds ratio for evaluating the current practice of recommending five or more coaching sessions to be academically successful. The logistic regression was run separately for full-time and part-time students.

Assumptions Regarding the Program and Resulting Data

As previously mentioned, the following assumptions were noted in the study:

- (1) The sample of academically at-risk students who participated in the Academic Coaching for Excellence (ACE) program during spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters had accurate academic data inputted by instructors representing their grade point averages.
- (2) The sample of academically at-risk students who participated in the Academic Coaching for Excellence (ACE) program during Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters answered each question upon admittance to the University honestly.
- (3) The sample of academically at-risk students who participated in the Academic Coaching for Excellence (ACE) program during the Spring 2015, Fall 2015, Spring 2016, Fall 2016, and Spring 2017 semesters were properly tracked for number of

sessions attended by the academic coaches inputting the session into Appointment-Plus and then recorded by the director of the ACE program.

Limitations

The following limitations were present in this study:

- (1) The sample is not representative of the population of all academically at-risk undergraduate students in all academic coaching programs. Only students at one, mid-sized, metropolitan research university in the southeastern United States, were utilized in the data.
- (2) Although there are training and a coaching manual, students' needs vary. Academic coaches are given autonomy within the academic coaching sessions to assist their students as needed, thus not creating a standardized approach to the intervention.
- (3) The sample of students self-selected data into the intervention.
- (4) The demographic data provided is not all-inclusive. Based on the available coding procedure, the data does not have Hispanic students individually represented as its own population category. Additionally, due to the small sample size for non-white and non-black students, the category of other was utilized to include Asian, mixed-race American Indian, Native Hawaiian, Pacific Islander, or unknown.

Definition of Terms

The definition of terms originally provided in Chapter 1 is copied here to assist the reader.

- (1) Academically at-risk students: College students who are referred to the Academic Coaching for Excellence program at the University due to their previous semester's grade point average falling below 2.00 and considered on academic warning.

- (2) Academic success: Semester grade point average has increased to a 2.00 or above.
- (3) Academic warning: Students at the University who have fallen below “Good Standing” after completing a minimum of seven hours of coursework with an overall combined GPA is below a 2.00 (Center for Academic Retention and Enrichment Services, 2017).
- (4) Academic Coaching for Excellence (ACE): A one-on-one intervention program designed to work with academically at-risk students to focus on their strengths, goals, study skills, engagement, academic planning, and overall college performance (SACSCOC, 2015).
- (5) Coaching sessions: A session is considered a recorded meeting time between student and academic coaching at the ACE program office.
- (6) First-generation college student (FGCS): The definition for FGCS used for this study is a student whose parents have not obtained a post-secondary degree (CollegeBoard, 2017; K. Nixon, personal communication, August 31, 2017; First Scholars, 2016).
- (7) Retention: Student is enrolled and completes the following semester at the University following the intervention semester.
- (8) Persistence: The student’s earned hours completed towards their academic degree in the intervention semester.
- (9) Non-traditional/traditional student: The non-traditional student is considered 25 years or over, whereas traditional student is under the age of 25 (Musu-Gillette, et al., 2017).
- (10) Pell Grant/Non-Pell Grant: Students are identified as Pell Grant recipients when they are receiving financial assistance based on their financial need and estimated family

contribution. Students are considered Non-Pell Grant recipients if their financial need or estimated family contribution is too high based on the formula of the student's estimated family contribution, combined with the cost of the student's institution and enrollment status such as full-time or part-time (Federal Student Aid, 2017b).

Chapter 4

Results

This chapter presents the statistical analyses for each of the three research questions. It is divided into the following four sections: (a) description of the participants, (b) academic performance findings, (c) academic course progression findings, and (d) university retention findings. All statistical analyses in this chapter were performed with IBM SPSS Statistics 24.

Participants

The participants for this study were students on academic warning within their first 59 credit hours of college. The total sample was 1,440 students; 81% ($n = 1165$) were full-time students and 19% ($n = 275$) were part-time students. Descriptive statistics were run to summarize the student variables in terms of participation status in academic coaching to better understand the academic warning population at this institution. Some observable differences between both the part-time and full-time students exist.

Of the full-time students on academic warning who participated in academic coaching, more students identified as Federal Pell-Grant recipients, Black (as compared to White or Other), traditional age (under 25 years old), and non-first-generation college students. For full-time students who participated in academic coaching, the average ACT composite score was 20.88 ($SD = 3.569$), which equates to approximately the 50th percentile in ACT scoring. Their average high school GPA was 3.04 ($SD = .466$), and average previous college term GPA was .993 ($SD = .661$). For the full-time students who were on academic warning and who did not participate in academic coaching, the average ACT composite score was 20.10 ($SD = 3.515$), average high school GPA was 2.948 ($SD = .471$), and average previous college term GPA was .791 ($SD = .652$). This indicates that full-time students on academic warning within their first 59 credit hours

of college at this particular institution are likely low SES, Black, traditional age, and non-first-generation college students. Additionally, the academic variables were similar between those students who participated and those who did not in terms of high school academic indicators. An average difference of .202 in previous semester GPA was evidenced between the students who participated in academic coaching and those who did not.

Of the part-time students on academic warning who participated in academic coaching, more students identified as Federal Pell-Grant recipients, Black (as compared to White or other), and traditional age (under 25 years old). For part-time students who participated in academic coaching, the average ACT composite score was 19.68 (SD = 3.344), similar to the full-time students. Their average high school GPA was 2.852 (SD = .557) and average previous college term GPA was .715 (SD = .666). These differences also held true for those part-time students who did not participate in academic coaching and also included gender differences, where more part-time male students chose not to participate in academic coaching than female students. The students' academic variables indicated the average ACT composite score was 19.68 (SD = 3.342), average high school GPA was 2.816 (SD = .565), and average previous college term GPA was .623 (SD = .656). This indicates that part-time students on academic warning within their first 59 credit hours of college are likely low SES, Black, and traditional age. Additionally, the academic variables are comparable to those students who participated and those who did not, indicating that part-time students on academic warning likely fall into similar academic benchmarks.

Table 2. Descriptive Statistics for Student Variables by Enrollment and Participation Status

Variable	Part-Time Students		Full-time Students	
	Participated	Did Not Participate	Participated	Did Not Participate
SES (Pell Grant Recipients)	74.1% (<i>n</i> = 140)	64% (<i>n</i> = 55)	66.7% (<i>n</i> = 605)	69.8% (<i>n</i> = 180)
Gender (Females)	58.2% (<i>n</i> = 110)	47.7% (<i>n</i> = 41)	49.9% (<i>n</i> = 453)	42.2% (<i>n</i> = 109)
First-Generation Status	52.4% (<i>n</i> = 99)	46.5% (<i>n</i> = 40)	42.6% (<i>n</i> = 386)	42.6% (<i>n</i> = 110)
Traditional	79.9% (<i>n</i> = 151)	82.6% (<i>n</i> = 71)	96.8% (<i>n</i> = 878)	95.3% (<i>n</i> = 246)
Race - White	26.5% (<i>n</i> = 50)	24.4% (<i>n</i> = 21)	36.9% (<i>n</i> = 335)	35.7% (<i>n</i> = 92)
Race - Black	67.2% (<i>n</i> = 127)	68.6% (<i>n</i> = 59)	52.9% (<i>n</i> = 480)	53.5% (<i>n</i> = 138)
Race - Other	5.8% (<i>n</i> = 11)	7% (<i>n</i> = 6)	8.5% (<i>n</i> = 77)	8.5% (<i>n</i> = 22)
ACT Score	19.68 (3.344)	19.68 (3.342)	20.88 (3.569)	20.10 (3.515)
HS GPA	2.852 (.557)	2.816 (.565)	3.04 (.466)	2.948 (.471)
Previous Term GPA	.715 (.666)	.623 (.656)	.993 (.661)	.791 (.652)
Coaching Term GPA	1.47 (1.145)	.871 (1.116)	1.517 (1.116)	.834 (.988)
Number of Coaching Sessions	3.84 (1.812)	-	4.17 (1.888)	-

Academic Performance

Change in GPA. A two-way repeated measures ANOVA was conducted to compare the effect of student participation in academic coaching for full-time students on mean semester GPA, using the semester GPA prior to the academic coaching intervention and the academic coaching intervention semester GPA. Partially due to the inequality in group sample sizes, the assumption of equality of covariance matrices was not met, $F(3, 3350706) = 2.609, p = .050$. A square-root transformation of GPA was used in order to retain the observations for students with a zero GPA in either semester. This transformation resulted in meeting the assumption of the equality of covariance matrices, $F(3, 3350706) = 1.357, p = .254$. There was a significant interaction effect of full-time students' participation status and mean semester GPA, Pillai's Trace = .028, $F(1, 1161) = 33.408, p = .000$. The partial eta-squared effect size for the

interaction was .03 for the non-transformed data and .003 for the transformed data, both indicating a very small effect. There was a significant effect for participation status, $F(1, 1161) = 83.414, p = .000$. The effect size estimate for participation status (for both the transformed and non-transformed data) indicated that approximately 6.7% of the variation in GPA was explained by participation, with those participating having a higher GPA. There was a significant difference between the mean semester GPA for those full-time students that participated in academic coaching between the prior semester GPA and the academic coaching intervention semester GPA. The average semester GPA for both the students who participated and those who did not participate were higher in the intervention semester. However, on average, those students who participated in coaching saw a greater increase in GPA (.686 higher) than those who did not participate (See Table 3 and Figure 1).

