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SINGLE PARENT SUCCESS IN MISSISSIPPI'S COMMUNITY COLLEGES

A Dissertation
presented in partial fulfillment of requirements
for the degree of Doctor of Philosophy
in the Department of Higher Education
The University of Mississippi

By

CRAIG-ELLIS SASSER

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ABSTRACT

On an average year, over 90,000 students enroll in a Mississippi community college. Until now, no data were available to identify the number of students enrolled in the Mississippi community college system who were single parents. No data were available to determine if there was a relationship between being a single parent and fall-to-fall retention. Each of the fifteen Mississippi community colleges were asked to provide data on the 2016 cohort of students. Data collected were race/ethnicity, academic program (transfer or career/technical), three questions from the FAFSA to determine a student's single parent status, if each student was retained from the Fall 2016 to the Fall 2017 semester, grade point average at 100% of time to degree (four semesters), and if the student completed a degree after four semesters. Four colleges provided usable data for the study, representing 8.6% (8,427) of the 98,013 students enrolled in for-credit courses in the Fall 2016 semester. The study found 12.4% of students in the sample were single parents. The average grade point average of single parents was 2.62. The average grade point average of non-single parents was 2.55. Separate Chi-square tests were used to determine if a significant relationship existed between single parent status (yes or no), single parents' gender, single parents' race/ethnicity, and fall-to-fall retention. Additionally, the independent T-test statistic was used to determine if a significant difference existed between single parent status and grade point average. Results showed that single parent status (single parent or not) had a strong relationship between fall-to-fall retention status (retained or not) as well as a significant difference in grade point average after four semesters. Gender and race/ethnicity did not have a significant relationship with fall-to-fall retention among the sample.

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CHAPTER I: INTRODUCTION

Purpose of the Study

Some students attending universities and community colleges transition into higher education with little responsibilities beyond attending class regularly and maintaining satisfactory academic progress. Some students, and especially community college students, need remediation before tackling general education core courses such as English Composition and College Algebra. Some students qualify for, apply for, and receive Federal financial aid to make their attending college possible. Others are the first person in their family to pursue higher education. These groups are not mutually exclusive, and for single parents who attend college, many have the same concerns in addition to a unique set of barriers and challenges along their pathway to and through higher education. Some institutions have addressed the barriers single parents face when transitioning to college by creating single parent programs to reach this group of students and provide them with resources, information, support services, and social interaction/engagement opportunities. While these single parent programs offer supports that likely help participants, little data have been produced showing how successful single parents are compared to nonparent college students. Ideally, these programs would improve the retention of single parent students, ultimately leading to degree attainment and to gainful employment in the workforce. Each Mississippi community college could eventually benefit from this type of program.

Before establishing a single parent program, data are needed comparing the success of single parents enrolled in Mississippi's fifteen community colleges with the success of other students. These data will establish a baseline that allows individual Mississippi community colleges to consider implementing a single parent program, or the data will show the Mississippi Community College Board the need to seek special state and Federal funds to increase single parent success in the state's fifteen community colleges (Institute for women's policy research).

The impetus for this study came from a class assignment in which I adopted a voice with at least two major characteristics different than my voice, a married white male with no children at the time. After considering several options, I chose to research a single mother in the Spring 2014 semester. This choice allowed me to read about the experiences of women in this group through both qualitative and quantitative data. As the semester progressed, I began learning about barriers single mothers face when entering college as well as learning about the existence of single parent programs offered at some colleges to help single parents transition. Most studies and articles focus on single mothers, so more research is needed to examine the barriers single fathers face in higher education.

History

Single parents have attended college for many decades, and some colleges devoted significant resources to serving the needs of this population. Historically, two programs stood out as setting the precedent for other programs to follow. In Washington, the Washington State Higher Education Coordinating Board published a document in 1993 establishing guidelines for Washington's universities as they went about creating single parent programs. Austin Community College published a similar report in 1995. The reports were similar because they

both focused on providing adequate resources for single parents and focused on lowering or removing barriers facing the single parent college student population.

Austin Community College's program was limited to career and technical students. That college's program focused on a few objectives that tried to link the single parents and displaced homemakers with jobs upon moving through a career or technical educational program. The college first created partnerships with local businesses and community organizations to help provide resources to the students (Austin Community College, 1995). Another focus for the Texas program was retention, and Austin did several things to help retain students, such as providing individual and group counseling, providing financial assistance through a grant, putting on 34 workshops to improve the parents' personal skills and study skills, providing access to over 200 community services, publishing a student newsletter, founding a textbook loan center, and instituting a clothes closet for the students' children (Austin Community College, 1995).

The Washington State Higher Education Coordinating Board (1993) document preceded the Texas program, and there is no way of knowing if the state board in Texas was aware of the Washington document, but many of the things included in the program at Austin Community College were included in the recommendations related to single parents in Washington. The focus on this document was different than the one from Texas because it was written for single parents. The authors covered the diaspora and took single parents through the entire process of attending college from motivating them to create or find their dream to how to look for a job upon graduation. The report suggested specific considerations for selecting a college, showed students how to apply and described the entire admissions process, explained how to obtain financial aid and from which sources, explained affordable housing, food, childcare,

transportation, medical services, community resources, counseling resources, and provided a lengthy discussion on personal skills. Of the information provided to single parents, the chapter on personal skills and issues stands out because of its tone. The author was very honest with the intended audience about what the college experience would demand on students' lives. The advice given to students was practical and could be easily applied and is useful more than twenty years after publication.

In fact, both documents provided a historical context, or a backdrop, onto which modern single parent programs and discussions about them emerged. The principles and suggestions that both documents set forth continue being relevant to the literature because the same conceptual framework is needed for single parent programs today. The documents can provide a foundation for building a modern program; a new single parent program must of course update itself to reflect changes in technology, student development theory, admissions processes, financial aid regulations, and retention strategies over the last twenty-five years.

Problem Statement & Research Questions

Duquaine-Watson (2010), Austin & McDermott (2004), Yakabowski (2010), King (2002), and the IWPR (2014) showed single parents face numerous barriers to completing college. This study will determine the number of single parents enrolled in Mississippi's community college system, identify their success during their community college enrollment, and compare their success to non-single parent students. This study focuses on an underserved population enrolled in Mississippi community colleges.

The following research questions summarize the focus of the study:

1. What percentage of students enrolled full-time in Mississippi's community colleges are single parents?

2. Does gender affect retention for single parents enrolled in Mississippi's community colleges?
3. Are single parents who enrolled full-time in Mississippi community colleges retained at similar rates when compared to other full-time students who are not single parents?
4. Does race or ethnicity affect retention for single parents enrolled in Mississippi's community colleges?
5. Does single parent status affect cumulative grade point average (GPA) for students enrolled in Mississippi community colleges?

The research questions determine the number of single parents enrolled in Mississippi community colleges and whether the success of non-single parent and single parent students who were enrolled in a Mississippi community college varied. This study defines success as fall-to-fall retention among first time, full time students. Data were collected by contacting each Mississippi community college's institutional research office. These offices queried the colleges' student information system (SIS) to gather the data for this study. The researcher compiled the data so that it could be analyzed in the aggregate. No existing data has been gathered about this population of the state's community college students in the ways this study does. The data from this study provides Mississippi community colleges insight into a group of their students many are only beginning to consider. Further, this study provides these institutions with data they can use to create or to revise student services for both single parent students as well as the general student population.

Population

Nelson, Froehner, and Gault (2013) showed that nationally, students with children comprise nearly one-quarter of all college students in the United States. Nearly two-fifths of

black college students are parents, and Native Americans and Hispanic students are also more likely to have children than the other races and ethnicities. Half of the students in college with children are first generation college students and 75 percent of single parent students in the United States are low income. Parents have more financial demands, yet they have more unmet financial needs than other students. Fifty-six percent of single parents spend at least 30 hours per week on taking care of their children (Nelson, Froehner, and Gault, 2013). This population of students comprises a significant proportion of college students in the United States, and these students face significant barriers that require specialized resources from the colleges they attend.

No data were found that disaggregated the national-level data of single parents enrolled in higher education to know how many single parents were enrolled in Mississippi's community colleges; however, at Northeast Mississippi Community College (NEMCC), nearly 400 single parents were enrolled in the Fall 2014 semester. For NEMCC, the population represents over ten percent of the total enrollment. These students were identified by querying the college's student information system, Banner, using a Microsoft SQL script. The script pulled data from the FAFSA form students completed when they applied for financial aid. At this college 98% of the student population receives some sort of federal student aid, so the population adequately represents the student body. One quarter of all students enrolled in college are single parents, and the majority of research is devoted to female single parents, despite the population containing numerous male single parents.

After reviewing the literature about single parents in college, a focus on college mothers emerged. Little research exists about single fathers in college. While single fathers are certainly enrolled in higher education, the majority of studies about single parents or articles discussing single parent issues focused on the female experience. Goldrick-Rab and Sorensen (2010)

presented the only research specifically on single fathers, noting that fathers were not able to use Pell grants to take college course while in prison. More research is needed to examine the prevalence of single fathers in the college population. This study examines single parents regardless of gender.

Definitions

The definition of *single parent* was determined based on the 2016-2017 Free Application for Federal Student Aid (FAFSA) because the study examines the Fall 2016 freshman cohort who enrolled in a Mississippi community college, allowing the study to gather data through 100% of time to degree, or four semesters.

For the purposes of this study, *single parent* is defined as a person who was not currently married and had a dependent minor living with them at the time they filled out the 2016-2017 (FAFSA). Not currently married meant someone who selected “I am single”, “I am separated”, or “I am widowed or divorced” on item 16 of Step One of his or her financial aid application which reads, “What is your marital status as of today?” (Federal Student Aid, 2016). According to the note on page 9 of the 2016-2017 (FAFSA), this status was determined at the time of signing the FAFSA. If a student’s status changed after signing the FAFSA, they were to contact the financial aid office at the college. The note for question 16 goes further, citing the Defense of Marriage Act (1996), ‘...the word ‘marriage’ means a legal union between one man and one woman as husband and wife, and the word ‘spouse’ refers to a person of the opposite sex who is a husband or a wife’ (Federal Student Aid, 2016, 2). Under the FAFSA’s guidelines for determining dependency, one of the above had to be marked and one of the following conditions had to be present on the student’s FAFSA to be considered a single parent: (a) the student had a child or children who received more than half their support from the student between July 1,

2016 and June 30, 2017, or (b) the student had dependents other than a child or spouse who received more than half their support from the student and who also lived with the student through June 30, 2017. These statements are items 51 and 52 on the 2016-2017 FAFSA (Federal Student Aid, 2016, 5). The second item was included because those who have dependents other than a child or spouse could be grandparents or another relative raising a family member's child or children and would be considered a legal guardian in some cases. This group of persons were functionally similar to single parent because they were caring for another person in the household by themselves and would consequently need similar forms of support and information to be successful college students.

In addition to *single parent*, this study defines *full-time enrollment* as enrollment in 12 semester credit hours. The Integrated Postsecondary Education Data System (IPEDS) (2018) defines a full-time undergraduate student as one who is enrolled in at least 12 semester credits. *Nonparent students* are defined as any student not meeting the criteria to be considered a single parent. This study defines *success* as fall-to-fall retention among first time, full time students. Gender will be defined as binary, male and female, due to the FAFSA gender definition (Federal Student Aid, 2016).

Significance of the Study

This study determines the number of single parents enrolled in Mississippi community colleges as full-time students beginning in the Fall 2016 semester and compares their success by comparing single parents to the rest of the student population. Establishing these baseline data allow Mississippi community colleges to better inform decision-making. As state funding diminishes, each student retained becomes more valuable to each Mississippi community college. For example, state appropriations to the fifteen Mississippi community colleges fell 10%

from fiscal year 2009 to fiscal year 2018, a reduction of \$26 million dollars (Gilbert, 2017). The data from this study may be used to create programming for a population of students that has traditionally been overlooked, so single parent students may be retained at a higher rate. Conversely, if data show single parents are more successful than other students, more research may be done to learn why they are more successful than their nonparent peers. While the colleges benefit with increased state reimbursements, higher retention rates, and graduation rates by focusing on retaining single parents, the students and their communities benefit the most. As Cohen and Bower (2008) discussed, community college student services provide an opportunity to support student development as they transition into college, through college, and out of community college into the workforce.

Significant difference between single parent success and other students should catalyze Mississippi community colleges to provide or reimagine student services programming to increase retention rates, transfer rates, and graduation rates. Targeting this group of people with additional student services to improve retention can have an impact beyond the college's bottom line. Not only does the state of Mississippi reimburse the college for each student who is retained at the six-week mark in the semester, each student will benefit after he or she earns a credential of some form: high school equivalency, workforce certificates, a career certificate, the associate of science, or the associate of arts. According to Statistical Atlas, as of 2013, 28.3% of Mississippi residents have earned a higher education credential. Not surprisingly, the area's per capita income is one of the lowest in the region and in the United States (2015). When combined with ambition and strong work ethic, education is the tool that moves individuals out of poverty. In turn, a community's cultural underpinnings will shift as more residents earn credentials that

prepare them for higher paying jobs. Ultimately, this study could provide an opportunity for Mississippi's community colleges to better serve their students.

Single parents enrolled in Mississippi's community college system should be supported with more student services and deserve specific programs designed to help them as they consider going to college, through the transition to college, and as they move through their coursework toward graduation and the workforce. Community colleges are an entry point into higher education for more than half of all undergraduates in the nation (American Association of Community Colleges, 2011), and many are single parents who have additional stressors beyond what traditional college students experience. For example, single parents live under several time and economic burdens that increase their stress. These factors decrease the likelihood of them being retained and ultimately graduating with a certificate or degree (Hess, et. al, 2014; Goldrick-Rab and Sorensen, 2010). Colleges should provide adequate counseling resources, choices in course scheduling and delivery modes, financial aid support, resource awareness training, activities that build social networks for these students, and help finding affordable childcare or scheduling for single parents. If colleges do these things through a coordinated single parent program such as the models in place at several private institutions and at Front Range Community College, single parents will be retained and will graduate at higher rates. As part of the community college's mission, they have the responsibility to serve people in their districts, including single parents, with the best resources and programs they can muster. This study establishes the baseline for single parent achievement in Mississippi community colleges. The colleges should research best practices and begin offering more support mechanisms targeting single parent success as discussed in chapter 5.