Table 3. Means and Standard Deviations for Term and Participation Status for Full-Time Students

	Participated in Coaching	Did Not Participate in Coaching
Prior Term GPA	.993 (.022)	.791 (.041)
Intervention Term GPA	1.520 (.036)	.834 (.068)

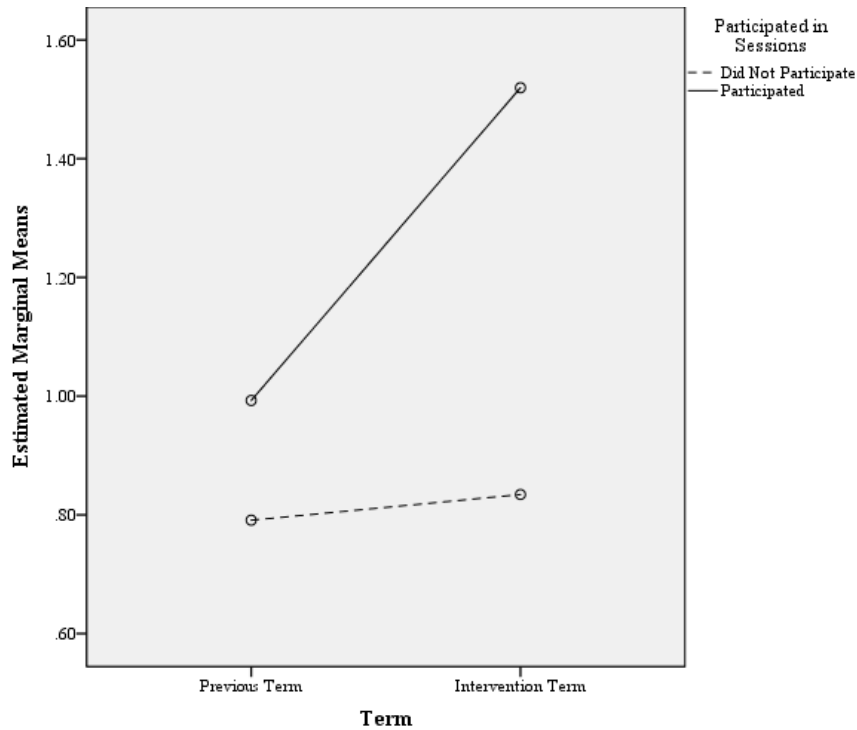


Figure 1. Interaction Plot for Term and Participation Status for Full-Time Students

A two-way repeated measures ANOVA was conducted to compare the effect of student participation in academic coaching for part-time students on mean semester GPA, using the semester GPA prior to the academic coaching intervention and the academic coaching intervention semester GPA. The assumption of equality of covariance matrices was met, $F(3, 606923) = 3.727, p = .297$. There was a significant interaction effect regarding part-time students' participation status on mean term GPA, Pillai's Trace = 0.32, $F(1, 273) = 9.022, p = .003$. The partial eta-squared effect size for the interaction was .032, indicating a very small effect. There was a significant effect for participation status, $F(1, 273) = 15.420, p = .000$. The effect size for participation status indicated that 5.3% of the variation in GPA was explained by participation, with those participating having a higher GPA. The average semester GPA for both

the students who participated and those who did not participate were higher in the intervention semester. However, on average, those students who participated in coaching saw a greater increase in GPA (.595 higher) than those who did not participate (See Table 4 and Figure 2).

Table 4. Means and Standard Deviations for Term and Participation Status for Part-Time Students

	Participated in Coaching	Did Not Participate in Coaching
Prior Term GPA	.715 (.048)	.623 (.071)
Intervention Term GPA	1.466 (.083)	.871 (.122)

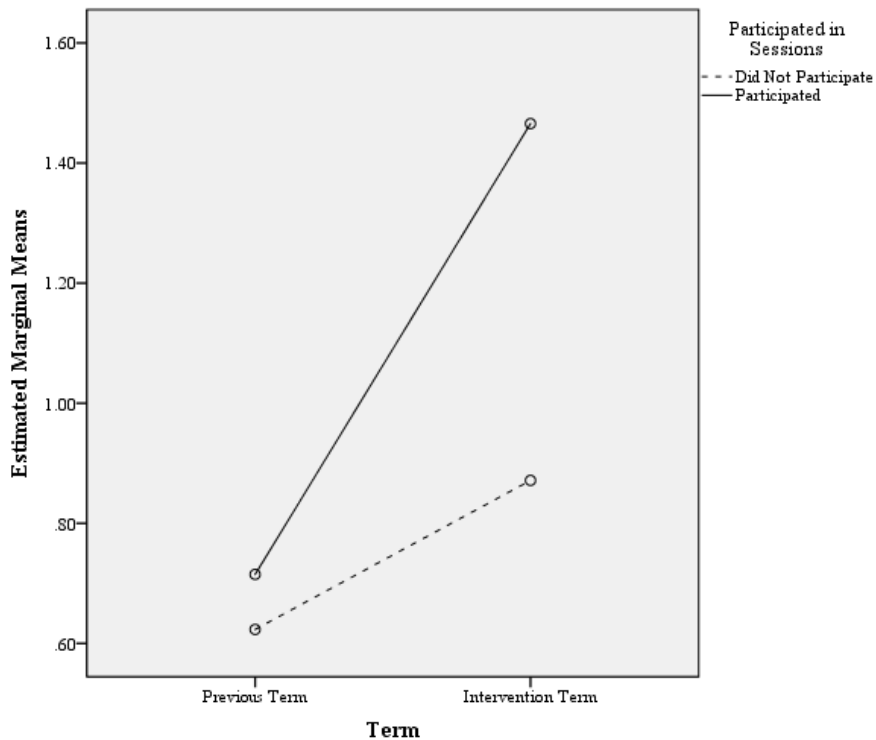


Figure 2. Interaction Plot for Term and Participation Status for Part-Time Students

Academic success. A chi-square test was performed to assess the relationship between academic success and participation in the academic coaching program for full-time students. The

assumption that each cell has an expected count greater than or equal to five was met, as the minimum expected count was 87.25. A significant relationship was found, $\chi^2 (1, N = 1165) = 41.617, p = .000$. Full-time students who participated in academic coaching were more likely to have an academic coaching semester GPA of at least a 2.00 or higher (38.6%) as compared to those who did not participate in academic coaching (17.1%). Cramer's phi (.189) indicates this was a small effect.

A chi-square test was also performed to assess the relationship between academic success and participation in the academic coaching program for part-time students. The assumption that each cell has an expected count greater than or equal to five was met, as the minimum expected count was 29.71. A significant relationship was found, $\chi^2 (1, N = 275) = 12.086, p < .001$. Part-time students who participated in academic coaching were more likely to have an academic coaching semester GPA of at least a 2.00 or higher (41.3%) as compared to those who did not participate in academic coaching (19.8%). Cramer's phi (.21) indicates this too was a small effect.

A multiple linear regression analysis was conducted to examine the relationship between academic success and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) for full-time students who participated in the program (defined as attending at least one coaching session). Most of the assumptions were verified using residual plots. A histogram showed that the residuals follow an approximately normal distribution ($n = 813$). The residual versus predicted plot indicated a random pattern for a scatterplot of residuals versus predicted values. There was one participant who attended 12 academic coaching sessions that was an outlier to the scatterplot. Multicollinearity was met by all variance inflation factors being less than 10. There were no outliers with the standard residual between - 2.603 and 2.982.

The test for the overall model was significant, $F(9, 825) = 23.673, p = .000$.

Approximately 20% of the variation in coaching term GPA was explained by the variables in the model. As seen in Table 5, three variables were significantly related to coaching term GPA. The number of academic coaching sessions was positively correlated with GPA. For the number of academic coaching sessions, full-time students have an average GPA increase of .237 for each session attended. GPA was negatively correlated with SES, indicating students who receive Federal Pell-Grant tend to earn .3 lower GPA compared to their non-Pell-Grant student counterparts participating in academic coaching. GPA was negatively correlated with age, indicating students under 25 years old (traditional students) tend to earn .634 lower GPA compared to their non-traditional counterparts participating in academic coaching.

Table 5. Regression Coefficients for Part-Time and Full-Time Models

	Part-Time Model			Full-Time Model		
	Unstd. B	Std. Error	t	Unstd. B	Std. Error	t
Intercept	1.156	-	-	1.389	-	-
Gender	-.049	.197	-.251	.092	.074	1.249
Under 25 Years Old	-.500	.269	-1.856	-.634**	.199	-3.186
First Generation Student	.023	.195	.119	-.058	.074	-.787
Race: Black	-.134	.261	-.515	-.203	.089	-2.279
Race: Other	-.236	.438	-.539	-.027	.133	-.200
Pell Grant Recipient	-.549*	.239	-2.294	-.300**	.085	-3.506
HS GPA	.099	.197	.503	.076	.080	.948
Composite ACT Score	.007	.034	.196	-.009	.012	-.719
Number of Coaching Sessions	.214**	.053	4.056	.237**	.019	12.755

Note: * indicates significant at .05, ** indicates significant at .01

A multiple linear regression analysis was conducted to examine the relationship between academic success and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) for part-time students who participated in the program (defined as attending at least one coaching session). Most of the assumptions were verified using residual plots. A histogram showed that the residuals approximately follow a normal distribution. The residual versus predicted plot indicated a random pattern for the scatterplot of residuals versus predicted values. Multicollinearity was not an issue as all variance inflation factors were less than 10. There were no outliers, and the standard residuals being between -1.805 and 2.043.

The test for the overall model was significant, $F(9, 120) = 3.378, p = .001$. Approximately 20% of the variation in coaching term GPA was explained by the variables in the model. As seen in Table 5 only two variables were significantly related to coaching term GPA. The number of academic coaching sessions was positively correlated with GPA. For the number of academic coaching sessions, part-time students have an average GPA increase of .214 for each session attended. GPA was negatively correlated with students' SES, indicating students who receive Federal Pell-Grant tend to earn .55 lower GPA points compared to their non-Pell-Grant student counterparts participating in academic coaching.

A logistic regression analysis was performed on academic success (defined as the intervention semester GPA being at least a 2.00) as the outcome and the number of sessions (defined as five or more sessions attended) and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) as the predictors for full-time students that participated in the program. The likelihood ratio chi-square of 114.037 ($df = 9$) with a $p = .000$ which indicates that some of the variables in the model are important for explaining academic success. The model is correct 66.7% of the time in classifying students as academically

successful. As seen in Table 6, two predictor variables were significant indicators of academic success, students' SES and the number of academic coaching sessions. For dichotomous predictor variables such as these, when the odds ratio is greater than 1, the reference group was more likely to have a coaching semester GPA of at least a 2.00. When the odds ratio is less than 1, the reference group was less likely to have a coaching semester GPA of at least a 2.00. Hence, Federal Pell Grant recipients were .542 less likely to have a coaching semester GPA of at least a 2.00 than non-Pell Grant recipients. Similarly, the students who attended five or more sessions were almost 4 times (3.923) as likely to have coaching semester GPA of at least a 2.00 as those who attended fewer academic coaching sessions.

Table 6. Summary of Logistic Regression Analysis for Variables Predicting Academic Success for Part-Time and Full-Time Students

	Part-Time Students				Full-Time Students			
	B	S.E.	Wald	Odds Ratio	B	S. E.	Wald	Odds Ratio
Gender	-.045	.407	.012	.956	.192	.166	1.341	1.211
Under 25 Years Old	-.785	1.081	.528	.456	-.775	.720	1.159	.460
First Generation Student	.116	.405	.082	1.123	-.228	.168	1.851	.796
Race: Black	-.613	.513	1.427	.542	-.177	.198	.801	.838
Race: Other	-1.209	.910	1.764	.298	.400	.296	1.823	1.491
Pell Grant Recipient	-.692	.483	2.049	.501	-.612	.187	10.657**	.542
HS GPA	.141	.455	.096	1.151	.196	.190	1.071	1.217
Composite ACT Score	-.029	.071	.164	.971	.004	.027	.019	1.004
Number of Coaching Sessions	.765	.400	3.661	2.148	1.367	.156	76.882**	3.923

Note: * indicates significant at .05, ** indicates significant at .01

A logistic regression analysis was performed on academic success (defined as the intervention semester GPA being at least a 2.00) as the outcome and the number of sessions (defined as five or more sessions attended) and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) as the predictors for part-time students that participated in the program. The likelihood ratio chi-square of 10.958 ($df=9$) with a p -value of .279 indicated that the model as a whole does not fit well. The model was correct 66.9% of the time in classifying students as academically successful. Based on the p - values ratio, none of the predictor variables were significant (see Table 6).

Academic Course Progression

Course Credit Persistence. A chi-square test was performed to assess the relationship between participation in academic coaching and percentage of earned hours for full-time students on academic warning. The assumption that each cell had an expected count greater than or equal to five was met, as the minimum expected count was 31.00. A significant relationship was found, $\chi^2(3, N = 1165) = 75.230, p = .000$. Full-time students who participated in academic coaching were more likely to earn 76 - 100% of their credit hours (41.5%) as compared to those on academic warning who did not participate in academic coaching (19%). Additionally, full-time students on academic warning who did not participate in academic coaching were more likely to earn only 0 - 25% of their credit hours (58.1%) compared to those who participated in academic coaching (29.8%). Cramer's phi (.254) indicated this was a small effect.

A chi-square test was performed to assess the relationship between participation in academic coaching and percentage of credit hours earned for part-time students on academic warning. The assumption that each cell had an expected count greater than or equal to 5 was met, as the minimum expected count was 11.26. A significant relationship was found, $\chi^2(3, N = 275)$

= 20.946, $p = .000$. Part-time students on academic warning who participated in academic coaching were more likely to earn 76 - 100% of their credit hours (43.4%) as compared to those who did not participate in academic coaching (20.9%). Additionally, part-time students on academic warning who did not participate in academic coaching were more likely to earn only 0 - 25% of their credit hours (50%) compared to those who participated in academic coaching (28%). Cramer's phi (.276) indicated this was a small effect.

An ordinal regression analysis was performed on persistence in the percentage of earned course credit hours during the intervention semester as the outcome and the number of sessions (defined actual session count) and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) as the predictors for full-time students on academic warning who participated in academic coaching. The likelihood ratio chi-square of 170.225 ($df = 9$) with a $p = .000$ indicated that some of the variables in the model are important for explaining course credit persistence. The ACT composite score, number of sessions, SES, and age were all significant. The ACT composite score was negatively correlated with the percentage of earned course credit hours, but the odds ratio of .95 indicates a negligible effect. The number of academic coaching sessions was positively correlated with the percentage of earned course credit hours. As the number of academic coaching sessions increased, full-time students on academic warning had a higher likelihood of completing more academic credit hours, with an odds ratio of 1.55 indicating a small effect size. The percentage of earned course credit hours was negatively correlated with SES, indicating full-time students who receive Federal Pell Grant tended to earn fewer course credit hours compared to their non-Pell Grant student counterparts who participated in academic coaching, with an odds ratio of .49 indicating a large effect size. The percentage of earned course credit hours was negatively correlated with age,

indicating full-time traditional students (those under 25 years old) tended to earn fewer course credit hours than their non-traditional student (at least 25 years old) counterparts who participated in academic coaching, with an odds ratio of .11 indicated a large effect size.

Table 7. Summary of Ordinal Regression Analysis for Variables Predicting Persistence for Part-Time and Full-Time Students

	Part-Time Students				Full-Time Students			
	B	S.E.	Wald	Odds Ratio	B	S. E.	Wald	Odds Ratio
Gender	-.627	.365	2.949	.53	-.030	.143	.044	0.97
Under 25 Years Old	.39	1.053	.137	1.48	-2.211	.864	6.549**	0.11
First Generation Student	.334	.368	.827	1.40	.009	.144	.004	1.01
Race: Black	-.667	.479	1.936	.51	-.159	.173	.840	0.85
Race: Other	-.414	.754	.302	.66	-.027	.265	.010	0.97
Pell Grant Recipient	-1.018	.467	4.74*	.36	-.707	.169	17.483**	0.49
HS GPA	-.06	.405	.022	.94	-.062	.164	.143	.94
Composite ACT Score	-.036	.064	.314	.96	-.051	.024	4.54*	.95
Number of Coaching Sessions	.469	.108	18.835**	1.60	.440	.039	124.768**	1.55

Note: * indicates significant at .05, ** indicates significant at .01

An ordinal regression analysis was performed on persistence in the percentage of earned course credit hours during the intervention semester as the outcome and the number of sessions (defined actual session count) and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) as the predictors for part-time students on

academic warning who participated in academic coaching. The obtained likelihood ratio chi-square of 35.349 ($df = 9$) with a $p = .000$ indicated that some of the variables in the model were important for explaining course credit persistence. The number of sessions and SES were significant. The number of academic coaching sessions was positively correlated with the percentage of earned course credit hours. As the number of academic coaching sessions increases, part-time students on academic warning have a higher likelihood of completing more academic credit hours, with an odds ratio of 1.60 indicating a small effect size. The percentage of earned course credit hours was negatively correlated with SES, indicating part-time students who receive Federal Pell Grant tended to earn fewer course credit hours compared to their non-Pell Grant student counterparts who participated in academic coaching, with an odds ratio of .36 indicated a large effect size.