Organization of the Dissertation

This study quantitatively examines single parents within a dataset aggregated from each Mississippi community college to understand how many and how successful single parents are in the 15 state community colleges. Chapter II discusses the challenges and barriers single parents face in obtaining college success, the history of institutions that have focused on helping this population achieve college success, and discusses the supports needed to facilitate single parent success: retaining students and helping them persist to graduation. In addition, the literature review includes the theoretical framework. Chapter III includes the methodological approach, data collection, data analysis, and limitations. Chapter IV contains the research findings, and Chapter V concludes with a summary, discussions, and implications for community college practice and research.

CHAPTER II. REVIEW OF LITERATURE

Introduction

This literature review contains a summary of research focused on the history of applied research aimed at increasing single parent student success in American higher education, of research describing the college experience for single parents, and of research examining various support mechanisms for single parents.

Many college students attending universities and community colleges transition into higher education with little responsibilities beyond attending class regularly and maintaining satisfactory academic progress. Many students, community college students especially, need remediation before tackling core courses such as English Composition and College Algebra. Some students qualify for, apply for, and receive Federal financial aid to make their attending college possible. Others are the first person in their family to pursue higher education. These groups are not mutually exclusive, and for single parents who attend college, many have the same concerns in addition to a unique set of barriers and challenges to their pathway to and through higher education. Single parent programs have been used before to reach those students and provide them with resources, information, support services, and social interaction/engagement opportunities. Programs such as that aim to improve the retention of this population of students, ultimately leading to degree attainment and successful entry to gainful employment in the workforce. Each Mississippi community college student and community could eventually benefit from additional focus on student success.

Community College Retention

Mississippi's fifteen community and junior colleges are required by law to monitor a set of success measures for the state legislature as set forth in H.B. 1071 of the 2010 regular session of the Mississippi Legislature. (Education achievement council). Mississippi's Education Achievement Council (EAC) was created in 2010 by House Bill 1071 to "set education achievement goals for the state and to monitor progress towards those goals through required institutional and state report cards" (Community college performance). The fifteen community and junior college presidents along with each institution's institutional research and effectiveness officer developed the Community College Performance Profile. (Community college performance). This profile contains measures closely aligned with the Voluntary Framework of Accountability, developed by the American Association of Community Colleges. Information on the Performance Profile includes measures on general enrollment data, degrees earned, student success among first-time, full-time cohorts at 100%, 150%, and 200%, fall-to-fall retention of first-time, full-time students, and student progress based on credit hour completion.

In addition to the statutory requirements that hold Mississippi community and junior colleges accountable for their students' success, the Mississippi Code of 1972 Annotated contains a statute providing for annual appropriation of funds to the community and junior colleges (Calculation of funding, 2017). In order to fulfill this statutory requirement, annually the Mississippi legislature passes a community and junior college appropriation bill that provides a portion of the state's budget for the community and junior colleges and specifically defines which students may be counted for state reimbursement (Calculation of funding, 2017). The appropriation bill states that funds for academic, career, technical, and associate degree allied health programs "shall be disbursed on the basis of prior year full-time equivalency (FTE) of

hours generated [...] for each public community and junior college student actually enrolled and in attendance the last day of the sixth week of each semester, or its equivalent, counting only those students who reside in the state of Mississippi” (Enrollment audit and reporting guidelines).

The enrollment audit and the performance profile incentivize focus on student success above and beyond the mission statement, core values, and strategic plan because each college’s state funding is linked to keeping students on campus at least through the eighth week of classes. The Mississippi Community College Board expects the Education Achievement Council to link measures from the performance profile to funding as well, but the EAC has not determined to what degree.

In addition to Mississippi’s statutory requirements for meeting student success measures, national data suggest Mississippi community colleges pay attention to completion rates. The National Student Clearinghouse Research Center published the *Signature Report & State Supplement: Completing College: A State-Level View of Student Attainment Rates* in 2015 comparing completion rates state-by-state (Shapiro, Dundar, Wakhungu, Yuan, & Harrell, 2015). This state supplement considered six-year outcomes for students in numerous categories, most notably to this study were the tables for students who started at two- year public institutions. The report included one table with outcomes for all students, for male students, and for female students. The relevant data from the *Signature Report* are summarized in Table 2.1 below:

Six-Year Completion Rate % of Students Who Started at Two-Year Public Institutions

	Overall	Males	Females
United States	39.13	36.41	42.62
Mississippi	46.01	44.30	49.08

These data show Mississippi's community college population completes college at a rate higher than the United States average. Additionally, while females complete at the highest rate, nearly 12% more males who begin at a Mississippi community college complete college than the national average. No data were found in the literature comparing the outcomes of single parents to those outcomes of the population who were not parents. The Integrated Postsecondary Education Data System (IPEDS) does not gather detailed FAFSA completion data regarding child and/or dependent status. Data on the student financial aid survey is reported in the aggregate by the entire fall cohort (2017).

Schuetz (2008) showed that almost half of community college students are not retained, and McClenny (2007) showed that these students often leave early in the first semester of college. Consequently, interventions are needed to retain community college students. Schuetz (2008) also showed that increased participation in non-classroom events and programs on campus led to increased retention; however, 84 percent of students do not participate in additional activities (McClenney & Greene, 2005). Nakajima, Dembo, & Mossler (2012) investigated factors likely influencing a community college student's decision to stay in school or leave school. Their study found several variables that influence a student's decision. The most notable factors were age and high school graduation year. Younger students persisted at higher rates than older students in the study, and students who graduated high school in 2004 or earlier, passed the GED test, or never graduated high school had the lowest rates of persistence. Students in the study who received financial aid persisted at higher rates than those who did not receive any financial aid. Those who worked more hours were less likely to persist than those who worked less hours. The study also showed that enrolling in more credits per semester led to more academic success. Interestingly, faculty interaction with students in the study did not increase

persistence, suggesting that simple interaction with faculty is not enough to influence a student's decision to stay in college; however, perceived faculty interest and concern was a significant predictor of persistence for Nakajima, Dembo, & Mossler (2012). Students who perceived faculty having concern for them persisted at higher rates.

Mertes and Hoover (2014) produced data with similar results to Nakajima, Dembo, & Mossler (2012). Younger students were retained at higher rates than those in older age groups. Female students were retained more frequently than males, and those who received financial aid were also retained at higher rates and so were White students and those who were enrolled in at least 12 credit hours. High school grade point average (GPA) was also a significant predictor of community college retention.

In addition to environmental factors, other studies examined the role of a first-year freshman seminar or orientation course in community college student retention (Ryan, 2012; Derby & Smith, 2010). Ryan (2012) anecdotally showed that students enrolled in a freshman seminar course taught by a specially trained faculty member serving as the students' advisor earned a higher GPA than other students enrolled in sections taught by other instructors. Students in the experimental sections were also retained at higher rates (Ryan, 2012). A confounding variable not controlled for in this study was many students enrolled in this course were not first-semester students.

Derby & Smith (2012) found a significant relationship between taking a freshman orientation course and completing the two-year associate degree. A greater proportion of students completed their two-year degree after enrolling in an orientation course at one Midwestern community college than those students who did not enroll in an orientation course. Additionally, fewer students dropped out of college who were enrolled in an orientation course

than those who did not enroll in the course. Those who did stop out after taking the orientation course were more likely to reenroll after a break than those who did not take the orientation course. Similarly, students who took the orientation course persisted (completed four semesters of course work within a two-year period and averaged at least a three-course load) more frequently.

Mayo (2013) goes a step farther than Ryan (2012) and Derby & Smith (2012) by providing guidelines for establishing first-year experience programs within community colleges and by identifying essential components of first-year programs. Mayo (2013) suggested that putting one individual in charge of first-year experience or college orientation courses made the programming more successful by placing accountability on one person. Otherwise, Mayo (2013) argued that without a single person who is responsible for the programming, the responsibility and thus the quality of the content and its effectiveness are shuffled between student and academic affairs. Second, Mayo (2013) said to create a team to deliver the initiative, and finally Mayo (2013) said to include a multidisciplinary group of faculty members and to avoid focusing solely on retention.

The key components of the programming should include various types of interaction: student-to-student, providing peer support, faculty-to-student, providing influence on students' decisions to maintain enrollment, and student-to-campus, providing opportunities to engage with campus activities (Mayo, 2013). Price and Tovar (2014) supported Mayo's assertion (2013) with data from the Community College Survey of Student Engagement (CCSSE). Student engagement and graduation rates were statistically associated, and active and collaborative learning practices as well as support for learners impact the level of engagement and consequently graduation rates. Both college-wide and classroom-based activities can increase

engagement. Price and Tovar (2014) suggest several active and collaborative approaches to increase interaction and engagement between students and faculty and students such as:

- Requiring group projects during class,
- Encouraging group work outside of class,
- Creating peer tutoring opportunities,
- And promoting students to use the faculty's time outside the classroom to engage about readings or classes.

Goldrick-Rab (2010) presented 14 policies and practices that “represent the most promising areas for reform” (p. 454). These 14 policies and practices were the most popular and/or well-evaluated, according to Goldrick-Rab (2014). These include performance-based funding, simplifying the FAFSA, articulation agreements, the community college baccalaureate, developing career pathways, contextualized learning, learning communities, student life skills courses/success centers, smaller counselor-student ratios, dual enrollment, early assessment programs, performance-based scholarships, and emergency financial aid. Goldrick-Rab (2010) warned that despite the 14 efforts she listed having financial and/or political support from state and local governments and philanthropies, much of the evidence about their efficacy is new. While the policies and practices she discussed were potentially best practices for increasing student success, not enough data were available for Goldrick-Rab (2010) to fully recommend each of the practices. Further, Goldrick-Rab (2010) criticized many studies for identifying best practices without being able to link any one particular practice to higher rates of student success. She called for a “much more rigorous research agenda focused on community college students [...] to inform and evaluate future actions” (Goldrick-Rab, 2010, p. 454).

The literature often discussed community college retention by applying one of the most prominent retention theories in retention literature. Tinto (1975), (1993), Astin (1984), and Astin, Korn, and Green (1987) provided theoretical approaches to community college retention. Tinto's Interactionist Theory (1993) posited that a student's integration into college was determined by background characteristics such as race, gender, family, educational and financial context, and high school accomplishments. The background characteristics influenced the student's commitment to college as well as her goals (Tinto, 1993). According to Tinto's (1993) model, those students who can integrate more deeply into the academic and social structures of the higher education institution are most persistent.

Though students enter college with the background characteristics Tinto (1993) identified, college students move through three stages: separation, transitions, and incorporation. In the separation stage, students loosen engagement with prior groups such as family, friends, previous institutions, and communities. As students enter the transitions phase, they feel an awkwardness as they do not yet feel assimilated into their new surroundings, yet they feel a growing distance from their previous support groups. Finally, students reach the incorporation stage once they are fully incorporated into both the academic and social realms of their college. Depending on how well students are incorporated into the structure of their college determines how committed a student is to the institution and thus to persisting. Astin (1984) theorized that a student's involvement in college life activities drove the student's persistence. Involvement for Astin (1984) equated with psychological and physical well-being. The quality and quantity of involvement in Astin's (1984) model influences learning and development. The degree to which a college is able to increase involvement determines how effective the college's educational practices are. This model depends on environmental variables to influence the retention equation.

National Community College Student Success Initiatives and Retention

On Tuesday, July 14, 2009 President Obama gave a speech at Macomb Community College in Warren, Michigan in which he introduced a plan called the American Graduation Initiative, which aimed to increase college completion (1) by offering competitive grants for outcomes based strategies and improving remediation, creating a research center to evaluate which strategies worked and which strategies did not, tracking student progress and learning about barriers to completion, (2) by providing \$10 billion in loans for community college facilities renovations, and (3) by creating an online, open-source clearinghouse of courses that community colleges could offer courses within. set a goal of increasing the proportion of the population with a college credential (Obama, 2009 <https://obamawhitehouse.archives.gov/the-press-office/remarks-president-american-graduation-initiative-warren-mi>).

Obama said, “By 2020, this nation will once again have the highest proportion of college graduates in the world” (2009). Specifically, President Obama set a goal that at least 60 percent of 25- to 34- year olds would have a college credential by 2020. In a follow-up speech at Macomb in 2015, Obama said, “[...] education has always been the secret sauce, the secret to America’s success” (Obama, 2015). His words from 2009 have propelled American community colleges for the last decade and continue to influence retention and student success work among community colleges. The American Graduation Initiative never took off because Congress only partially funded the initiative, but the idea President Obama espoused lived on.

New organizations were formed, and existing organizations retooled as a result of Obama’s American Graduation Initiative, assuming the responsibility of improving college completion rates. Several organizations were created to address student success in United States community colleges. Beginning in 2011, the Bill & Melinda Gates Foundation funded an

extensive reform effort to increase graduation rates and to decrease the time to completion for low-income community college students by transforming the student experience both academically and through student services. Participating colleges set goals, gathered more data and improved how they used the data, employed peer learning, and garnered external support. The college experience was reimagined, and policies and practices were changed to lift success on five key indicators: passage of introductory math, passage of introductory English, first term credit completion, first year credit completion, first year completion of classes in major. The Gates Foundation created and funded an organization named Completion by Design in order to help colleges carry out these goals. The Gates Foundation ended Completion by Design in 2018 after the nine participating colleges in Florida, Georgia, and Ohio met their targets three years ahead of schedule (Community Colleges Mounted Ambitious, Completion by Design).

Completion by Design created a loss/momentum framework to support college personnel in intentionally fabricating detailed pathways for each student. The loss/momentum framework contains four parts: connection, entry, progress, and completion, and each part of the framework provides both points at which students may be lost and points at which students may gain momentum, depending on the strategies the college employ. For example, according to Completion by Design, a loss point for students in the progress stage is being a low-income student who have to work and go to school and who work more than 20 hours per week. A momentum strategy to combat the loss point are programs that incentivize attendance (Progress). The framework also lists questions different colleges units should ask at each point in the framework in order to optimize the student's success along the pathway.

Similar to Completion by Design, the Lumina Foundation picked up the American Graduation Initiative's goal of increasing the proportion of people with college credentials to 60

percent by 2020. Lumina has since revised their time for meeting the goal to 2025 (Lumina's Goal). Lumina published research and continues publishing research on the student completion initiative and provides grants to institutions and state community college systems. Grant opportunities with Lumina are centered around strategies to increase student success such as mobilizing employees to work toward student success, advancing state and federal higher education policy, creating new higher education models, metrics, competency-based learning, quality assurance, and equity (Grants Database <https://www.luminafoundation.org/grants-database>).

The Lumina report titled "A Stronger Nation Through Higher Education" was first published in February 2009, shortly after newly inaugurated President Obama addressed Congress for the first time. In this first report, Lumina wrote, "Improving higher education success rates is a critical national priority, particularly in community colleges, where most low-income, first-generation students begin higher education. However, making such improvements will be impossible without better data" (Matthews, 2009, 5). "Stronger Nation" asserted that "everyone" (p. 4) agrees that colleges have a duty to offer quality educational programs to its students. The report also said, "We will also agree that programs and institutions should support the success of students in meeting their goals. Unfortunately, research suggests that there is little consensus on what this means; it also shows that we are unable to clearly determine whether an institution actually provides quality courses and supports student success." (Matthews, 2009, 4).

The report went on to blame higher education data collection at the federal, state, and institutional level for not collecting enough data on student learning outcomes and on the results of higher education in general. If a college did gather data through learning outcome assessments, it could not compare its data with other colleges, making benchmarking nearly

impossible, as well as not being able to learn about different ways of improving student learning outcomes. As a solution, the report supported national efforts toward more transparency and accountability for colleges, states, and federal data systems in order to improve student learning outcomes (Matthews, 4-5).

A 2015 book by Bailey, Jaggars, and Jenkins titled *Redesigning America's Community Colleges* changed the trajectory of many community colleges as well as the aforementioned private philanthropic organizations such as the Lumina Foundation and Achieving the Dream. The authors were heavily influenced by their experiences at Achieving the Dream institutions. Baily, Jaggars, and Jenkins (2015) argued for wholesale transformative changes at community colleges. Instead of offering a cafeteria model for students in which students use their agency to select what courses, programs, student services, and supports they want, the authors encourage community colleges to adopt a guided pathways model. In this model, the institution provides a clear path for each student by providing a clear program structure and map with well-defined learning outcomes. If a student does not have an educational goal, the college helps that student choose a broad field of interest, called a pathway or meta-major, giving the student a taste of the field. Guided pathways colleges mandate student success courses and offer explicit career counseling.

Academic advising focuses on students meeting academic milestones and tracks progress with automated alert systems. Instruction develops students' metacognitive skills, fosters collaboration between peers, and incorporates technology to leverage learning. Development education courses in guided pathways community colleges is delivered mostly through co-requisite courses. *Redesigning America's Community Colleges* took lessons learned from the completion agenda's stakeholders in both the public and private sectors and applied them to a

new framework. Bailey, Jagers, and Jenkins (2015) devoted considerable space to provide strategies that would engage faculty and staff across campus to generate buy-in across the entire institution. They saw lack of campus-wide buy in as a weakness of their earlier experience with Achieving the Dream.

Due to the increased awareness of community colleges and the focus on community college retention in the last decade, thanks to the Obama administration's promises and goals and organizations such as Completion By Design, Achieving the Dream, the Lumina Foundation, and the American Association of Community Colleges, research about community college retention and student success has blossomed. In addition to the reports published by these organizations and others like them, researchers have zeroed in on studying community college student retention in many facets from factors affecting students to drop out or to stay in school, how interventions affect retention, which student services improve retention and completion, as well as numerous studies about student services programming's effects on community college student retention. College student retention is not a new field: retention has been studied for over 70 years (Braxton & Lein, 2000, as cited in Nakajima et al., 2012). However, community colleges, with their open admissions policies, have not focused on retaining students as intently as they have since Obama's calls for increased transparency and outcomes.

Nakajima et al. (2012) examined community college student persistence by investigating the effects different factors had on retention. Nakajima et al. (2012) argues that the traditional models used to study college retention are not adequate for community college students since many are first generation attendees with different backgrounds and characteristics than students attending four-year institutions with some admissions criteria. For example, four-year institutions have considered Tinto's Interactionist Theory (1993) which states that students come to college

with manifold background characteristics and experiences from their K-12 schooling. Those characteristics and experiences, according to Tinto (1993), influence students' initial commitment to the college, their goals, and influence their interaction and integration with the college's support services. Students whose parents attended college are more likely to integrate into their new environment thanks to their parents' experiences that were shared. Tinto's model (1993) says that increased integration into the student's college social, academic, and support services environment will lead to increased persistence (Nakajima et al., 2012).

Unlike Tinto's (1993) Interactionist Theory, Astin (1984) theorized that the more students are involved in college life, the more likely they are to persist. The student's involvement in college life means both physical investment such as attending events and mental investment such as engaging with new ideas. Astin (1984) says the more students are involved and the quality of their engagement directly influences student learning (Nakajima et al., 2012). Mertes and Hoover (2014) also argue that many researchers have tried to apply retention models developed from the four-year arena with mixed results, pointing to several studies that counteracted the other. One study found academic and social integration to be factors affecting community college retention; another study found only academic integration a significant predictor of success. Another study found the relationship between persistence and academic and social integration dependent on age, suggesting more nuance for the community college student. For older students, social integration was more strongly related to persistence, and for younger students, academic integration was more closely related to persistence (Mertes, S.J, and Hoover, R.E., 2014).

Grade Point Average and Retention

Nakajima et al. (2012) found cumulative GPA the greatest predictor of student success in community college students they sampled. Students in their study were twice as likely to be retained when cumulative GPA increased by one standard deviation. Cumulative GPA and career goals were significantly correlated, asserting that students with clear career goals who knew how to move toward the goals put in more work toward academics which in turn increased their cumulative GPA (Nakajima et al., 2012). Davidson and Wilson (2017) assert that grade point average is direct feedback to the students, so students who receive higher grades are validated. They feel more engaged and experience a stronger sense of belonging than those students who have lower cumulative grade point averages. Many researchers have over the last twenty-five years have found GPA to be a predictor of persistence. Davidson and Wilson (2017) cite numerous studies that found community college students who had higher GPAs persisted at higher rates (Aragon & Johnson, 2008; Craig & ward, 2007-2008; Hawley & Harris 2005-2006; Hoyt, 1999; Nippert 200-2001; Simmons, 1995). Recent research such as Nakajima et al. (2012) continue to support earlier findings that cumulative GPA affects community college students' retention. Yu (2017) found that high school GPA was a significant predictor of community college student retention. Yu's (2017) conceptual framework was Pascarella's General Model for Assessing Change which, like Tinto (1993), considers background characteristics and K-12 experiences as factors affecting retention. However, Pascarella's model incorporates the student's experiences while in college, similar to Astin (1984).

Davidson and Wilson (2017) present a conceptual framework based on several studies affirming cumulative GPA as a strong retention predictor. Their framework is called the Collective Affiliation Model and encourages community colleges to respond to the needs of the

student rather than ask the student to respond to the needs of the institution. The model turns Tinto's (1993) Interactionist Theory on its ear because the Collective Affiliation Model asserts that community college student retention is based on the student's ability to integrate into the academic and social spheres of the college, but retention is based on how well the community college can affiliate with the student. The Collective Affiliation Model places the onus on the institution for retaining students (Davidson and Wilson, 2017).

Other Retention Factors

Success/Orientation Course Enrollment

Windham et al. (2014) found that student success courses increase community college student retention. First-time, full-time students with an ACT Compass score who completed a study skills course were nearly 64% more likely to retain fall-to-fall. Students withdrawing from the study skills course were 81% more likely not to be retained from fall-to-fall. Earlier, Derby and Smith (2004) found a significant association between students who enrolled in an orientation course and degree attainment, as well as a significant association between student who enrolled in an orientation course and persistence. Students who enrolled in an orientation course were more likely to be retained over time and eventually complete their degree. Both Windham et al. (2014) and Derby and Smith (2004) showed enrollment and engagement in a course focused on helping students transition to their new environments positively affected community college student retention. Mayo (2013) discussed guidelines for establishing first-year experience programs, which would include a student success component and an extended orientation to the college. Mayo (2013) mentioned things such as supporting personal contacts among peers, faculty interaction with students, increased involvement with student activities, goal setting, and

value development. All are things Astin's (1984) theory supported because they increase engagement on the college campus.

Windham et al. (2014) also found age and gender to be significant variables affecting fall-to-fall retention of community college students. Females in their study were 94% more likely to be retained than males. Students aged 19-24 were 25% less likely to be retained than 18-year-old students. First-time, full-time freshmen students age 40 and over were 70% more likely to be retained than 18-year-old students. Finally, the study found the ACT Reading Compass score, a college placement test, a significant retention predictor. For each unit increase in a student's score, fall-to-fall retention increased 1.2%. Mertes and Hoover (2014) found ethnicity, credit load, math placement score, and receiving financial aid factors significant to community college students being retained. Ryan (2013) found that when instructors of a freshmen experience course acted as both instructor and advisor to students enrolled in the freshmen experience course, students in the experimental sections had higher semester GPAs and were retained at significantly higher rates than students taking the control sections of the course. Instructors in the control sections did not serve as advisor to students enrolled in the course. Ryan (2013) did not conduct inferential analysis on the data, but the descriptive statistics suggest the instructor as advisor model in a success course or freshmen seminar course deepens the relationship between faculty and student and leads to improved outcomes.

Engagement

Price and Tovar (2014) analyzed the results of 2007 administration of the Community College Survey of Student Engagement (CCSSE). The article mentioned the Lumina Foundation, the Gates Foundation, American Association of Community Colleges, League for Innovation in Community Colleges, and others for their efforts to increase student retention. Across the

literature on community college retention over the last decade, these organizations are mentioned as groups moving the conversation about retention forward. Price and Tovar (2014) said, “The challenge with this completion agenda is that no one solution or program is a panacea” (p. 767). As the literature suggests, increasing community college student retention requires multiple strategies. Through their analysis, Price and Tovar (2014) found three engagement factors that were correlated to a statistically significant degree with the Integrated Postsecondary Education Data System (IPEDS) graduation rates: active and collaborative learning, student-faculty interaction, and support for learners. In short, student engagement is a predictor of community college completion among the 2007 cohort of institutions participating in the CCSSE (Price and Tovar, 2014).

Godfrey et al. (2017) cited several studies that have shown the number of items a student checks out from the library or accesses via online library services is positively correlated with grade point average. The authors cited a study conducted by the University of Wyoming on its graduating seniors that found students who participated in high level information literacy courses had higher GPAs. Based on that quantitative data, a University of Utah library created family-friendly spaces such as a family reading room and moving its juvenile room next to the family reading room in its library so that student parents would spend more time in the library or even come in the first place. Children were welcomed into the family reading room so long as they were supervised. Godfrey et al. (2017) collected survey data to evaluate their efforts and to learn how to improve. The authors did not study lift in GPA or retention, but the colleges efforts invoke the call Davidson and Wilson’s (2017) Collective Affiliation Model made for colleges to seek activities that affiliate the institution with students.

Psychosocial Factors

Mahlberg (2015) found metacognitive tasks such as formative self-assessment positively related to retention. Through self-assessment, students are expected to learn about how to self-regulate their behavior as they move through the learning process. As students assess their own performance, the instructor provides formative guidance that helps students improve performance. As students become accustomed to this iterative process, they gain self-confidence and begin making more independent critiques of their performance as they work on assignments; hopefully, they self-regulate early enough to preserve a high letter grade on the assignment (Mahlberg, 2015). Students in the study who were enrolled in courses using self-assessments were retained at a higher rate than students enrolled in courses not using self-assessments. Students practicing self-assessment enrolled in more credits the following fall semester, and this group self-reported being more prepared for class, setting goals, reflecting on their learning, and modifying their study habits as a result of self-assessment.

Through meta-analysis, Fong et al. (2017) studied five psychosocial categories: motivation, self-perceptions, attributions, self-regulation, and anxiety. The relationship between these five categories were examined with two student success outcomes: community college persistence and achievement. Fong et al. (2017) found that, overall, self-perceptions and motivation were positively related to community college student persistence. Four psychosocial variables: self-perceptions, motivation, attributions, and self-regulation were positively related to community college student persistence. Mahlberg's (2015) findings about self-regulation were similar to Fong et al. (2015). Both studies found a correlation between self-regulation and short-term achievement, such as a course grade. A weaker correlation existed between self-regulation and persistence.

Faculty Employment Status

Hutto (2017) found a correlation between community college course retention and faculty employment status. She focused her study on the general education core curriculum in one Florida community college. Hutto (2017) compared course retention with the faculty member's employment status: permanent or adjunct. Permanent faculty were required to teach their courses and engage in other activities such as advising, hold office hours, had office space, were required to participate in campus life such as committees, student organizations, meetings, and extracurricular activities. Adjunct faculty only had to teach their assigned courses, had not dedicated office space, and did not hold office hours. The correlation Hutto (2017) found revealed adjunct faculty had better course retention (letter grade a C or above) than permanent faculty. Hutto's (2017) explained how adjunct faculty may have had better course retention results by attributing it to adjunct faculty teaching the majority of first year general education courses at the college studied. Permanent faculty at that institution most often teach sophomore courses such as literature surveys and higher-level math and science courses.

Academic Advising

Hatch and Garcia (2017) studied the effects of academic advising on community college students in their first weeks of college. The researchers' most significant finding was the increased odds that minority students had no current plans to return to their community college. Minority students were three times more likely to say they would accomplish their goals in the current term and not return than White students. Hatch and Garcia (2017) concluded that the relationship between having plans to return and racial and ethnic group was indicative of "broader structural issues" (Hatch and Garcia, 2017, p. 371). Among variables Hatch and Garcia (2017) identified as bridge variables. They defined bridge variables as "unique characteristics

that arise due to their entry into a college, shaped by their background circumstances and the particular activities and programs offered by the institution” (Hatch and Garcia, 2017). The study considered academic goals the main bridge goal. Full-time or part-time enrollment, enrolling in at least one developmental course, receiving financial aid, when students registered for classes, and not participating in an orientation course, participating in an orientation program, or participating in an extended orientation program were other bridge variables. Of the bridge variables, Hatch and Garcia (2017) found having academic goals gave students the greatest odds of seeking a credential or transferring. For students without an academic goal, their odds of not returning were significantly higher. Another notable result was the longer a student was enrolled in an orientation program or course, the more likely they were to return the next semester (Hatch and Garcia, 2017).