An ordinal regression analysis was performed on persistence in the percentage of earned course credit hours during the intervention semester as the outcome and the number of sessions (defined as five or more sessions) and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) as the predictors for full-time students on academic warning who participated in academic coaching. The obtained likelihood ratio chi-square of 149.175 ($df = 9$) with a $p = .000$ indicated that some of the variables in the model were important for explaining course credit persistence. The ACT composite score, number of sessions, SES, and age were significant. The ACT composite score was negatively correlated with the percentage of earned course credit hours, but the odds ratio of .95 indicates a negligible effect. The number of academic coaching sessions was positively correlated with the percentage of earned course credit hours. As the number of academic coaching sessions increased, full-time students on academic warning had a higher likelihood of completing more academic credit

hours; an odds ratio of 4.33 indicated a large effect size. The percentage of earned course credit hours was negatively correlated with SES, indicating full-time students who receive Federal Pell Grant tended to earn fewer course credit hours compared to their non-Pell Grant student counterparts who participated in academic coaching; an odds ratio of .49 indicated a large effect size. The percentage of earned course credit hours was negatively correlated with age, indicating full-time traditional students (those under 25 years old) tended to earn fewer course credit hours than their non-traditional student (at least 25 years old) counterparts who participated in academic coaching; the obtained odds ratio of .15 indicated a large effect size.

Table 8. Summary of Ordinal Regression Analysis for Variables Predicting Persistence for Part-Time and Full-Time Students

	Part-Time Students				Full-Time Students			
	B	S.E.	Wald	Odds Ratio	B	S. E.	Wald	Odds Ratio
Gender	-.515	.359	2.061	.60	-.011	.142	.006	0.99
Under 25 Years Old	.503	1.033	.237	1.65	-1.898	.835	5.174*	0.15
First Generation Student	.215	.359	.359	1.24	-.027	.144	.034	.97
Race: Black	-.689	.474	2.115	.50	-.114	.172	.433	0.50
Race: Other	-.183	.742	.061	.83	.021	.261	.006	1.02
Pell Grant Recipient	-.906	.451	4.031*	.40	-.711	.168	17.973**	0.49
HS GPA	-.014	.40	.001	.99	.019	.163	.014	1.02
Composite ACT Score	-.046	.063	.528	.96	-.069	.024	8.332**	.93
Number of Coaching Sessions	1.302	.373	12.211**	3.68	1.466	.139	110.682**	4.33

Note: * indicates significant at .05, ** indicates significant at .01

An ordinal regression analysis was performed on persistence in the percentage of earned course credit hours during the intervention semester as the outcome and the number of sessions (defined as five or more sessions) and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) as the predictors for part-time students on academic warning who participated in academic coaching. The likelihood ratio chi-square of 27.032 ($df = 9$) with a $p = .000$ indicated that some of the variables in the model are important for explaining course credit persistence. The number of sessions and SES were significant. The number of academic coaching sessions was positively correlated with the percentage of earned course credit hours. As the number of academic coaching sessions increased, part-time students on academic warning had a higher likelihood of completing more academic credit hours, with an odds ratio of 3.68 indicating a large effect size. The percentage of earned course credit hours was negatively correlated with SES, indicating part-time students who receive Federal Pell Grant tended to earn fewer course credit hours compared to their non-Pell Grant student counterparts participating in academic coaching. The obtained odds ratio of .40 indicated a large effect size for this finding.

Academic Retention

Retention. A chi-square test was performed to assess the relationship between retention and participation in the academic coaching intervention for full-time students on academic warning. The assumption that each cell had an expected count greater than or equal to five was met, as the minimum expected count was 103.64. A significant relationship was found, $\chi^2 (1, N = 1165) = 27.381, p = .000$. Full-time students on academic warning who participated in academic coaching were more likely to be retained the following semester (63.8%) as compared

to those who did not participate in academic coaching (45.7%). Cramer's phi (.153) indicated this was a small effect.

A chi-square test was performed to assess the relationship between retention and participation in academic coaching program for part-time students. The assumption that each cell had an expected count greater than or equal to 5 was met, as the minimum expected count was 39.72. No significant relationship was found, $\chi^2(1, N = 275) = 1.900, p = .168$.

A logistic regression analysis was performed with retention in the semester following the intervention semester as the outcome and the number of sessions (defined as five or more sessions attended) and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) as the predictors for full-time students on academic warning that participated in academic coaching. The obtained likelihood ratio chi-square of 81.718 ($df = 9$) with a $p = .000$ indicated that some of the variables in the model are important for explaining retention. The model was correct 67% of the time in classifying full-time students as retained. Only the number of sessions was significant. Students who attended five or more sessions were almost 3.5 times (3.537) more likely to be retained than those who attended fewer academic coaching sessions.

Table 9. Summary of Logistic Regression Analysis for Variables Predicting Retention for Part-Time and Full-Time Students

	Part-Time Students				Full-Time Students			
	B	S.E.	Wald	Odds Ratio	B	S. E.	Wald	Odds Ratio
Gender Under 25	.214	.388	.305	1.239	.067	.164	.170	1.070
Years Old First Generation Student	-.214	1.085	.039	.807	-1.760	1.086	2.625	.172
Race: Black	.070	.508	.019	1.072	-.185	.198	.874	1.203
Race: Other	.916	.835	1.205	2.500	.461	.308	2.241	1.585
Pell Grant Recipient	-.053	.472	.012	.949	-.293	.192	2.323	.746
HS GPA	-.159	.433	.136	.853	-.257	.187	1.884	.774
Composite ACT Score	.027	.069	.149	1.027	-.049	.027	3.302	.952
Number of Coaching Sessions	.869	.390	4.976*	2.384	1.263	.161	61.515**	3.537

Note: * indicates significant at .05, ** indicates significant at .01

A logistic regression analysis was performed with retention in the semester following the intervention semester as the outcome and the number of sessions (defined as five or more sessions attended) and student demographics (first-generation status, race, SES, gender, age, high school GPA, and ACT score) as the predictors for part-time students who participated in the program. The obtained likelihood ratio chi-square of 7.067 ($df = 9$) with a p -value of .630 indicated the model as a whole did not fit well. The model was correct 61.4% of the time in classifying students as retained. Only the number of sessions was significant, which indicated

that students who attended five or more sessions were almost 2.4 times (2.384) more likely to be retained than those who attended fewer academic coaching sessions.

Chapter 5

Discussion

Introduction

Funding in much of higher education has shifted over the past decade from enrollment-based to performance- or outcome-based budgeting, meaning that funding is linked to student retention and graduation and not merely the number of students matriculating (National Conference of State Legislatures [NCSL], 2015; Tennessee Higher Education Commission [THEC], 2015). This holds universities accountable for not only admitting students but ensuring that they obtain the degree. This poses a challenge for many universities as the national graduation rate for undergraduates attending four-year public institutions is 10% within the traditional 4-year timeframe, a figure which expands to only 39.3% at the 5-year mark and 50% at 6 years (Shapiro et al., 2016). Thus, universities have begun to focus their attention on academically vulnerable student populations in order to increase these students' academic performance and, ultimately, their retention and graduation. These academically vulnerable students include academically underprepared students (Chen, 2016), first generation college students (Atherton, 2014), racial minorities (Musu-Gillette, et al., 2017), low socioeconomic status (Sandoz, et al., 2017), males (Combs et al., 2010), and non-traditional age students (Rabourn, et al., 2015).

As noted in chapter 2, mutable and immutable variables have known associations to student academic success. For this study, these immutable variables (i.e. first-generation status, race, gender) are of interest as previous research has demonstrated these student demographics to significantly impact the students' college experience. Additionally, mutable variables (i.e. mental health, academic skill) have also been found to notably affect students' academic success, course

progress, and retention (Gruttadaro & Crudo, 2012; Kiriakidis & Barber, 2011). In response to this, colleges and universities are working to meet those student needs by creating programming and interventions that provide students with academic and social supports. These interventions serve as a resource on campus to help triage major mental health concerns and connect students to counseling services or academic supports as needed. The interventions also aid in helping students develop coping skills, effective stress management techniques, and study skills that mitigate some of the less severe mental health concerns in a supportive environment (Burdette Williams, 2017). The hope is then that colleges and universities are able to reach these vulnerable student populations with these interventions prior to students dropping out or failing courses.