Population

According to the American Association of Community Colleges (AACC) (2018), the United States community college diaspora is comprised of 1,103 public, tribal, and independent colleges. A total of 12.1 million students were enrolled in United States community college in the Fall 2016 semester, including both credit-bearing enrollment and non-credit enrollment. The average age of students in this population cohort was 28, and the median age was 24. Of those who were enrolled for credit, white students made up the greatest percentage of students at 47%, Hispanic students were next at 24%, and black students were third at 13%, Asian/Pacific Islanders made up 6%, and other categories made up the remaining 10%. Thirty-seven percent were enrolled full-time, and 63% were enrolled part-time (American Association, 2018).

Perhaps more telling than 63% of students being enrolled part-time is the percentage of students who were first generation students and single parents. Thirty-six percent were first

generation college students and 17% were single parents (American Association, 2018). Among the entire college-going student population in Fall 2015, community college students represented 41% of all U.S. undergraduates and 40% of all first-time freshmen, and 58% of community college students received some form of financial aid to attend (American Association, 2018). Contrast the student profile among community colleges with 4-year public institutions, and differences emerge between the student populations. Beginning with access to higher education, 98% of community colleges are open admissions institutions and only 22% of public, four-year institutions have no application criteria (National Center for Education Statistics, 2018). In contrast to public community colleges, according to the National Center for Education Statistics (NCES) 53% of students at four-year institutions were white, 19% were Hispanic, 12% were black, 7% were Asian/Pacific Islander, and the remaining 9% were a combination of those who identified as two or more races or were nonresident aliens. (Table 306.5, 2016). According to an NCES Fact Sheet, in 2015-2016 at public four-year institutions, 83% of first-time, full-time undergraduate students received some form of financial aid, a percentage that is significantly higher compared to the nation's community colleges. This difference is likely due to differences in cost of attendance (2017). After reviewing the literature about single parents in college, a focus on mothers emerged after finding little research about single fathers in college. The vast majority of studies about single parents or articles discussing single parent issues focused on the female experience. Goldrick-Rab & Sorensen (2010) presented the only research specifically on single fathers, noting that fathers were not able to use Pell grants to take college courses while in prison. More research is needed to examine the prevalence of single fathers in the community college population. Since little existing research examines single parent fathers who are enrolled in college, this study will focus on all single parents, regardless of gender.

According to the Institute for Women's Policy Research (IWPR) (2014), the student parent population among all college students increased 30 percent over the eight-year period between 2004 and 2012. The Southeast region, including Mississippi saw a 25 percent increase during that time, and 27 percent of the undergraduate population in the Southeast were parents. Nearly one third of all undergraduate women were mothers, and in the Southeast, 62.2 percent of single parents were mothers. Almost half of black women students who are mothers while in college are single; black women in general are more likely to be mothers while in college. Compared to the black population in the Southeast, only 27.8 percent of white women were mothers in the 2011-2012 academic year. IWPR data analysis showed that single parents completed college at the lowest rate of any group based on dependency status, parent status, and marital status (Noll, E., Reichlin, L, and Gault, B., 2017).

Earlier, Nelson, Froehner, and Gault (2013) showed that nationally students with children comprised nearly one-quarter of all United States college students. Two-fifths of black college students are parents, and Native Americans and Hispanic students are also more likely to have children than other races and ethnic groups. Nelson, Froehner, and Gault's (2013) data differs from the IWPR study published in 2014, possibly due to students self-reporting. This study will more accurately identify the single parent population by using FAFSA data. According to the National Center for Educational Statistics (2016), 71% of students enrolled in two-year colleges applied for aid in the 2011-2012 year, which was the latest year available. Half of the students in college with children are first generation students, and 75 percent of United States single parent students are low income. Fifty-six percent of single parents spent at least 30 hours per week taking care of their children. Since three-quarters of single parent students may be categorized as low income and must spend a large amount of time taking care of their children, single parent

students need significant financial support to initially matriculate and to remain enrolled semester after semester.

Despite having national data on the number of single parents enrolled in college, no data were available. LifeTracks, a statewide longitudinal data system housed at Mississippi State University and created by the National Strategic Planning and Analysis Research Center (nSPARC), indicates Mississippi’s fifteen community and junior colleges enrolled 16,736 entering freshmen students in the Fall 2016 semester. Of this cohort, 39% identified as male and 61% identified as female. Just over 47% were under 20 years old and 68% entered college seeking the Associate of Arts degree. The race and ethnicity, age group, and program of study data is found below in Table 1. No study has researched single parent success in Mississippi’s community colleges, and none have compared single parent success with the rest of the college student population. This study will provide the first look at a vulnerable population within Mississippi’s community college system.

Table 2.2 Demographics of Fall 2016 Mississippi Community College Cohort

Race & Ethnicity	Asian	0.92%
Race & Ethnicity	Black	37.97%
Race & Ethnicity	Hispanic	1.70%
Race & Ethnicity	Native American	0.55%
Race & Ethnicity	White	53.22%
Race & Ethnicity	Other	5.64%
Age Groups	<20	47.24%
Age Groups	20-24	28.37%
Age Groups	25-34	14.08%
Age Groups	35-50	8.30%
Age Groups	>50	1.93%
Program of Study	Associate of Arts	68.29%
Program of Study	Associate of Applied Science	16.43%
Program of Study	Career Technical Certificates	5.13%

According to LifeTracks, among the 64,087 for-credit students enrolled in the Fall 2016 Mississippi community college cohort, the demographic breakdown was consistent with the overall demographic was consistent with that of the entering freshmen, as shown in Table 2.3:

Table 2.3 Demographics of Fall 2016 Cohort of For-Credit Students in Mississippi Community College

Race & Ethnicity	Asian	.85%
Race & Ethnicity	Black	38.58%
Race & Ethnicity	Hispanic	1.89%
Race & Ethnicity	Native American	0.53%
Race & Ethnicity	White	54.52%
Race & Ethnicity	Other	3.63%
Age Groups	<20	49.78%
Age Groups	20-24	27.32%
Age Groups	25-34	13.35%
Age Groups	35-50	8.30%
Age Groups	>50	1.74%
Program of Study	Associate of Arts	67.07%
Program of Study	Associate of Applied Science	15.76%
Program of Study	Career Technical Certificates	5.73%

Barriers

Some scholarly articles (Duquaine-Watson, 2007; Austin & McDermott, 2004) discussed the challenges single parents face, and the crux of them is that welfare reform has made attending college more difficult for single mothers. Those articles discussed the limited level of student support services for single mothers on college campuses. Duquaine-Watson found through interviews and through first-hand observations that peer culture stigmatizes single mothers. Further, Yakaboski (2010) wrote about several barriers for single mothers, and her research overlapped the others mentioned here. She cited several institutional barriers such as welfare reform that requires a mother to focus on work first and school second. Working more

than part-time negatively affects a students' success (King, 2002). Welfare policy creates a barrier to higher education.

An additional barrier is access to childcare, especially outside the working hours of 8:00 a.m. to 5:00 p.m. In order to provide after-hours childcare, colleges may have to devote a substantial amount of additional funds for staffing, especially if the college does not have an existing facility. More staff may have to be hired even if the community college has an existing childcare center. For single mothers receiving federal welfare assistance and working full time hours, there is no option for childcare after 5:00 p.m. The institution can lower this barrier by offering childcare after 5:00 p.m. or by providing institutional scholarships for single parents that could assist them in paying for after-hours childcare. Again, increasing the number of institutional scholarships may present too large a financial increase for a community college to adopt that practice, unless the college is willing to earmark existing institutional scholarships for single parents. If a college chose to provide an institutional scholarship, it would not affect the single parent's financial aid. The Office of Federal Student Aid defines financial need as the cost of attendance minus a student's expected family contribution (Federal Student Aid). Further, Yakaboski (2010) argued the institution should provide resources on how to find and evaluate childcare providers. Yakaboski (2010) addressed the stereotyping of single mothers; she said that much of the rhetoric about single mothers is negative. In turn, lawmakers and policymakers hold the negative stereotype when making decisions that ultimately negatively influences the type of policies made as well as the public's opinion of the group (Yakaboski, 2010).

Support Mechanisms

Single Parent Programs

Historically, single parents enrolled in community colleges were not singled out as a population that was given additional support; however, two programs emerged through the research that did offer additional student supports as mentioned earlier. Austin Community College had a comprehensive program in the early 1990s offering wraparound student supports for single mothers in career and technical programs. The Washington State Higher Education Coordinating Board also published a report in the early 1990s guiding colleges to offer additional supports for single parents in college. No research studies were found showing any Washington community college implemented the recommended supports in the form of a comprehensive single parent program. These programs recommended and/or included providing individual and group counseling, grants to help single parents pay for living expenses and tuition and associated fees, workshops on developing financial literacy and study skills, among other personal skills, connecting single parents with community resources, and connecting the population to resources for affordable housing, transportation, and childcare. The types of supports recommended 1993 and 1995 by Austin Community College and the Washington state board continue to be utilized in student success programming as part of single parent programs.

Existing single parent programs seek to help single parents, and mostly single mothers, overcome the various barriers that prevent a single mother's access to higher education or that prevent the student from succeeding while enrolled. The programs identified through the research saw the same equation for student success. Colleges must first recruit and enroll the single mother, then must provide adequate student support services to retain them, which will ultimately yield single mothers who are graduates of the institution. The Institute for Women's

Policy Research (IWPR) listed 49 programs for single parents (2014). Of those, many of the community college single parent programs are specifically related to childcare resources. Ten of those are comprehensive programs. The remaining community college programs provide only childcare resources. Duquaine-Watson (2007), Austin & McDermott (2004), and the IWPR (2014) all argued that single parents do not have adequate access to childcare. Since many articles and single parent programs are focused on it, childcare should be a priority of any single parent program.

Despite the seemingly significant number of single parent college programs the IWPR listed in its materials, the majority of them dealt with childcare issues. For a community college, providing childcare would require resources that many would not have due to decreased state and local support. Consequently, looking to other single parent programs provided a better picture of how to craft a program at a community college. A superficial audit of college's websites using search terms such as "single parent program," "college single parent," "single mother college initiative," and "single mother program" returned results from many institutions not listed by the IWPR. The vast majority of these programs were at private colleges and universities in which resources may be able to be devoted to special programs such as a single parent program. Regardless of the reason for their existence, these private colleges provided many common elements in their programs (Champlain College 2014, Wilson College, Endicott College, & Berea College). Berea College transcends the other programs because it combined multiple initiatives to meet students' needs. It built 50 apartments, a child development lab, and several buildings that demonstrate the college's commitment to sustainable building practices. The two goals of providing housing and childcare to single parents and building sustainable buildings are linked metaphorically. The college is helping ensure the sustainability of the community and the

workforce by providing resources to those who need it while literally promoting the sustainability of buildings.

The most notable community college with a single parent program is Front Range in Colorado because they are able to do much for students with a smallest amount of additional institutional resources. Berea's program would be difficult to accomplish at a Mississippi community college that relies on millage from local boards of supervisors. In addition to limited local funding, the state has also failed to fund community colleges to the level legislated by its own body several years ago (Calculation of funding, 2018; Gilbert, 2017). Front Range did this by building a web page for their single parent program and having a well-organized list of supports and resources for single parent students. Front Range offered academic advising services, career counseling and planning, referral and advocacy, financial aid guidance, educational workshops and social activities, and health and wellness advising ("Single Parent Program," 2014). The web page serves at least two purposes, marketing and functional support. Single parents interested in attending Front Range may see their page dedicated to single parents and implicitly know they are welcomed and supported at this college. Upon further inspection and perhaps after enrolling, single parents have an easily accessible web page to get connected with resources to help them successfully navigate their college experience.

Counseling

Multiple writers discussed providing counseling services directed to single parents. This thread was common across a twenty-year span of the literature ("Washington State Higher Education Board," 1993; Turner & Thompson, 2014). Essentially, every text reviewed with the exception of Sabourin & Irwin (2008) discussed the need of providing counseling services in three areas to single parents. The first form of counseling recommended was financial aid

(Wilson, 2011; McKinney & Novak, 2012). McKinney & Novak (2012) argued that first year community college students as a whole do not complete the Free Application for Federal Student Aid (FAFSA) as they should because 42% of those eligible in the 2007 academic year did not complete the FAFSA. Goldrick-Rab & Sorensen (2010) acknowledged the importance of single parents completing the FAFSA to receive aid. Wilson (2011) and Radey & Cheatham (2013) showed that many single mothers were not aware of the types of aid available to them. Consequently, these studies argued, colleges should make a public and concerted effort to reach single parents and inform them of all financial aid programs and options, preferably one-on-one or on an easily navigable website.

The Washington State Higher Education Coordinating Board (1993) suggested providing comprehensive career counseling, and Front Range Community College's program provided career planning and advising. Hess, Krohn, Reichlin, Roman, & Gault (2014) and Wilson (2011) recommended enhancing career counseling that encourages women, including women of color, to pursue jobs in science, technology, engineering, and mathematics (STEM) fields. According to Wilson (2011), STEM programs of study create problems for single women because of the demands of parenting and of their limited economic resources. The women in Wilson's (2011) study often changed majors to something in which they felt more assured of earning a degree.

Childcare

According to the Institute for Women's Policy Research, college campuses only supply about 5% of the childcare that parents who are students need (2013). Duquaine-Watson (2007) found that all the students in her sample experienced limited access to childcare on campus. While those points are relevant to the conversation, until policy changes or college funding and resources are directed to single parent programs including on campus childcare, single parents

must find other solutions. Austin & McDermott (2003) showed that parents met their childcare needs in various ways, including using TANF daycare vouchers or Federal Title 20 funds for daycare. Many mothers arranged their class schedules in order to avoid childcare costs. Allen & Seaman (2011) and Hess, et. al (2014) demonstrated the prevalence of single parents taking online classes, which creates more scheduling flexibility. Hess, et. al (2014) showed the top sources of childcare for single mothers in Mississippi to be something other than an off campus childcare center or an on campus childcare center. Only 12 percent of mothers in the study used off campus childcare centers, and 2.1 percent used on campus childcare centers. Family, neighbors, and friends topped the list as primary sources of childcare for single mother college students in Mississippi (Hess, et. al, 2014).

Community colleges providing this benefit carry out multiple parts of their mission. Cohen and Brawer (2008) cited a 1988 report from the American Association of Community and Junior Colleges (as it was called then) on the future of community colleges urging community colleges to focus on the community education aspect of their mission, imploring [community colleges to] bring together agencies to strengthen services for minorities, working women, single parent heads of households, and unwed teenage parents (1988, p. 35). Even though providing childcare could be expensive for the community college, providing a program of student services supporting all students' development is part of the mission.

Academics and Advising

According to Women Employed, part of the ideal community college experience for single parents is academic advising ("Single Mothers," 2011). The organization suggested that a college provide a sufficient number of advisors and counselors to reach out to students proactively and help them address personal and academic challenges. Some of these challenges

could include speaking in front of their classmates during class, meeting with other students to make sure they are making progress toward graduation, and supporting students early alert systems flag as being in danger of not succeeding. Further, the report suggested that advisors should work closely with the career center to understand how degrees and certificates translate to the workforce (“Single Mothers,” 2011).

Along those lines, Austin & McDermott (2003) wrote that increased amount of contact with faculty members led to higher rates of persistence among all students. In addition, increased faculty ties led to a decrease in the effects of working and parenting on single parents’ college careers. Turner & Thompson (2014) stressed the importance of the relationship between instructors and students as well. The data they cited showed that freshmen students have little interaction with faculty, but 70 percent of sophomores had an interactive relationship with at least one instructor. The relationship between faculty and student helps the student transition to an unfamiliar environment. Turner & Thompson (2014) also wrote that half of students reported not receiving adequate academic advising support. However, the numbers differed again between freshmen and sophomore students. Sophomores generally had more positive experiences with academic advisors. Turner & Thompson’s (2014) findings suggest an examination of other literature to determine if the student reports in their study may be triangulated.

Goldrick-Rab & Sorensen (2010), Turner & Thompson (2014), and “Single Mothers and College Success” (2011) suggested providing student success courses taught by a counselor who would disseminate information on study skills and basic college transition information. Turner & Thompson (2014) claimed that 65 percent of participants in their study saw developing study skills as the greatest obstacle freshmen faced in the transition to the college environment. Both Goldrick-Rab & Sorensen (2010) and “Single Mothers and College Success” (2011) wrote that

colleges should provide student success centers where students can seek supplementary resources such as academic tutoring and can access student services in one location. Goldrick-Rab & Sorensen (2010) argued that since a study skills course required enrollment, that participation led to completion of not just that course but to college. They also wrote that dual enrollment programs allow more students to attend college (Goldrick-Rab & Sorensen, 2010). This type of program helps those single mothers who become pregnant in high school by providing a means for accessing higher education at a reduced cost. Dual enrollment programs also speed the student through a program of study, which help a single mother if she is able to complete the assignments.

To support the claim that Goldrick-Rab & Sorensen (2010) made for community colleges to require a study skills course, Windham, M.H, Rehfuss, M.C., Williams, C.R. Pugh, J.V., & Tincher-Ladner, L. (2014) showed that study skills courses increased fall-to-fall retention of those with an ACT-COMPASS test score versus those who did not participate in a study skills course. Specifically, that study found that first-time, full-time students who enrolled in a study skills course and had an ACT-COMPASS score were 63.6% more likely to be retained than those who were not enrolled in that course (Windham, M.H, et. al, 2014). The implications for single parent programs are important and clear. Colleges should offer mandatory study skills courses for single parent students. The effect will help retention of all students, including single parents who already struggle with developing study skills.

Flexible scheduling and variety of delivery methods.

According to Allen & Seaman (2011), 31% of all college students take at least one course online. Many Mississippi single parents work at least part time, and many of them work full time (Hess, et. al, 2014). Online courses provide single parents with the means to delimit themselves

from some things traditionally seen as barriers. For example, the Washington State Higher Education Coordinating Board (1993) discussed how to balance work and school as well as how to secure transportation to and from college. This barrier does not have to exist with the advent and subsequent popularity of online courses. Additionally, online education overcomes the childcare barrier for both single parent students and colleges as discussed earlier in this chapter.

The dual enrollment program suggested by Goldrick-Rab & Sorensen (2010) is one example of a program that changes the delivery of courses because it reaches down into high schools for students. For single parents in high school who still live at home, a dual enrollment program would allow them to take advantage of the family support they may have at their disposal.

In addition to online courses and dual enrollment programs, colleges are exploring contextualized learning models, or competency-based education (Goldrick-Rab & Sorensen, 2010). Programs such as the Integrated Basic Education and Skills Training program (i-BEST) model are now in place in Washington State, and now in Mississippi through a Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant Program. TAACCCT grants provide community colleges with funding for career training and education that can be completed in two years or less (United States Department of Labor, 2011). The i-BEST model involves team-teaching and moves students from noncredit basic skills to credit-bearing coursework, to completing credits, earning certificates, and improving scores on basic skills tests (Goldrick-Rab & Sorensen, 2010). This model increases access for those underprepared students who typically have to enroll in Adult Basic Education (ABE) courses before enrolling in credit-bearing coursework. The i-BEST model combines both ABE and coursework with credits attached.

Motivation/Belief in The Importance of Higher Education

Austin & McDermott (2003) and Lovell (2014) stressed the importance of student-parents having the inherent belief that a college education was a valuable investment in their future and the future of their children. The women in these studies felt that educating themselves would benefit not only them but their children as well. Additionally, through the work requirement in the Temporary Assistance for Needy Families (TANF), some single mothers realize that college was the way to obtain a higher paying job. The welfare to work component of TANF only offers jobs that are minimum wage or close to it, so many mothers see that as a dead end. Wilson (2011) discussed TANF at length and suggested that women need multiple alternative sources of financial aid to finance their education and to provide for their family's living expenses. Further, Wilson (2011) found that navigating the multiple application requirements for the different programs available to women frustrated them. She suggested policy changes to reduce the complexity of obtaining financing and building a clear pathway to inform single mothers of their college financing options. The Washington State Higher Education Coordinating Board (1993) opened with a section on helping single parents realize their motivation by identifying dreams and turning them into goals that could be measured and thus achieved through a college education, realizing nearly thirty years ago that a student must be motivated not just to attend college, but he or she must have some goal in mind that needs to be realized and a clear pathway for how to achieve their goal. The Washington State Higher Education Coordinating Board (1993) laid out a clear map for single parents to follow that would encourage them to be more motivated in order to move along their pathway.

Importance of building social networks

Goldrick-Rab & Sorensen (2010), Duquaine-Watson (2007), and (2014) all discussed the important role colleges should take in providing social interaction for single parents. Front Range did that by offering information sessions, but the type of interactions needed should go beyond programming in which a college official leads the event. Goldrick-Rab & Sorensen (2010) suggested that creating social networks for single parents led to economic returns and what they termed the “marriage market theory,” meaning that attending college after a child’s birth increased a woman’s chance of marrying a college educated man by 62 percent, which in turn would provide another income for additional support.

The literature revealed contradictory findings about how well student-parents integrated with the rest of the student population. Duquaine-Watson’s (2007) research, through the small sample of mothers she interviewed, showed that the general student population could anecdotally be cold at the least, and at its worst, the general student population could be cruel to single mothers and exclude them. However, Austin & McDermott (2003) also used qualitative methods and interviewed 14 single mothers and their results showed a different conclusion about social interactions single mothers had with the general student population. Some of the participants who were able to interact with traditional students reported that their nonparent classmates had been helpful & supportive. One mother discussed how her study group was willing and welcomed her to bring her child along to study sessions, and another said nonparent classmates would take notes for her and take assignments for her when she had a sick child (Austin & McDermott, 2003). Based on this conflicting qualitative data drawn from small samples, more research is needed to quantify how their nonparent counterparts treat single parents.

Health Status

Beginning with the earliest literature in 1993, most studies and documents have recognized the importance of single parents' health status. Hess et. al (2014) claimed that Mississippi's single mothers wanted more health care supports. Of the top supports, help paying for health insurance was rated the highest with 46 percent of single mothers seeking additional financial support. Of students in the study, only 57 percent had health insurance, and nearly half of African Americans lacked health insurance (Hess et. al, 2014). According to Goldrick-Rab & Sorensen (2010), many community college single mothers want more support to reduce the stress of their perceived neglect of their children while enrolled in college.

Sabourin & Irwin (2009) found that only 16 percent of parent students met a benchmark for moderate exercise levels compared to nearly half of nonparent students who met the benchmark. The researchers used frequency analyses to reach their conclusion. As a result of their inactivity, single parents are more susceptible to many negative health effects related to a sedentary lifestyle. The Washington State Higher Education Coordinating Board (1993) included a short section titled "Running the Marathon: Taking Care of Yourself" in which it suggested conserving energy and spending time for relaxation each day. The final note was to reach out to the campus health center or the counseling center if needed. Contemporary research supports those suggestions (Hess, et. al, 2014).

Gaps in Current Research

Little quantifiable data exists showing the number of single parents enrolled in community colleges, much less data to measure the effectiveness of a community college single parent program. Many studies suggest what elements to include for the single parent population, which provides great insight into creating a program. The logical next step is assessing a program's effectiveness by measuring success and retention rates, GPA, and transfer rates of

single parents who participated in a single parent program. In addition to those measures of student learning and the program's effectiveness, research should be conducted to compare parents in a single parent program to others in a specific course or courses; researchers should determine the success of a single parent program's academic tutoring services, for example, by comparing success on several student learning outcomes in a college algebra course. To quantify the effectiveness of parts of the program not related to classroom instruction, indirect assessment methods could be used. For example, a survey of graduates who took part in a program may identify areas of the program that need improvement based on their feedback; exit interviews could be conducted; and focus groups could help a college determine best practices for its single parent program.

Since little of these data exist in the literature, colleges with existing programs should assess and publish this type of information about their programs in order to improve them. Again, the body of research shows what parts of a program are needed such as financial aid, counseling, and various mechanisms of support, but little research shows the effectiveness of particular parts of a single parent program after being planted on a campus. Austin Community College did that back in the 1994-1995 academic year, and it determined that all parts of their program were successful: GPA and retention rates were high, the program provided financial assistance to a number of the group who participated, and the program helped others secure alternative means of financial aid. Students who participated were overall satisfied with the program (Austin Community College, 1995). While these insights were valuable twenty-five years ago, they are mostly relevant now to provide the historical backdrop for future programs.

Conclusion

Single parents comprise a significant proportion of United States college students; they should be supported with more student services and deserve specific programs designed to help them as they consider going to college, through the transition to college, and as they move through their coursework toward graduation and the workforce. Community colleges are an entry point into higher education for more than half of all undergraduates in the nation (American Association of Community Colleges, 2011). Many of those are single parents who have additional stressors beyond what traditional college students experience. Single parents live under several time and economic burdens that increase their stress. Access to childcare, transportation, and food, along with working to support themselves and their child(ren) shift single parents' focus away from education toward survival. In addition, these stressors decrease the likelihood of them to be retained and to graduate with a certificate or degree (Hess, et. al, 2014; Goldrick-Rab & Sorensen, 2010). Colleges should provide adequate counseling resources, choices in course scheduling and delivery modes, financial aid support, resource awareness training, activities that build social networks for these students, and help finding affordable childcare or scheduling for single parents. If colleges do these things through coordinated efforts to create a single parent friendly campus, single parents as well as nonparent students will be retained and will graduate at higher rates. As part of the community college's mission, they have the responsibility to serve people in their districts, including single parents, with the best resources and programs they can muster. The studies reviewed here provide a set of suggestions based on evidence that a community college may use to develop and implement a successful single parent program as part of a guided pathways model.

CHAPTER III: METHODOLOGY

Introduction

This study compares the success rates of single parents who enrolled in the Mississippi community college system for the Fall 2016 semester with other students enrolled in the system and defines success as fall-to-fall retention among first time, full time students. Mississippi's 15 community and junior colleges comprise an independent association, governed locally with a coordinating board in Jackson, Mississippi. Kruvelis, M., Cruse, L.R., & Gault, B. (2017) found the number of single mothers in college more than doubled between 1999 and 2012.

Additionally, they found that 4 in 10 women at community, technical, and junior colleges felt they are likely or very likely to drop out of college due to their childcare responsibilities.

Degree attainment among single mothers is lower than married mothers and women overall.

Based on these findings, Mississippi's community colleges have a responsibility to investigate further in order to gain more insight about single mothers enrolled in the system, ultimately changing student support mechanisms to improve the outcomes.

This chapter (1) describes the research methodology of this study, (2) describes the dataset, (3) describes the data collection procedure, and (4) explains the statistical procedures used to analyze the data.

Methodology

Dataset

This research study extends the research completed by the Institute for Women's Policy Research, examines the differences that exist for the most current group of students, and examines if there are statistically significant differences and relationships between single parents and non-single parents. This study also generates data about Mississippi's single fathers enrolled in community colleges who have previously gone unnoticed. For the purpose of this study, the sample is comprised of students who enrolled in Mississippi community colleges beginning in the Fall 2016 semester. Students were identified as single parents based on the following criteria.

Definition

Single parent is defined as a person who was not currently married and had a dependent minor living with them. Not currently married meant someone who selected "No" on question 47 of his or her financial aid application which reads, "As of today, are you married?" (Federal Student Aid, 2016). According to the note on page 2 of the 2016-2017 (FAFSA), this status was determined at the time of signing the FAFSA. If a student's status changed after signing the FAFSA, they were to contact the financial aid office at the college. The note for question 16 goes further, citing the Defense of Marriage Act (1996), "...the word 'marriage' means a legal union between one man and one woman as husband and wife, and the word 'spouse' refers to a person of the opposite sex who is a husband or a wife (Federal Student Aid, 2016, 9). The Federal Student Aid's definition of marriage was used for this study since it was the only option which the FAFSA gives a married person to select. While the definition given by the office of Federal Student Aid was, perhaps, socially outdated, their definition provided a parameter to capture data and to determine which students were not married at the time they completed the FAFSA. Under

the FAFSA's guidelines for determining dependency, one of the above had to be marked and one of the following conditions had to be present on the student's FAFSA to be considered a single parent: (a) the student had a child or children who received more than half their support from the student between July 1, 2016 and June 30, 2017, or (b) the student had dependents other than a child or spouse who received more than half their support from the student and who also lived with the student through June 30, 2014. These statements were items 51 and 52 on the 2016-2017 FAFSA (Federal Student Aid, 2016, 5). The second item is included in this study because those who have dependents other than a child or spouse could be grandparents or another relative raising a family member's child or children and may be considered a legal guardian in some cases. This group of persons is functionally similar to a single parent, facing similar barriers to achieving educational success. No personally identifiable information (PII) was collected that revealed an individual student's identity.