The literature is replete with a variety of college retention efforts and the size of this literature (much of it not subject to outcome evaluation), is beyond the scope of this study. Course based models, living learning communities, and summer bridge programs are a few of the handful of well researched approaches that address either the mutable or immutable variables under consideration here, yet each of these fails to capture a true person-centered approach to student support efforts addressing these kinds of variables (Hoops & Artrip, 2016; Tomasko, et al., 2016; Adams, et al., 2014). Therefore, a relatively new intervention appearing on many college campuses that focuses on these kinds of variables is academic coaching. As noted earlier in this work, academic coaching is a one-on-one, collaborative relationship between an academic coach and academically at-risk undergraduate students. In this study, the academic coaches were trained graduate students and the at-risk students were undergraduates on academic warning due to having a composite GPA below 2.00 within their first 59 credit hours (Center for Academic Retention and Enrichment Services [CARES], 2017). This coaching relationship focuses on

strength building, goal setting, skill development, and the utilization of tools needed to successfully navigate the college process. This study aimed to explore the effectiveness of this intervention over the course of five academic semesters at a mid-sized, urban research university in the southeastern United States. A discussion of the results, implications of the major findings, future research considerations, and limitations of the study follows.

Student Demographics

The research questions for this study aimed to determine the effectiveness of the Academic Coaching for Excellence (ACE) program as implemented at a mid-sized, urban research university in the southeastern United States. To better comprehend the program's effectiveness, an understanding of the student population is needed. According to the student demographic variables (academically underprepared, first-generation status, age, SES, race, and gender), the students on academic warning at this institution both confirm and reject previously mentioned literature on academically vulnerable populations. The student demographic variables in the overall population of academically at-risk students that align with the literature include low socioeconomic status students (Goldrick-Rab & Pfeffer, 2009), racial minority students (Niu, 2015), and academically underprepared students (Westrick, et al., 2015).

Low SES students made up 68.1% of the student population on academic warning over the course of the five academic semesters. These students were recipients of the Federal Pell-Grant, indicating their family income was sufficiently low to warrant this financial assistance to attend college (Federal Student Aid, 2014). The extant literature demonstrates that a substantial portion of students considered Pell-Grant eligible or low socioeconomic status attend low achieving public schools which, in turn, can be associated with poor academic achievement and a lack of the primary skills needed to succeed in the collegiate environment (Fain, 2016; Aikens &

Barbarin, 2008). Additionally, when academically challenging or college preparation courses such as Advanced Placement (AP) course are available, low socioeconomic students are often not afforded the same opportunity to take these courses as their higher SES peers (Colgren & Sappington, 2015). This lack of college readiness likely accounts for some level of the high percentage of low SES students on academic warning during the beginning stages of their college careers at this institution. Furthermore, it is important to consider the financial demands of college, such as tuition, room and board, textbooks, course materials, and supplies. These additional financial burdens can significantly impact students' financial situation and often leads students to take on part-time or even full-time employment while attending college. Carnevale and colleagues' (2015) found that 70 to 80% of students are actively engaged in both the labor market and in some form of postsecondary education at the same time. Importantly, they found that lower SES students work full-time at a higher rate than their higher SES peers and that this full-time employment is negatively associated with degree completion (Carnevale, et al., 2015). Thus, a large portion of students in the current study hailing from low SES backgrounds may be balancing additional obstacles such as work demands, family needs, and educational deficits which may be negatively impacting their ability to be academically successful without additional supports.

The racial demographics of the academically at-risk population for this study included 55.8% identifying as Black and 9.6% as Other (non-White or non-Black), indicating that racial minorities made up a total of 65.4% of the academic warning student population. This result is considered high for the institution, as over 60% of the entire student population is considered White (Office of Institutional Research, 2016). Baker's (2013) study suggests that as minority students are encouraged by faculty, particularly those of the same racial background, student

academic performance increases. In Fall 2016, the race of the faculty at the intervention institution included 27.8% of racial minorities (Office of Institutional Research, 2016). This disparity may impact the minority students' academic performance, as their ability to connect with faculty from racial minorities is low. Additionally, students from racial minorities are found to have additional vulnerable variables such as low SES (Engle & Tinto, 2008), first-generation status (Postsecondary National Policy Institute, 2016), or academically underprepared (Chen, 2016) at a higher rate than their White counterparts. This may have increased the likelihood of these racial minority students being on academic warning.

In Tennessee, students are considered academically eligible for the state-based HOPE scholarship if they have at least a high school GPA of 3.00 and at least a 21 ACT composite score (Tennessee HOPE Scholarship, 2017). Of the students on academic warning in this study, only 22.9% ($n = 330$) qualified for this financial assistance based on academic standards alone. Thus, 77.1% ($n = 1,110$) of these students earned lower high school academic standards, disqualifying them from additional financial support for college. With such a high representation of students that completed high school with low academic achievement, based on GPA and standardized testing, the beginning of their college career was likely to be academically challenging. Westrick and colleagues (2015) found these high school academic variables (GPA and standardized test scores) to be strong indicators of early college academic success. Thus, the academic coaching intervention served as a needed support to aid students in developing their academic skills to better equip them in their academic classrooms.

The demographics that do not align with the literature include gender, age, and first-generation status. The students in the overall population of academically at-risk students were almost evenly split between male and female students. This suggests that male students are not

necessarily more academically deficient to their female counterparts at the beginning of their college journey as Combs and colleagues suggest (Combs et al., 2010). Both male and female students at this particular institution almost equally encountered academic difficulties within their first 59 credit hours of their college careers. At urban universities, there may be additional academic variables that impact the academic success of both male and female students. One possible explanation is the diversity that urban universities tend to capture in terms of race, SES, and first-generation students (Association of Public & Land-Grant Universities, 2017). As noted in chapter 2, racial minorities, low SES, and FGCS are more academically vulnerable and thus may be higher represented at urban universities which may result in more equal academic difficulties in terms of both male and female genders.

The non-traditional age students, those over the age of 25, were also found to be in a much lower need of academic interventions compared to their traditional student counterparts based on the low percentage of non-traditional age students on academic warning (6.5%). The Fall 2017 enrollment report from the intervention institution indicated that 9.6% of baccalaureate degree seeking students within their first 59 credit hours were considered non-traditional students (Office of Institutional Research, 2017), thus indicating that the campus population does not show a full representation of all non-traditional students' academic needs and may be more specific to this specific institution's non-traditional students' needs. Non-traditional age students may be juggling multiple life roles including caretaking, working, or have community demands. Although these additional roles may create constraints for the student, it may also benefit the student in having additional social supports or more financial resources compared to their traditional student counterparts (Ross-Gordon, 2011). Furthermore, additional variables regarding the study's non-traditional students are unknown such as if this is their first-time

pursuing a college degree or if they are returning to college after stopping out. These additional variables and roles can impact the students' adjustment to college academics in different ways and are worth exploring in the future.

Research has demonstrated that first generation college students (FGCS) are more likely to be academically vulnerable compared to their multigenerational counterparts (Strand & Council of Independent Colleges, 2013). This was also not consistent with the students on academic warning at this institution, as 44.1% of the academic warning population were considered FGCS. However, FGCS overall population at this particular institution accounts for 31.59% (Office of Institutional Research, 2017). Research indicates that multigenerational students are often from higher SES backgrounds compared to their FGCS counterparts (Postsecondary National Policy Institute, 2016), likely aiding in their college preparation (Aikens & Barbarin, 2008). Additionally, these multigenerational students are sometimes overlooked by initiatives and academic supports on college campuses with the assumption that these students will receive parental involvement to help them navigate the college process and thus promoting their academic success. Yet, Turner and colleagues' research explains that parenting styles often impact college students' academic achievement (Turner, Chandler, & Heffer, 2009), and thus how parents communicate their collegiate knowledge and experience with their students may vary on how students benefit from having multigenerational parents.

Each of these student populations (e.g. low SES, racial minorities, non-traditional age, first gen) are well-researched (Sandoz, et al., 2017; Shapiro, et al., 2017; Austin & Lockmiller, 2016; DeAngelo & Franke, 2016; DeNicco, et al., 2015; Trenz, et al., 2015; Westrick, et al., 2015; Jackson & Kurlaender, 2014; Lightweis, 2014; Lopez & Gonzalez-Barrera, 2014; Niu, 2015; Petty, 2014; Strand & Council of Independent Colleges, 2013; Museus & Liverman,

2010), yet as this study shows, each campus is impacted differently in terms of their students' academic needs. Accounting for the academic needs of what literature identifies as academically vulnerable populations is important; however, knowing the landscape of the student needs for each particular institution is necessary to best support each institutions' academically at-risk students. Thus, exploring the effectiveness of student support programs that work individually with academically at-risk students for this particular institution is important to gauge the climate of students' needs and how the institution is helping support these students.