Gender

After reviewing the literature about single parents in college single, a focus on mothers enrolled in college emerged after finding little research about single fathers in college. While single fathers are enrolled in American higher education, no data could be found that measures single father success or compares their success with other students. In addition, the vast majority of studies about single parents or articles discussing single parent issues focused on the female experience. Goldrick-Rab & Sorensen (2010) presented the only research specifically on single fathers, noting that fathers were not able to use Pell grants to take college course while in prison. More research is needed examine single fathers' experiences in the Mississippi community college system's population. Single fathers were included in this study as part of the files sent from each community college. The hypotheses are disaggregated in the results to show

differences between male and female single parent student success in order to provide new data for Mississippi community colleges to use as they develop future student success programming.

Race and Ethnicity

According to the Institute for Women's Policy Research (IWPR) (2014), nearly half of all black students enrolled in Mississippi higher education are single mothers, presenting an opportunity to draw comparisons between races and ethnic groups as well as among racial and ethnic groups.

Ethical Considerations

Personally-identifiable information (PII) was not included by in the files sent from each community college to the researcher. Data were reported in the aggregate. The Screening/Abbreviated IRB Application was completed since the research methods used qualify the study for a brief review. The Institutional Review Board (IRB) at the University of Mississippi reviewed and approved the proposed research to ensure subjects will be treated ethically and that their rights and welfare will be adequately protected. After obtaining the University of Mississippi IRB approval, the researcher sought approval of the Mississippi Community College Board (MCCB) through its internal review process. The appropriate forms were completed, and the MCCB approved this research project. Each community college in the study also had an internal review process that required approval before the college agreed to submit data.

Data Collection Procedure

The researcher first developed Table 3.1 and consulted with Northeast Mississippi Community College's student information system (SIS) database administrator to determine if these data could be collected from the SIS, Banner by Ellucian. The data were extracted from

Banner using an SQL script the Northeast Mississippi Community College database administrator wrote. Colleges using a different SIS were asked to create their own script to collect data using the definitions above for single parents, gender, and other characteristics as defined on the FAFSA to ensure data received from each school captured the same groups of students. An email was sent to each Mississippi Community College’s institutional research officer stating the intent of the study and providing data fields on an Excel spreadsheet, definitions, and which semesters needed to be included. Of the fifteen (15) Mississippi community colleges, five (5) responded. Each college’s institutional research office or database administrator securely sent their college’s file to the researcher through a secure University of Mississippi Box account with data saved in comma separated values. Data from the colleges participating in the study were compiled into an Excel file, then uploaded to SPSS for analysis. Table 3.1 includes the Excel format the researcher loaded into SPSS. Colleges were asked to code data in the Excel sheet they provided using the following Excel worksheet column structure:

Table 3.1 Excel data file.

Gender	Race/Eth	Aca Prog.	FAFSA #47	FAFSA #51	FAFSA #52	F-F Ret.	100% GPA	Degree at 100%
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Data were coded within each column as follows:

- a. Gender: 1=Male, 2= Female
- b. Race/Eth: 1=Caucasian, 2=African American/Black, 3=Asian/Pacific Islander, 4=Hispanic,
 - a. 5=Multiple Races
- c. Academic Program: 1=Associate of Arts, 2=Associate of Applied Science, 3=Certificate
- d. FAFSA #47: 1=Yes, 2=No

- e. FAFSA #51: 1=Yes, 2=N
- f. FAFSA #52: 1=Yes, 2=No
- g. Fall 2016-Fall 2017 Retention: 1=Yes, 2=No
- h. GPA at 100% time to completion (4 semesters): 0.00-4.00
- i. Earned Degree at 100%: 1=Yes, 2=No

Sample

Five of the fifteen Mississippi community colleges submitted data. A total of 12,918 students were included in the data submitted, representing 13.2% of the total population of 98,013 students enrolled in for-credit courses in the Fall 2016 semester (Report card 2017). One community college submitted its file without the gender field completed, so that college was not included in the study. After removing records that included blank fields or incorrectly coded data, 8427 students remained in the sample, representing 8.6% of 98,013 students enrolled in for-credit courses in the Fall 2016 semester (Report card 2017). Of the 8427 students, 1045 met the definition of *single parent*: not married with a child or dependent living at home.

Variables

The independent variables in this study are single parent status, gender, and race/ethnicity. This was determined by identifying students enrolled in Mississippi community colleges in the Fall 2016 cohort who indicated non-married status and claimed a dependent living at home at least 50% of the time. The independent variable single parent status has two levels: unmarried (single) parent and nonparent. Items 47, 51, and 52 on the student's FAFSA contain these data. The dependent variable in this study is the Fall 2016 to Fall 2017 mean retention rate.

The dependent variables in this study are retention and grade point average at 100% of time to completion, or four semesters.

Research Questions

This study aimed to satisfy the following questions:

1. What percentage of students enrolled in Mississippi's community colleges are single parents?
2. Does gender affect single parent success for single parents enrolled in Mississippi's community colleges?
3. Are single parents enrolled full-time in Mississippi community colleges retained after the first year of college at the same rate as other full-time students who are not single parents?
4. Does race or ethnicity have an effect on fall-to-fall retention among single parents?
5. Does single parent status affect cumulative grade point average (GPA) for students enrolled in Mississippi community colleges?

Hypotheses

Based on the research questions, the following quantitative null hypotheses assume no significant relationships exist between single parent status and gender and retention:

- H₀₁ There is no significant relationship between fall-to-fall retention (retained or not) and gender (male single parents or female single parents).
- H₀₂ There is no significant relationship between fall-to-fall retention (retained or not) and single parent status (single parent or non-single parent).
- H₀₃ There is no significant relationship between fall-to-fall retention (retained or not) and race/ethnicity of single parents.
- H₀₄ There is no significant relationship between single parent status (single parent or not) and grade point average (GPA) after 100% of time to degree.

The first three null hypotheses were tested using the Pearson Chi-Square statistic. Null hypothesis four was tested using the independent T-test statistic.

Statistical Analysis Procedure

Statistical analyses were conducted using a Statistical Package for Social Sciences (SPSS) Version 26 to test the hypotheses using data provided by Mississippi community colleges in a comma separated value document in Microsoft Excel. The Excel document was formatted and uploaded to SPSS for analysis. Data were stored on the researcher's university-provided Box account, which is FERPA compliant and secure, according to the University of Mississippi's IT Platform Security Chart (2018). First, descriptive statistics were summarized to determine the number of students in the Fall 2016 cohort, the percentage of students who identified as single parents, as married parents, married nonparents, and as single nonparents, as well as the percentage of students who claimed a dependent but were not the dependent's parent. In addition, the sample was disaggregated by gender, race, and ethnicity. This satisfied the first research question. Next, data from each of the five community colleges that submitted data were combined into one Excel worksheet. One community college did not include the gender field, so its data were removed. Any other student record missing information or with information that was coded incorrectly was removed. Summary tables were created using pivot tables to get the data ready to go into SPSS for analysis. Then all hypotheses were tested using the Chi-Square statistic in SPSS to determine if there was a significant relationship between variables. These tests examined the second, third, fourth, and fifth research questions. An analysis of each dependent and independent variable is discussed in Chapter IV. Chapter V discusses future uses of this research study.

Limitations

Only five of the fifteen community colleges in Mississippi ultimately provided data. All five use Banner as their SIS and did not need to write their own script to query their student database. One college did not submit data in the gender field of the spreadsheet, so its data were not considered. This study obtained a sample of 8.6% (8427 of 98,013) of the total population of Mississippi community college students in the Fall 2016 cohort (Report card 2017). To improve the validity of the results, data are needed from the colleges that did not participate to examine single parent retention more accurately.

This study does not examine the root causes for any differences and/or relationships between the dependent and independent variables. Further research is needed to help explain any differences between single parent students and married parent students or nonparent students. Additionally, further research is needed to examine why gender affects single parent success. Qualitative research is needed to learn about single fathers' experience moving through Mississippi community colleges. Qualitative data gathered from single mothers would also provide more information about their experiences moving through the community college system. Simply providing the comparison data as this study does is the first step to improving outcomes among single parent students. This study is also limited by its examination of one cohort of students, but it is assumed that the cohort being examined is representative of other cohorts in the Mississippi community college system. The researcher is a full-time employee of a community college included in this study; therefore, the researcher brings biases to the study. In order to avoid potential conflicts, the researcher removed college names while interpreting data during the study. All data collected were quantitative, and the researcher avoided judgments about the results that either directly state or suggest any community college performs better than

other community colleges. The researcher received no monetary benefits from the study and did not nor will not use data or findings to market his employer against other community colleges. In addition to the other limitations, the study was limited because it examines one cohort, making trend analysis in single parent student success impossible. A longitudinal study examining single parent retention over multiple years would identify trends.

Conclusion

Chapter III has explained the data that will be collected, how it was collected, and how it was analyzed. This chapter defined the term *single parent* in detail since a clear definition was needed to collect data using the FAFSA. Even though this study did not examine the cause of any differences in success among single parents and non-single parents, this study provides the first glimpse at a population of students enrolled in the Mississippi community college system that has not been researched in the past

CHAPTER IV: RESULTS

Existing data have not been previously aggregated to learn how many single parents are enrolled in Mississippi's community college system, and existing data have not been analyzed to determine if a relationship exists between single parent retention and non-single parent retention. This study gathered data on the Fall 2016 cohort and determined if a relationship existed between fall-to-fall retention between single parents and those who were not single parents. This study sampled the Fall 2016 cohort and This chapter contains the findings of the three hypotheses of this study and answers the four research questions. The research questions are stated below:

1. What percentage of students enrolled full-time in Mississippi's community colleges are single parents?
2. Does gender affect retention for single parents enrolled in Mississippi's community colleges?
3. Are single parents who enrolled full-time in Mississippi community colleges retained at similar rates when compared to other full-time students who are not single parents?
4. Does race or ethnicity have an effect on fall-to-fall retention among single parents?
5. Does single parent status affect cumulative grade point average (GPA) for students enrolled in Mississippi community colleges?

To satisfy research questions 2 through 5, the researcher wrote null hypotheses:

- H01 There is no significant relationship between fall-to-fall retention (retained or not) and gender (male single parents or female single parent
- H02 There is no significant relationship between fall-to-fall retention (retained or not) and single parent status (single parent or non-single parent).
- H03 There is no significant relationship between fall-to-fall retention (retained or not) and race/ethnicity of single parents.
- H04 There is no significant difference between single parent status (single parent or not) and grade point average (GPA) after 100% of time to degree.

Research Question 1

To answer research question 1, descriptive statistics were calculated based on the data provided by community colleges. Five of the fifteen Mississippi community colleges provided data for the study within the time frame set by the researcher. One community college that submitted data was removed from the sample because it did not include data in the gender field. An email was delivered to each community college's institutional research office, and the researcher initially allowed two weeks for colleges to respond. Reminders were emailed, and colleges were given more time to submit data. Data collection concluded the last week of May 2019. Two community colleges said they did not have the capability of obtaining the data because they did not collect FAFSA data in their Student Information System.

The researcher took separate Microsoft Excel files as submitted by each of the four colleges and combined them into one. After data were combined into one file, the total sample size was 8,427 students. The Fall 2016 cohort contained 98,013 students who were enrolled in for-credit coursework in the Mississippi community college system. The sample represents 8.6% of the total credit-seeking enrollment in the Fall 2016 semester among Mississippi community colleges

(Report card 2017). Of the data gathered from five community colleges, 1045 of 8,427 students were single parents, representing 12.4% of the sample. Other students were in the sample as sent by the community colleges, but a number left either the gender field or the race/ethnicity field blank on the FAFSA, or colleges keyed data into their student information system incorrectly which resulted in a blank field or an incorrect code for gender and/or race/ethnicity. Students with missing or incorrectly coded data were removed from the raw data file used to calculate both descriptive and inferential statistics. For example, some females may have left their race/ethnicity field blank or coded incorrectly, so these records could not have been counted when comparing students based on race/ethnicity and were removed from the study.

Descriptive statistics were compiled in Excel using pivot tables showing the average GPA of male single parents and female single parents by race/ethnicity. While cleaning data in order to use pivot tables in Excel to calculate descriptive statistics, student records in the file that contained blank fields or incorrectly coded fields were removed from the study since they could not be by counted accurately in one way or another. These results are found in Table 4.1 and Table 4.2 below. These tables include the 100% GPA (four semesters after enrollment) of all single parent students.

Table 4.1

Average GPA of Male Single Parents by Race/Ethnicity		
Race/Ethnicity	Count	GPA at 100%
Caucasian	91	2.89
African American/Black	62	2.31
Asian/Pacific Islander	3	3.17
Hispanic	3	3.58
Multiple Races	5	2.51
American Indian	0	N/A
Grand Total	165	2.63

Table 4.2

Average GPA of Single Mothers by Race/Ethnicity		
Race/Ethnicity	Count	GPA at 100%
Caucasian	465	2.74
African American/Black	331	2.40
Asian/Pacific Islander	7	2.78
Hispanic	30	2.94
Multiple Races	48	2.68
Grand Total	880	2.62

Single mothers made up 84.2% of the single parents in the study; single fathers comprised only 15.8% of single parents as indicated on their FAFSA at the community colleges included in the study. The majority of single parents were Caucasian females at 44.5%, followed by African American females at 31.7%. In contrast, Caucasian males comprised 8.7% and African American males made up 5.9% of the total single parent population.