Academic Performance

The first and second research questions asked specifically about the academic performance of these academically at-risk students. First, a discussion about the change in the students' GPA in terms of the participation status in the academic coaching intervention will be discussed, followed by a discussion of the findings when setting the academic threshold of achieving at least a 2.00 GPA to account for the students' academic success. A discussion of the major findings for academic performance follows.

Change in GPA. Both full-time and part-time students that were placed on academic warning based on their previous semester GPA falling below a 2.00, saw an increase in their GPA whether they participated in the academic coaching intervention or not. Full-time students had a .686 higher GPA and part-time students had a .595 higher GPA if they participated in the academic coaching intervention compared to students that did not participate. This increase for both participating and non-participating students may be attributed to the level of motivation they experience following their first academic remediation. As academic warning is the first level of the institution's academic intervention system, followed by the academic probation and suspension process, the impact that being placed on academic warning may have on students

could possibly explain the increase in their level of academic motivation for the following academic semester. Other possible explanations include students taking fewer courses after being placed on academic warning or possibly changing their external work or social commitments to focus their attention more on academics. Without further information from the students, this change remains unknown.

The significant increase in GPA for those that participated in the academic coaching intervention, at a minimum of one coaching session, suggests that students benefit from being guided through the academic demands of college by learning study skills, having emotional support, and receiving guidance in navigating the college process. These students see greater academic performance gains than those students on academic warning that do not utilize the additional support. Hurd and colleagues' (2016) study suggest that underrepresented minority students benefit from mentoring relationships while adjusting to college. These mentoring relationships were associated with students' improvement in their GPAs, as well as a reduction in mental health concerns from one semester to the next (Hurd, Tan, & Loeb, 2016).

Additionally, Hoops and Artrip's (2016) study noted that students that participate in student success courses that focus on college academic development and college transitions experience an increase in academic performance (Hoops & Artrip, 2016). These findings indicate that the coaching relationship established through participating in the academic coaching intervention and the additional academic support provided by the intervention may be similarly influential towards the participating students' GPAs.

Academic Success. As the institution identified a GPA of 2.00 as an indicator of academic success (CARES, 2017), the study created the academic success threshold to mirror the institution's academic standards. Yet, it should be noted that the 2.00 GPA is based on the

intervention semester GPA alone, rather than the cumulative GPA for the student following the academic coaching intervention. This is due to the need to help students reach an achievable goal to see that they are academically capable first and to then build upon their confidence as they move forward in their academic journey. For many of the students, the ability to raise their cumulative GPA to at least a 2.00 following the intervention semester alone was unlikely due to the level of deficiency at which they entered into the intervention semester. When exploring if the academic coaching intervention program helped students to achieve this 2.00 GPA threshold in the given semester compared to the students that did not participate in the program, participating status was significant for both full-time and part-time students. Students who participated in coaching were more likely to earn a 2.00 in the intervention semester than those who did not.

These results warrant the investigation into the average increase in GPA per each academic coaching session. For both full-time and part-time students, the number of coaching sessions indicated an average increase in GPA .237 and .214 per session respectively. This indicates that there is a need for repetitive coaching sessions to help ensure that students are able to achieve the 2.00 GPA threshold. When looking for an explanation to the number of sessions needed, five sessions was an appropriate indicator as it was used in the benchmarking for the Academic Coaching for Excellence's Quality Enhancement Plan goals and projections at the institution (SACSCOC, 2015). This number takes into account the number of weeks in an academic semester at the institution, as the student is expected to meet with an academic coach on a bi-weekly basis throughout the semester. The student likely only has five to seven chances to attend coaching sessions, so with a fifteen-week semester when accounting for holidays,

university closures, and the possible missed session due to illness or scheduling conflicts for either the coach or the student, the five-session indicator was appropriate.

Results of the effectiveness of academic coaching for students who attended five or more sessions showed a positive impact on students' GPAs. Full-time students who attended five or more sessions were nearly four times (3.923) as likely to earn at least a 2.00 GPA as those full-time students attending four or fewer sessions. A possible explanation for this finding rests on the possibility that students may have developed a stronger sense of self-efficacy through the intervention and their work with the academic coach. Cheon-woo Han and colleagues found that increased feelings of self-efficacy are associated with increases in college student academic performance (Cheon-woo Han, Farruggia, & Moss, 2017). It may be that student self-efficacy is nourished through the coaching relationship as students are equipped with additional academic knowledge, emotional support, and guidance in navigating challenges. Students may be able to increase their academic capital through learning study skills, time management techniques, and university resources via participation in the ACE program which could subsequently influence their academic performance. Thus, as students are more equipped with academic skills their ability to perform in the classroom increases (Lotkowski et al., 2004). These findings indicate that, with both increased self-efficacy and academic knowledge, students are able to navigate the college academic demands more effectively resulting in higher academic achievement. This may be how the academic coaching intervention is directly helping students. Yet regardless of the how, the findings from this study show that the intervention itself was, in fact, helping students meet the 2.00 GPA threshold for academic success.

When specifically looking at student demographics in terms of achieving academic success when participating in academic coaching, low SES students, which in this study were

those students that received the Federal Pell Grant, were more likely to see less of an improvement in their GPA as compared their non-Pell Grant recipient counterparts for both full-time and part-time students. When the five-session indicator was applied, low SES students were .542 less likely to have 2.00 GPA compared to the non-Federal Pell-Grant recipient students. These findings regarding SES are significant to note as literature has indicated mixed reviews to whether SES impacts academic performance. Westrick and colleagues note that SES is a weak indicator for academic success (Westrick, et al., 2015), whereas Sirin's meta-analysis indicates that SES is a medium to strong predictive factor to college students' academic performance (Sirin, 2005). The findings from this study likely support Sirin's findings, as an individualized academic support program such as academic coaching is not meeting the needs entirely for the low SES students at the same extent that it does their higher SES counterparts.

Another student demographic variable that was statistically significant was whether a student was a traditional aged student, those students under 25 years old. The findings suggest that traditional aged full-time students that participated in academic coaching, at a minimum of one coaching session, had an average GPA that was .634 lower than non-traditional students, those at least 25 years old. Chung and colleagues found that non-traditional age students are considered to be more resilient than their traditional student counterparts (Chung, Turnbull, & Chur-Hansen, 2017). This resilience may, in turn, be helping non-traditional students in terms of their academic performance, as they overcome the obstacle of falling into academic warning, and they instead are able to apply the academic skills they learn within the coaching relationship that helps them in the classroom. It may also be that when non-traditional age students are provided with academic support, their academic performance increases. Rabourn and colleagues' study shows that non-traditional age students benefit from engagement with faculty (Rabourn, et al.,

2015), thus validating this person-centered academic intervention for non-traditional aged students to work with university staff members. Although, it should be noted that the traditional age students benefited from the intervention as well, however, their ability to translate their information gleaned from academic coaching into their course work was to a lesser extent than their non-traditional counterparts. This indicates that coaches need to work with the students to learn how to not only learn study skills, time management, and university resource, but they would continue to benefit from additional accountability to translating those learned skills into the classroom.

Academic Course Progression

The first and third research questions addressed the persistence of the academically at-risk students. In the section that follows, a discussion of students' earned course credit progression in terms of the participation status in the academic coaching intervention will be discussed, followed by a discussion of the findings based on the student variables (demographics, academic indicators, and number of sessions). A discussion of the major findings for the students' academic course progression follows.

Course Credit Persistence. The results indicated that both full- and part-time students who participated in academic coaching, at a minimum of one coaching session, were more than two times as likely to complete the majority (76-100%) of their course credit hours in the intervention semester compared to those who did not participate in academic coaching. This indicates that academic coaching is an important factor in helping students' progress towards degree completion. The rationale behind this is likely due to the added accountability that academic coaching provides for the students. Campbell and Campbell's (2007) study notes that when academically vulnerable students are mentored through a relationship with a university

member, their ability to complete more credit hours increases (Campbell & Campbell, 2007). This may be what was happening to students that participated in academic coaching. The coach and student develop a relationship over the course of the academic semester where the coach was able to check in with the students' academic progress in each of their courses. By having this support, students likely were more apt to complete the tasks needed within the courses, which in turn helped them to complete the academic requirements. It may also be possible that students that choose to participate in the intervention were operating from a growth mindset, defined as students that believe their abilities can be developed with dedication and commitment, rather than a fixed mindset, defined as students believing their intelligence is merely a static trait (Dweck, 2006). In the coaching relationship, students learn that they have the abilities needed to be academically successful, and the coach merely refines and exposes them to new academic knowledge and skills. This mindset may be one of the reasons for the impact academic coaching has on academic course progression.