Data were further disaggregated by degree completion status at 100%, or four semesters, the GPAs of both groups, and those who earned a degree and those who did not. Female single parents who earned a degree performed marginally better than male single parents in both degrees earned and not earned as shown in Table 4.3 and Table 4.4:

Table 4.3

Male Single Parent Degree Status at 100% by Race/Ethnicity					Total Male Single Parents
Race/Ethnicity	Count Earned	GPA at 100%	Count Not Earned	GPA not Earned	
Caucasian	51	2.74	38	2.64	91
African American/Black	40	2.05	22	2.12	62
Asian/Pacific Islander	1	2.74	2	2.74	3
Hispanic	2	3.2	1	3.20	3
Multiple Races	4	2.14	1	2.14	5
American Indian	0		1		1
Grand Total	98	2.42	105	2.40	165

Table 4.4

Female Single Parent Degree Status at 100% by Race/Ethnicity					
Race/Ethnicity	Count Earned	GPA at 100%	Count Not Earned	GPA not Earned	Total Female Single Parents
Caucasian	245	2.68	220	2.81	465
African American/Black	213	2.26	117	2.66	330
Asian/Pacific Islander	5	2.70	2	2.97	7
Hispanic	18	2.76	12	3.21	30
Multiple Races	31	2.47	17	2.99	48
Grand Total	512	2.49	368	2.78	880

Also notable at a superficial level is how similar the GPAs of students who completed a degree is between genders and between those who did not complete a degree and their gender. Success seems to not be dependent on gender. Fifty-nine percent of single fathers completed a degree, and 58% of single mothers completed a degree.

Table 4.5 and Table 4.6 include descriptive statistics comparing the GPA of students who were retained between the Fall 2016 semester and the Fall 2017 semester. Table 4.5 contains single father retention, and table 4.6 contains single mother retention. The data were disaggregated by race and ethnicity as students indicated on their FAFSA.

Table 4.5

Fall 2016 - Fall 2017 Single Father Retention					
Race/Ethnicity	Retained	GPA at 100% of retained	Not Retained	GPA at 100% of those not retained	Total Male Single Parents
Caucasian	53	2.99	38	2.75	91
African American/Black	27	2.80	35	1.92	62
Asian/Pacific Islander	2	3.39	1	2.74	3
Hispanic	2	3.95	1	3.20	3
Multiple Races	2	3.51	3	1.84	5
American Indian	0	0.00	1	0.00	1
Total	86	2.90	76	2.36	165

Table 4.6

Fall 2016-Fall 2017 Single Mother Retention					
Race/Ethnicity	Retained	GPA at 100% of Retained	Not Retained	GPA at 100% of Not Retained	Total Female Single Parents
Caucasian	290	2.92	175	2.44	465
African American/Black	188	2.67	142	2.04	330
Asian/Pacific Islander	2	2.97	5	2.70	7
Hispanic	21	2.94	9	2.93	30
Multiple Races	28	2.94	20	2.25	48
Total	529	2.84	351	2.27	880

Table 4.7 shows the percentage of single parents compared to students who were either married with children or who otherwise did not have children.

Table 4.7

Fall 2016 to Fall 2017 Retention by Single Parent Status						
	Not Single Parents	%	Single Parents	%	Total N	Total %
Retained	4844	65.60%	615	58.90%	5459	64.78%
Not Retained	2538	34.30%	430	41.10%	2968	35.22%
Total	7382	100%	1045	100%	8427	100%

Table 4.8 shows the average GPA of single parents and non-single parents.

Average Grade Point Average by Parent Status		
	N	Average GPA
Single Parent	1045	2.62
Not Single Parent	7382	2.55
	8427	2.59

Research Question 2

The second research question posited that there was no relationship between a single parent's gender and whether or not they were retained from their first fall semester to their second fall semester. The first null hypothesis was tested using a Statistical Package for the Social Sciences (SPSS), version 26. Table 4.9 was created using pivot tables in Excel to filter and summarize single parent data by gender and retention status. The data in the table were then uploaded to SPSS. Variables were weighted by frequency and data were analyzed using the Pearson Chi-Square statistic. With $\alpha = .05$ and $n=1045$, there was not a statistically significant relationship between single parents' gender and fall-to-fall retention among the students in the study, $\chi^2(1) = 3.665$, $p = .056$. The effect size was calculated using the Phi statistic in SPSS. The value of ϕ was $-.059$, indicating gender had a very small negative effect on fall-to-fall retention among the cohort. These results are summarized in Table 4.10 below. The effect size is displayed in Table 4.11.

Table 4.9

Single Parent Retention by Gender		
Gender	Retained	Frequency
Female Single Parents	Yes	529
Female Single Parents	No	351
Male Single Parents	Yes	86
Male Single Parents	No	79
Total		1045

Table 4.10

Single Parent Gender and Retention Chi-square Results			
	Value	df	P-Value
Chi-Square	3.665	1	0.056
N of Valid Cases	1045		

Table 4.11

Single Parent Gender and Retention Effect Size		
	Value	Significance
Phi	-0.59	0.056
N of valid cases	1045	

Research Question 3

Research question 3 asked if single parents who enrolled full-time in Mississippi community colleges were retained at similar rates as other non-single parent students. To answer this research question, the second null hypothesis was tested. First, descriptive data were compiled. The summary data in Table 4.12 were loaded into SPSS. Variables were weighted by frequency and data were analyzed using the Pearson Chi-Square statistic. With $\alpha = .05$ and $n=6605$, the resulting p-value of the Chi-Square was .000, so there was a statistically significant relationship between single parent status and fall-to-fall retention among the students in the study, $\chi^2(1) = 18.375, p = .000$. The effect size was calculated using the Phi statistic in SPSS

version 26. The value of β was -.069, indicating gender had a small negative effect on fall-to-fall retention among students in the sample. These results are summarized in Table 4.13 below. The effect size is displayed in Table 4.14.

Table 4.12

Single Parent Status and Retention			
	Retained	Frequency	% Retained
Single Parent	Yes	615	58.9%
Single Parent	No	430	41.1%
Not Single Parent	Yes	4844	65.6%
Not Single Parent	No	2538	34.4%
Total		8427	100.0%

Table 4.13

Single Parent Status and Retention Chi-Square Results			
	Value	df	P-Value
Chi-Square	18.375	1	0.000
N of Valid Cases	8427		

Table 4.14

Single Parent Status and Retention Effect Size		
	Value	Significance
Phi	-0.047	0.000
N of Valid Cases	6605	

Research question 4

Research question 4 asked if there was a relationship between a single parent's race or ethnicity and whether or not they were retained from the Fall 2016 to the Fall 2017 semester. To answer this research question, null hypothesis three was tested using the Pearson Chi-Square statistic. First, descriptive data were compiled. The descriptive data in Table 4.15 were loaded into SPSS version 26. Variables were weighted by frequency and data were analyzed using the Pearson Chi-Square statistic. With $\alpha = .05$ and $n=1045$, the resulting p-value of the Chi-Square was .107, so there was not a statistically significant relationship between single parents'

race/ethnicity and fall-to-fall retention among the students in the study. The effect size was calculated using the Phi statistic in SPSS. The value of ϕ was .107, indicating race/ethnicity had a minimal positive effect on fall-to-fall retention. The results of the Pearson Chi-Square and Phi statistics are displayed in Table 4.16 and 4.17 below.

Table 4.15

Single Parent Race/Ethnicity and Retention		
Race/Eth	Retained	Frequency
Cauc	Yes	343
Cauc	No	213
AfAm	Yes	215
AfAm	No	177
As	Yes	4
As	No	6
His	Yes	23
His	No	10
MulRace	Yes	30
MulRace	No	23
Total		1045

Table 4.16

Single Parent Race/Ethnicity and Retention Chi-Square Results			
	Value	df	P-Value
Chi-Square	9.058	5	0.107
N of Valid Cases	1045		

Table 4.17

Single Parent Race/Ethnicity and Retention Effect Size		
	Value	Significance
Phi	.093	0.111
N of Valid Cases	1045	

Research Question 5

Research question 5 asked if there was a relationship between a single parent status (single parent or not) and grade point average after four semesters. To answer this research question, null hypothesis four was tested using the independent T-test. First, an Excel spreadsheet was created with two columns: parent status and grade point average at 100%.

Single parents were coded as “sp” and non-single parents were coded as “nsp” for each of the students in the sample. These data were loaded into SPSS version 26. Variables were coded in the variable view inside SPSS to match the Excel spreadsheet. The independent T-test was then run, along with Levene’s Test for Equality of Variances with $\alpha = .05$ and $n=8427$. The results of Levene’s Test for Equality of Variances were first considered, $F=64.019$ (8425), $p=.000$. Since the p-value of .000 is less than the alpha level of .05, the variances between groups were unequal. The resulting p-value of the independent t-test when equal variances are not assumed was .008, so there was a statistically significant relationship between single parent status and grade point average among the students in the study. The group statistics and results of Levene’s Test for Equality of Variances and of the independent T-test are displayed in Tables 4.18, 4.19 4.20.

Table 4.18

Parent Status and GPA Group Statistics				
Parent Status	N	Mean	Std. Deviation	Std. Mean Error
sp	1044	2.62	0.919	0.028
nsp	7379	2.53	1.131	0.013

Table 4.19

Parent Status and GPA Levene's Test for Equality of Variances					
		F	Sig	t	df
GPA at 100%	Equal variances assumed	64.019	0.000	2.261	8425
	Equal variances not assumed			2.638	1527.152

Table 4.20

Parent Status and GPA t-test for Equality of Means				
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
GPA at 100%	Equal variances assumed	0.024	0.083	0.037
	Equal variances not assumed	0.008	0.083	0.031

CHAPTER V: DISCUSSION

Summary

This study answered four research questions first (1) to identify the population of single parents who were enrolled in the Mississippi Community College system beginning in the Fall 2016 semester, then to (2) determine if a relationship existed between a single parent's gender and whether they were retained in the Fall 2017 semester, (3) to determine if a relationship existed between single parent status and Fall 2016 to Fall 2017 retention status, and to (4) determine if a single parent's race or ethnicity was related to the student being retained from the Fall 2016 semester to the Fall 2017 semester, and (5) to determine if there were differences between the mean grade point averages of single parents and non-single parents. In order to answer the research questions, data were requested from the fifteen community colleges in Mississippi. Four community colleges provided data that could be used. One college submitted its data with the gender field missing for all students. Records were removed from the remaining four community colleges that contained missing data or incorrectly coded data. The remaining data 8427 records were compiled Excel files, and pivot tables were used to calculate descriptive statistics. Pivot tables were also used to disaggregate data based on the variables in the study, generating frequency tables that were uploaded to SPSS in order to calculate the Pearson Chi-Square statistic, the Phi statistic, and independent t-test.

Descriptive statistics showed that of the total N of 8427 Mississippi community college students sampled of the 98,013 enrolled in coursework in the Fall 2016 semester, 1045 were single parents, and single mothers made up 84.2% of single parents; single fathers comprised only 15.8% of single parents as indicated on their FAFSA at the community colleges included in the study. The majority of single parents were Caucasian females at 44.5%, followed by African American females at 31.7%. In contrast, Caucasian males comprised 8.7% and African American males made up 5.9% of the total single parent population. Of the data gathered from four community colleges, 1045 of 8427 students were single parents, representing 12.4% of the sample. Single parents were retained between the Fall 2016 and Fall 2017 semesters at a 9.5% lower rate than their peers who were not single parents.

Research question 2 asked if gender affected single parent retention and research question 3 asked if single parents were retained at similar rates as other students. Both questions yielded similar results after the Chi-Square tests were complete. Hypothesis 1 stated there is no significant relationship between fall-to-fall retention and gender. The Chi-Square test results were statistically significant, ($\chi^2=4.439$, $\alpha=.05$, $p=.035$) rejecting the null hypothesis and suggesting there was a relationship between a single parent's gender and whether or not they would be retained in the subsequent fall semester. The Phi value calculated using SPSS was -.066, suggesting gender had a medium negative effect on retention status.

Research question 3 asked if single parent status had an effect on retention. Hypothesis 2 stated there is no significant relationship between fall-to-fall retention and single parent status and answered research question 3. The Chi-Square test results for single parent status and retention were statistically significant ($\chi^2=31.280$, $\alpha=.05$, $p=.000$), meaning there was a statistically significant difference in the distribution of single parents and non-single parents who

were retained from the Fall 2016 to the Fall 2017 semester. This suggested there was a relationship between being a single parent and being retained from the Fall 2016 to the Fall 2017 semester.

Research question 4 for asked if race or ethnicity had an effect on retention among single parents. Hypothesis 3 stated there is no significant relationship between race or ethnicity and fall-to-fall retention among single parents in the study. With $\alpha = .05$ and $n=1045$, the resulting p-value of the Chi-Square was .107, so there was not a statistically significant relationship between single parents' race/ethnicity and fall-to-fall retention among the students in the study. The effect size was calculated using the Phi statistic in SPSS. The value of ϕ was .107, indicating race/ethnicity had a minimal positive effect on fall-to-fall retention.

Research question 5 asked if there were differences between single parent status and the cumulative grade point averages of all students in the sample. Hypothesis 4 stated there is no significant difference between single parent status and grade point average after 100% of time to degree. Levene's Test for Equality of Variances with. The results of Levene's Test for Equality of Variances were first considered, $F=64.019$ (8425), $\alpha = .05$, $n=8427$, $p=.000$. Since the p-value is less than the alpha level of .05, the variances between groups were unequal. The resulting p-value of the independent t-test when equal variances are not assumed was .008, so there was a statistically significant relationship between single parent status and grade point average among the students in the study.

Conclusions

Number of Single Parents

By analyzing the National Center for Education Statistics data from 2008, Nelson, Froehner, and Gault (2013) showed that nationally students with children comprised nearly one-

quarter of all United States college students. However, no data existed that disaggregated data enough to show how many single parents were enrolled in Mississippi community colleges. This study found that within the Fall 2016 cohort at the four community colleges that reported data, 12.4% of students (1045 of 8427) were single parents. The sample of 8427 students represents 8.6% of the 98,013 students who were enrolled in the Fall 2016 cohort. This represents a significant departure from Nelson, Froehner, and Gault's (2013) findings. No other study determined if a relationship existed between being a single parent and being retained or if a relationship existed between a single parent's gender and being retained.