Furthermore, the results showed that both full-time and part-time students that did not participate in academic coaching were more likely to complete only a quarter of their courses if they completed them at all (0-25%) compared to students that participated in the intervention. This result is likely the reverse reasoning from above. It continues to support Campbell and Campbell's findings of the significance of mentors (Campbell & Campbell, 2007). Here, the student does not have the additional support of academic coaching at the university holding them accountable and guiding them through their academic semester. Additionally, it is possible that these students operated more from a fixed mindset compared to the growth mindset of their participating peers. Students with a fixed mindset often believe that their intelligence is based on talent rather than refined and cultivated abilities in order to achieve and create success (Dweck,

2006). This lack of mentorship and mindset are the possible rationale for the lack of course credit completed by students that do not participate in academic coaching.

According to the findings, the number of coaching sessions increases the students' likelihood of completing more academic credit hours. This continues to support Campbell and Campbell's research that emphasizes the significance of the university staff member's relationship with students (Campbell & Campbell, 2007). By attending more coaching sessions, the likelihood of the academic coach and the student developing a stronger coaching working alliance increases. Working alliance is essential to a therapeutic relationship with college students (Owen, et al., 2012) and can also be found effective in the college classroom (Meyers, 2008). This possibly indicates that a strong working alliance is beneficial to the academic coaching relationship as well and could in fact aid in course completion.

The results also indicated that low SES (Federal Pell Grant recipients) students were more likely to earn fewer academic credit hours compared to their higher SES, non-Pell Grant recipient counterparts for both full-time and part-time students. Roman-Kenyon and colleagues' (2017) study looked across SES quartiles and found that for low SES students, academic preparation and communication with faculty or advisors were the strongest predictors of persistence (Rowan-Kenyon, et al., 2017). With this study in mind, the relationship formed between coach and student is again a possible explanation for the success that was seen in low SES students, indicating that this individual approach is an appropriate intervention to use with low SES student. However, that same coaching and student relationship is able to form for their higher SES counterparts as well within the intervention, therefore possibly leading to this negative correlation. So, although academic coaching indicates significant persistence, for these Pell-Grant recipient students, their persistence is still not as high as their non-Pell Grant

counterparts.

Another significant finding to note is in reference to age. Full-time traditional students (those under the age of 25) were more likely to earn fewer academic course credit hours compared to their full-time non-traditional student counterparts. This was not significant for part-time students. This finding related to age again supports Chung and colleagues' research noting the resiliency that non-traditional age students often possess (Chung, et al., 2017). Kemp (2001) notes that resiliency is correlated with academic persistence for non-traditional aged college students. Thus, with these other studies in mind, it may be possible that the non-traditional students in this study's sample had more academic resiliency compared to their traditional student counterparts. This then would account for the difference in the course credit persistence.

Academic Retention

The first and third research questions asked specifically about the retention of the academically at-risk students. First, a discussion about the students' retention in terms of participation status in the ACE intervention will be discussed, followed by a discussion of the findings for each of the student variables (demographics, academic indicators, and number of coaching sessions) as related to student retention.

Retention. The results regarding retention, defined as students completing the academic semester following the intervention semester, indicate that full-time students who participated in academic coaching were more likely to be retained at the university following the intervention compared to full-time students on academic warning who did not participate in the ACE program. Participation in academic coaching was not significantly associated with part-time students' retention. These findings indicate the academic coaching intervention may be influential in full-time students' decision to both come back to the university following their

intervention semester and in their ability to complete the following semester. Although the findings for part-time students were not statistically significant, the small sample size of part-time students likely impacted these results, and thus it is difficult to say with certainty what the impact of academic coaching on part-time students may include. This lack of significance may also be related to the additional demands that part-time students often face. An understanding of how or why a student has chosen to attend school part-time is unknown and could be related to their academic abilities, financial needs, work demands, family or social obligations, among other reasons. González (2014) notes that money, work and family commitments, child care issues, and financial issues are the biggest barriers for part-time students to reach graduation. With this in mind, the ability to be retained is harder to explain compared to academic performance or persistence as many additional factors outside of the intervention's control come into play when retention is examined.

When considering students' participation in the academic coaching intervention, both full-time and part-time students saw significant benefits when they attended five or more coaching sessions. Full-time students were 3.5 times more likely to be retained and part-time students were 2.4 times more likely to be retained compared to their peer counterparts that attended fewer than five coaching sessions. These are both substantial increases in retention and suggests that students benefit from a semester long, or otherwise more lengthy intervention as opposed to a one-time intervention. Similarly, Cholewa and Ramaswami (2015) found that students who received three to four hours of counseling were more likely to be retained than those students that received fewer hours. This implies that students benefit more from multi-session/multi-hour interventions.

Greater intensity or length of participation in the ACE intervention could also facilitate a sense of belonging that positively impacts students' and their desire to continue their studies. Cheon-woo Han and colleagues found that students are more likely to be retained when they feel a sense of belonging at the university (Cheon-woo Han, et al., 2017). Students in the ACE program could develop a greater connection to the institution over the course of multiple sessions wherein they feel cared for by the coach. Also, the student was likely better equipped with tools to be engaged in the classroom and on campus through longer participation in academic coaching when they have additional time to learn of campus activities and resources available to them. This knowledge and engagement could increase their sense of belonging to the college community and subsequently impact their retention.

Another possible explanation for student retention is directly related to the students' academic success. Goldrick-Rab and Pfeffer's (2009) research suggests that when students are more academically successful they tend to stay at an institution rather than transferring or leaving higher education. Since academic coaching significantly impacts students' academic success, as seen above, then this may impact the students' decision to stay at the university and therefore increases retention as well.

Implications

The results from the study provide implications for multiple aspects of higher education. In the following paragraphs, these implications will be addressed first for academically vulnerable student populations, followed by implications for academic coaching programs at higher education institutions. Finally, a discussion of implications for the counseling community vis-à-vis the academic coaching interventions is provided.

Academically vulnerable students. The findings of this study indicated that the Academic Coaching for Excellence (ACE) program is an effective intervention for students on academic warning in terms of academic performance, academic course progression, and academic retention at this mid-sized, public, urban research institution in the southeastern United States. Furthermore, the study implied that select special populations benefit from ACE more than others; specifically, non-traditional students and non-Pell Grant students. The main population that this study draws attention to are the students identified as low SES, those that were Federal Pell Grant recipients. As noted earlier, the financial assistance needed to make college a reality for many students includes more financial support than the Federal Pell Grant can provide. Thus, additional scholarships such as Tennessee HOPE Scholarship often aid in filling remaining financial gaps for tuition. This scholarship though is merit based and as seen above a high majority of the students did not qualify based on ACT or high school GPA alone. Therefore, two recommendations for working with low SES students are suggested. Universities must increase financial support for these low SES students in order to aid in the financial demand that college requires, from wider access to course textbooks to ensuring student fees remain reasonable. Finding scholarship opportunities that students from this low SES background can apply for that do not require the academic merit like HOPE, but instead capitalize on volunteer, service, and leadership potential may be helpful to these students. If additional private or public partnerships can be utilized in a way that both financially support students and provides a learning opportunity, these students likely will develop transferable skills and influential connections that may impact the trajectory of their college and post-college careers.

Recognizing that money and partnerships may be hard to meet all the needs of the high number of low SES students that attend higher education institutions, providing support at the

forefront would likely help. The academic deficit that low SES students enter college with is troublesome; yet, these students' ability to succeed with guidance from an academic coach is evident based on this study's findings. Therefore, implementing academic coaching at the start of college as a preventative aid rather than waiting for students to encounter low academic GPAs that will likely be hard to recover for the remainder of their college journey is recommended.

The lack of significance that was found in the results regarding the other vulnerable populations (e.g. first generation, racial minority) should be noted. There are a number of programming, attention, and financial support provided to special populations; yet, it is imperative that those programs be evaluated to ensure that they are working for the intended student populations. If reallocations of time, money, and attention are needed, a program evaluation is necessary to ensure universities are wisely investing in academic support initiatives. The results from this study support the intended purpose of the Academic Coaching for Excellence initiative.

Overall, the positive results found in the study for the academic warning population are encouraging. In terms of performance, persistence, and retention this academically at-risk student population has found promise in the relational intervention that challenges and supports the students by providing them with a connection on campus while serving as a touchstone throughout the semester to develop their academic potential. With this in mind, these students likely feel cared for and seen by members of the university community.

Academic coaching programs. In terms of the intervention itself, providing a clear direction and approach that still accounts for coaches' autonomy and a person-centered approach may be helpful. Therefore, implementing a conceptual model for coaches to use as a framework for working with these academically at-risk students as they move them towards academic

success could provide consistency amongst coaches and across institutions' coaching programs.

A model to consider is GO TEAM, a coaching framework that utilizes the academic coach as the anchor to working with the student in moving them towards academic success. This acronym provides (G) developmental understanding while instilling student growth, (O) observes areas of strength and deficits based on the student's needs, (T) teaches new strategies, skills, and concepts for students to utilize, (E) engages students within the campus community, (A) helps students become their own advocate, and (M) motivates the students towards continued academic success as they progress in their academic journey (Capstick, 2017).

Counseling in coaching. The coaches for this particular intervention often come from helping profession training programs (e.g. counseling, higher education student personnel, teacher education). These graduate students are able to use course knowledge and translate it into their working sessions with students. For the counseling profession, in particular, counselors-in-training, benefit from utilizing foundational counseling skills, such as reflective listening, attending skills, open ended questioning, reframing, amongst others when working with their undergraduate student. Utilizing the academic coaching intervention as a formalized training site providing practicum and internship experiences for counselors-in-training would likely be beneficial to the graduate programs as well as the coaching programs. This implication also would be financially beneficial for the intervention, as practicum students and interns would be receiving course credit for their work hours, rather than needing to be paid out of the program's budget.

More advanced counseling opportunities often occur, as stress, anxiety, depression and external factors impinging on the students' academic success come to light as the coaches explore with the student. With this being said, often coaches have to refer students to the on-

campus counseling center to mitigate those concerns because there is not adequate counseling supervision for the coach to delve deeper with the student in these areas. However, the literature shows that counseling centers are often understaffed to meet the students' mental health demands on campus. Many campuses, this institution, for example, have moved to more of a managed care approach where students are limited to the number of sessions provided during an academic year (Reetz, et al., 2015). Knowing this, and seeing that many students would benefit from brief therapeutic interventions addressing some of these issues, it is important to have proper supervision from trained counseling supervisors as the director of academic coaching programs. This would allow coaches to delve deeper with the student in a safe environment where rapport has already been established rather than having to refer students out.

Future Research Considerations

The results of this study lay the groundwork for a continued examination of academic coaching on college campuses and student support programs for academically vulnerable populations. The present study utilized students from one mid-sized, urban, research institution in the Southeast; however, examining academic coaching programs across multiple higher education institutions types, such as community colleges, 4-year private colleges, large and small public universities, and for-profit institutions would be beneficial to understanding the effectiveness of the practice in a more comprehensive way. Furthermore, additional evaluation knowledge of the coaching practice would allow for more depth in understanding the environment and population it best assists.

Future studies should also evaluate the financial implications of coaching interventions on college campuses. Research into the monetary value of the program is needed to better understand the economic benefits or deficits of the program and if the retention rate is able to

adequately offset the financial capital needed to equip coaches and implement the program. As a primary purpose of the intervention is to retain students and subsequently to aid in university funding, it would be responsible of the institutions to ensure that they are in fact receiving a positive return of their investment. Similar research exploring cost-return on the investment of student success has been conducted from large corporations which includes multiple universities and programming (Making Opportunity Affordable, et al., 2009), yet a review is needed from an institutional and program specific level to account for the intervention's student outcomes.

While the research in this study indicates the possible benefits of coaching, research into students' experiences with coaching would capture more of the interpersonal development aspect that this study did not explore. Specifically, qualitative research would be helpful in gleaning insight into the students' experience. Additionally, gathering pre- and post-intervention data regarding the students' sense of belonging, self-efficacy, resiliency, and mindset would provide more depth to the student experience and personal development gleaned through the coaching relationship and practice. Although research has been done on student development for decades (Holland, 1966; Sanford, 1966; Sanford, 1967; Tinto, 1975; Astin, 1984; Schlossberg, 1989; Bronfenbrenner, 1993; Réndon, 1994), how students develop in these specific areas based on this person-centered student support program would be beneficial to examine in order to evaluate new approaches to engage students in their college experience. Additionally, exploring the experience of students with one versus two or more of the academically vulnerable population characteristics would provide more depth to understanding the students' in academic coaching. For example, what does the academic coaching experience look like for a male student from a low SES background and of a racial minority with three academically vulnerable characteristics

compared to a male student from a high SES background and identifying as White with one academically vulnerable characteristic?

This person-centered approach emphasizes the development of academic skills and aids in the students' mental health, thus an evaluation of these specific areas would be beneficial to evaluate the extent of effectiveness students perceive in their academic skill development and coping with mental health concerns. Therefore, pre- and post-intervention data should be collected to understand the students' academic skills (e.g. time management, study skills, organization abilities) and mental health (e.g. depression, anxiety, perceived stress) through participating in the academic coaching intervention.

Not only is the student experience important to research, but the coaches' development would be beneficial to explore. Specifically looking at coaches' counseling identity would provide evidence to utilizing the academic coaching site as a training space for counselors-in-training. Moss and colleagues define six areas of counseling identity development. These themes that influence professional counseling identity included an adjustment to expectations; confidence and freedom; separation versus integration; experienced guide; continuous learning; work with clients (Moss, Gibson, & Dollarhide, 2014). Exploring how the coaches' counseling identity is able to develop through their coaching interactions with students will provide a more comprehensive understanding of the impact coaching has on aspiring counselors' development.

Finally, based on the significance that the number of sessions showed throughout the study, further research should be done to understand the number of sessions needed for when students' academic success, persistence, and retention meets significance. This research could possibly change the need for bi-weekly sessions to less meeting times, and it could potentially establish targeted points in the semester for when students would benefit most from the

intervention. This could use students' and coaches' time more effectively and ensure the resource is utilized to its fullest extent.

Limitations

Data. The study had several limitations to consider. Since the study utilized archival data, the variables available to the researcher were those provided in the dataset. This led to restrictions to know additional information about the students such as if they were residential students, participated in other student support programs, had on or off campus jobs, were caregivers of children, family members, or others amongst other variables of interests prior to or during the intervention semester. Each of these variables would add to future research regarding student connections to campus and additional external demands impacting students' academic success, persistence, and retention. This study should also not be considered representative of all academically at-risk undergraduate students, as this data was solely provided by one institution. Due to being reliant on the one institution's data coding procedure, the data does not have Hispanic students individually represented as its own population category. Additionally, due to the small sample size for non-White and non-Black students, the category of "other" was utilized to include Asian, mixed-race American Indian, Native Hawaiian, Pacific Islander, or unknown. Therefore, for this study race was considered White, Black, and other rather than more representative of additional races or ethnicities.

Intervention. The intervention is limited by the fact that despite having formalized training and coaching manual it was not a standardized program. Each academic coach has the autonomy to work with their students based on their individual needs. This was a limitation in terms of data, yet alternatively, it may be one of the components that works in the programs' favor as well. Another limitation to the intervention was the retention of academic coaches. The

coaches are graduate students which implies a turnover rate due to graduation, change in financial needs, or change in assistantships. This change in coaching staff means that different coaches have different years of experience working with students and although trained at the beginning of each semester, experience working with this vulnerable population likely increases effectiveness in reaching the students. Ikononopoulos and colleagues (2016) note that experience in a helping profession can increase one's self-efficacy in their abilities and skillset; thus, retention of coaches is potentially a challenge for the ACE program and its' effectiveness. There is a need for research on coach attrition and how experience impacts the coach's experience and skillset to work with students. Furthermore, while the students were required to attend academic coaching, there were no punitive measures in place for not attending. Thus, the students self-selected into the intervention by attending sessions which indicated a level of motivation to some extent which was not accounted for in the data and likely impacts the students' academic success, persistence, and retention. Additionally, the lack of punitive measure from the university may be interpreted as demotivating to students to not take the intervention as seriously as needed and instead not attend sessions at all which may also have limited the data.

Conclusions

This study aimed to explore the effectiveness of the Academic Coaching for Excellence (ACE) program at a mid-sized, urban research institution in the southeast United States. The results suggested the intervention is effective in increasing overall academic performance, moving students toward degree completion, and promoting retention of these academically at-risk students. The results provide a basis of support for the program's implementation at other institutions to use with similar populations. Additional research is needed to clarify the specific

components of the (ACE) program which are efficacious and to further elucidate factors promoting student success, persistence, and retention.

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Appendix

From: "Christopher Wayne Whitehead (cwhitehd)" <cwhitehd@memphis.edu> on behalf of Institutional Review Board <irb@memphis.edu>

To: "Madeline Kyle Capstick (mkcpstck)" <mkcpstck@memphis.edu>

Subject: Determination 3952

From the information provided on your Initial Review Request form for the study "A Program Evaluation of the Academic Coaching for Excellence Program", your activities do not meet the Office of Human Subjects Research Protections definition of human subjects research and 45 CFR part 46 does not apply.

This research does not require IRB approval nor review.

With best regards,

Chris Whitehead

IRB Administrator

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