Retention

Tinto (1975; 1993), Astin (1984), and Astin, Korn, and Green (1987) provided theoretical approaches to community college retention. Tinto's Interactionist Theory (1993) proposed that a student's integration into college was determined by background characteristics such as race, gender, family, educational and financial context, and high school accomplishments. The background characteristics influenced the student's commitment to college as well as her goals (Tinto, 1993). According to Tinto's (1993) model, those students who can integrate more deeply into the academic and social structures of the higher education institution are most persistent. The results of this study support Tinto (1993). This study found there is a statistically significant relationship between single parent status and their fall-to-fall retention status, and there is a statistically significant relationship between single parents' gender and their fall-to-fall retention status.

Astin (1984) theorized that a student's involvement in college life activities drove the student's persistence. Astin (1984) equated a student's involvement in college life with psychological and physical well-being. The quality and quantity of involvement in Astin's

(1984) model influences learning and development. The degree to which a college is able to increase involvement determines how effective the college's educational practices are. This model depends on environmental variables to influence the retention equation. The results of this study support Astin's (1984) theory because other research has shown that single parents face many barriers to being successful in college. For example, Duquaine-Watson (2007), Austin & McDermott (2004), and the IWPR (2014) all argue that single parents do not have adequate access to childcare. Consequently, a single parent without adequate childcare access may not be able to schedule coursework when needed due to a college's course scheduling. A single parent taking care of a child or children at night has less time to complete coursework than students without children. This study supports Duquaine-Watson (2007), Austin & McDermott (2004), and the IWPR (2014).

Schuetz (2008) showed that almost half of community college students are not retained, and McClenny (2007) showed that these students often leave early in the first semester of college. Descriptive data show that among the Fall 2016 cohort of Mississippi community college students, both those who were single parents and those who were not, these Mississippi students performed differently than those Schuetz (2008) and McClenny (2007) examined. As Table 4.7 found in chapter 4 shows, after two years, Mississippi community college students who were enrolled beginning in the Fall 2016 semester were retained at a 58.9% rate, compared to nonparent students being retained at a rate of 65.6%. There was a statistically significant relationship between single parent status and retention, with being a single parent having a negative effect on retention. The Institute for Women's Policy Research (IWPR) (2014) held that as of 2012 27 percent of the undergraduate population in the Southeast were parents. This study shows that the single parent population among the Fall 2016 cohort of Mississippi community

college students was lower at 12.4% (1045 of 8427) in the sample studied than the number cited by the IWPR.

The results of this study show a statistically significant relationship between single parent status and retention and a statistically significant difference between the cumulative grade point average after four semesters (100%) and single parent status. Since there was a relationship between the fall-to-fall retention rate of single parents and non-single parents, the barriers single parents face as numerous studies discuss in the literature review may be real within the Mississippi community college single parent population. For example, Duquaine-Watson (2007), Austin & McDermott (2004), and the IWPR (2014) all argue that single parents do not have adequate access to childcare. Duquaine-Watson (2007) and Austin & McDermott (2004) discussed how welfare reform has made attending college more difficult for single mothers, and they discuss the limited level of student support services for single mothers on college campuses. Both Duquaine-Watson (2007) and Austin & McDermott (2004) were qualitative studies, so this study supports their conclusions that access to childcare and welfare reform has made it more difficult for single parents to be successful. King (2002) also concluded that working more than part-time negatively affected single parent success. The results of this study support that single parents are retained at significantly different rates than those who are not single parents.

Grade Point Average

According to Nakajima et al. (2012), cumulative grade point average (GPA) is the greatest predictor of community college completion. This study found the average GPA of single parents studied was 2.62; for students who were not single parents, their GPA was 2.55. Hypothesis 4 tested to determine if a statistically significant difference existed between the mean GPA of single parents and non-single parents. The resulting independent t-test showed that, once

corrected for equal variances, there was a statistically significant difference between single parent status and GPA. Being a single parent among the sample studied meant they had a better GPA than their nonparent peers. This data point goes against the perception of single parents performing worse than their nonparent peers; however, both Austin and McDermott (2003) and Lovell (2014) stressed the importance of student parents having the inherent belief that a college education is a valuable investment in their future and the future of their children. The earliest literature on single parents from the Washington State Higher Education Board (1993) argued that helping single parents realize their motivation by identifying dreams and turning them into goals that could be achieved through a college education was central to single parents' retention and ultimate successful completion of a degree.

Limitations

This study set out to obtain data from each of the 15 Mississippi community colleges in the state system. The researcher allowed colleges first two weeks to compile their institutional data and send to the researcher; however, after this initial period, only one college had provided its data. A reminder email was sent to the remaining colleges, and they were given another month to submit data. Even after this extension only four community colleges provided data that was usable within the time frame. Consequently, the data that was aggregated and analyzed in this study contains a sample of 8,427 of the 98,013 students, or 8.6%, in the Fall 2016 cohort of students enrolled in for-credit coursework. While representative of the total population, if all colleges would have submitted data, a more accurate snapshot comparison between the groups could have been created.

This study did not examine the root causes for any differences and/or relationships between the dependent and independent variables. Further research will be needed to help

explain any differences between single parent students and married parent students or nonparent students. Simply providing the comparison data as this study does is the first step to improving outcomes among single parent students. This study was also limited by its examination of one cohort of students, but it is assumed that the cohort being examined is representative of others. The study was not able to identify trends in single parent student success. A longitudinal study examining single parent success over multiple years would identify trends.

The researcher is a full-time employee of a community college included in this study; therefore, the researcher brings biases to the study. In order to avoid potential conflicts, the researcher avoided interpreting data during the study. All data collected were quantitative, and no judgments were made about the results that either directly state or suggest any single community college is performing better than other community colleges.

The type of statistical analysis is also a limitation of this study because the purpose was to simply find the number of single parents within the Mississippi community college system and to find if a relationship existed between single parents and non-single parents and between male and female single parents. Another limitation is the lack of additional data points related to barriers single parents face and student support mechanisms community colleges offer. This study did not take age into account for comparing the retention of students sampled. The data may reveal age as a factor affecting retention and grade point average.

Recommendations for Future Research

This study only establishes a baseline from which others may learn basic facts about the number and nature of the single parent population within the Mississippi community college system. This study found a significant relationship between single parent status (single parent or not) and whether a student was retained from the Fall 2016 to the Fall 2017 semester as well as

single parent status and grade point average. Further research is needed to explore what the differences between the groups are and how those differences contribute to a student's likelihood of being retained. Additionally, since gender differences emerged further research will be needed to examine why gender affects single parent success. Because the number of single fathers in the Mississippi community college pipeline is small, qualitative research will be needed to learn about single fathers' experience moving through their education. These data may then be compared to qualitative data from single mothers to identify similar as well as disparate experiences.

Before conducting further research, more data need be collected from the other ten colleges not included in this study for the Fall 2016 cohort. This would create a more complete snapshot in order to more accurately inform the analysis that was carried out in this study. Longitudinal retention data need to be collected for single parents and non-single parents to develop a trend analysis of retention among this population. More data points need to be collected in order to understand the effect of the barriers introduced in the literature review such as childcare and welfare reform and working more than part-time. Also, more data should be collected from single parents that would identify which student supports existed on their campuses and how often single parents interacted with those supports. After collecting these data, each factor could be analyzed to determine the effect each of the supports has on single parents.

More types of quantitative analysis are needed on the Fall 2016-Fall 2017 data set. For example, part-time and full-time student retention among the single parent and non-single parent categories needs to be analyzed to determine if the number of hours taken affects retention. Further, while this study found a relationship between single parent status and retention,

quantitative analyses are needed to determine the strength of that relationship. Qualitative analysis is needed to learn more about the practices, barriers, and educational experiences of single parents. Further, age was not collected as part of this study, so that data should be collected and compared to single parent status to determine if age affects retention between groups of single parents and non-single parents.

Based on the literature and the results of this study, Mississippi community colleges should take action. They should adopt a guided pathways model that has shown tremendous success as the literature showed (Bailey, Jagers, and Jenkins, 2015; Matthews, 2009; Completion by Design). The guided pathways model addresses all of the barriers discussed in the literature, such as providing resources to single parents on how to find and evaluate childcare providers (Yakaboski, 2010), other students stigmatizing single parents (Duquaine-Watson, 2007; Yakaboski, 2010), and the limited amount of student services for single mothers on community college campuses (Duquaine-Watson, 2007; Austin and McDermott, 2004). Community college must design student services to help single parents *and* their nonparent peers first find their motivation for attending college, connect them with resources, help them build social connections, and develop academic maps with milestones.

Community colleges should transform their campuses by adopting the guided pathways model Bailey, Jagers, and Jenkins (2015) champions in *Redesigning America's Community Colleges*. The guided pathways model has four phases: connection, entry, progress, and completion. At each phase in the pathways model, community colleges incorporate the types of support the literature discussed such as intensive and intrusive academic advising, connection with wraparound student services, developing career and academic goals, and making steady progress toward those goals. The guided pathways community college first reaches down to high

schools to align curriculum with the community college's readiness standards in main program areas, conducts pre-career assessments and career exploration on high school students, enrolls students in dual enrollment courses in their meta-major of choice, and graduates high school with credits toward a degree. The student is on a program path and enrolls full time in the community college. Next, community colleges usher the student to the entry phase. Based on a required orientation or orientation course, career assessment, and advising, students should be guided to select a meta-major and begin their degree plan. In their first year, students should take a student success course focused on their meta-major. Instruction should provide learning opportunities around collaboration and other applied learning experiences to enhance instruction beyond the lecture model.

At the end of the entry phase, students have a program goal and completion plan and are gaining momentum toward completion. The guided pathways community college student then enters the progress phase. The college must have in place an e-advising system that allows both students and their advisors to monitor progress on students' degree plans and allows for notes to be left for students that other pertinent employees can see, so important success information follows each student as they interact with student services. Community colleges should utilize an early alert system alerting advisors when a student encounters a risk factor that could prevent them from passing a course, so advisors can connect students with tutoring or other support services. Students in this phase should be guided to joining clubs and organizations to connect them with people in their area of interest and potential internships. At this point, the advisors should help students apply for transfer admissions at four-year institutions or connect them with a job in their program of study. The academic supports and student services in place help students move closer to completion and build on earlier momentum. The last phase of the guided

pathways model is the completion phase. Students in this phase complete their academic program in two years ready to transfer to a four-year institution with all their credits and junior standing or enter the workforce with their earned credential (Bailey, Jagers, and Jenkins, 2015).

Faculty members and academic administrators should create program maps that include program learning outcomes, course sequences, and significant courses students must pass (milestone courses). Transfer program maps should align with related majors at transfer colleges relevant for each community college's students. Career and technical programs should have learning outcomes incorporating industry specific skills that graduates should possess in order to enter the workforce in that field (Bailey, Jagers, and Jenkins, 2015). Additionally, Bailey, Jagers, and Jenkins (2015) stress that community college should have strong partnerships with industry and transfer colleges to ensure the learning outcomes and coursework are appropriate for the needs of industry and transfer colleges. At a guided pathways community college, instruction should focus on building skills, learning concepts instead of content, and developing habits of mind. These recommendations directly support retention for all students and dovetail with the Washington State Higher Education Board's (1993) recommendations and Mahlberg's (2015) findings for developing meta-cognitive skills. Students at guided pathways colleges will be more engaged, and as Price and Tovar (2014) argued, student engagement is a predictor of retention among community college students.

Community colleges should transform student services by implementing practices learned from the guided pathways movement such as working with faculty to develop a mandatory process for career and program exploration and selection. Each student should be forced to choose a meta-major when they first enroll. Immediate academic and career guidance should be given to those students who cannot initially decide on a meta-major. Both online and

face-to-face supports should be employed for services such as assessments and exploration tools, in-person advising sessions, and student success courses (Bailey, Jagers, and Jenkins, 2015; Windham, et al, 2014; Ryan, 2013). Electronic advising tools that combine student tracking, case management, and early alerts into one package should be adopted as tools that do not replace people; instead, the tools provide the means for community college staff to have more interactions with students by providing nudges encouraging students at milestones in which students gain momentum and at loss points when students are at risk, no matter the population. The term *at-risk student* no longer applies to a targeted group of students such as single parents. Instead, community colleges should recognize that each student has *risk factors* that may prevent them from being retained. For example, a student accustomed to earning all As may face encounter a risk factor when they make a B- for the first time. E-advising tools can recognize this and automatically nudge the student to contact their advisor and/or to offer encouragement through a positive message (Bailey, Jagers, and Jenkins, 2015).

Finally, community college institutional researchers should become key to faculty and staff, providing data to stakeholders before making decisions. Cohorts of entering first-time students should be tracked longitudinally to identify both loss points, or places along a student's pathway in which the student struggles, and momentum points that are associated with an increased likelihood of students being retained or completing a credential. Community college institutional researchers should track the progress of transfer students after they leave the community college. The National Student Clearinghouse provides data to community colleges that may be used to learn how successful their students are after they enroll at four-year institutions. If students are not faring well at particular four-year institutions in particular majors, the community college should adjust their programs to better support students before they

transfer out. Finally, as Bailey, Jagers, and Jenkins (2015) suggest, institutional researchers should follow students after they enter the workforce by matching student records and obtaining data from state agencies. In Mississippi, as mentioned earlier in this study, LifeTracks is the state longitudinal data system containing information on students from kindergarten through the employment (or unemployment) in the workforce. These data should be used to determine which community college programs provide a real workforce benefit and can be used by college personnel to make a case for increased funding to the state legislature.

As a result of this study, Mississippi community college presidents and top administrators should commit to improving success through the budgeting process. Stakeholders can easily follow the money to know where an institution's priorities, and thus the leadership team's priorities, lie. Leadership teams must be willing to adopt practices that improve retention based on guided pathways efforts. College behaviors or spending for programs that do not support student retention and success should be eliminated. Community college leaders should support committee work that focuses on ways to improve retention and student success. Recommendations from committees that focus on improving student success should be listened to, and leaders must commit to taking these recommendations seriously while seeking data to support recommendations.

The literature and this study confirm that community colleges should adopt the guided pathways model in order to increase grade point averages and retention among both single parents and nonparent students. Guided pathways require the wholesale changing of the way community colleges are used to doing business; however, if they are truly focused on helping improve the standing of single parents and all students who enroll, community colleges will devote resources to adopting the guided pathways model. It provides a vehicle to transform the

entire community college experience for all students, including single parents and other underrepresented student populations. The guided pathways model forces community colleges to reimagine its academics and student supports, so each student is given the best chance to accomplish their goals.

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