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Examining the Impacts of Intrusive Advising on the Retention and Academic Success of First-Year, At-Risk, Community College Students

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Examining the Impacts of Intrusive Advising on the Retention and Academic Success of First-Year, At-Risk, Community College Students

Abstract

As degree completion rates have steadily declined nationwide, colleges are exploring student success initiatives for retention purposes. The intrusive advising approach has shown a positive relationship with retention of students from at-risk populations. The purpose of this study was to determine whether intrusive advisement impacted the retention and academic success of underprepared community college students in their first year. This study took place in a mid-sized, suburban, public community college located in New York State. Using a quantitative methodology, this study examined archival data from the fall 2017 student cohort to determine if intrusive advisement had an impact on educational outcomes through comparison of advised and not advised student groups. The results indicated that there is a statistically significant relationship between intrusive advisement and first semester retention. This is true when examining the results of the t-tests and regression analyses. However, intrusive advisement had no significant relationship with other educational outcomes. The results showed that high school grade point average is the strongest predictor for all educational outcomes. Recommendations for practice include: development of an advisement survey, use of early alert software, budget to accommodate staffing for advisement needs, and colleges partnering with local high schools to provide pathways for college. Additionally, the recommendations for future study include: expanding research to multiple community colleges with differing student populations, examining advisement in multiple semesters of study, including part-time and non-traditional students in the research, including the frequency of advisement students receive, and a qualitative study about student's experiences with intrusive advisement.

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Examining the Impacts of Intrusive Advising on the Retention and Academic Success of
First-Year, At-Risk, Community College Students

By

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Submitted in Partial Fulfillment
of the Requirements for the degree
Ed.D. in Executive Leadership

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Dedication

This dissertation is dedicated to my grandfather, Juan Pablo Martinez who worked tirelessly throughout his entire life and made his way to America in order to ensure a better future for his children and grandchildren. Abuelo, you can rest peacefully now knowing that there is a doctor in the family. A very special dedication and thank you to my mother, Radaisy West you have raised me in your vision and your love and support has been my guiding light throughout my whole life. I would never have come this far without your belief in me and without your unending support in all my pursuits. You are my hero and have always been a strong example of hard work and perseverance. Thank you to my stepfather, Robert West for choosing to raise me. May you rest peacefully knowing all of your help tutoring me all these years were not in vain. I turned out okay after all.

Dedication and thank you to my siblings, Belizabeth Rios, Andrew West, and Jayleene West, may this serve as an inspiration to each of you that no barrier is too great to overcome. May you all continue working towards your dreams. To my niece, Bella Romero may you always aspire towards greatness, you are the future!

Warm thanks go to my dissertation committee: Dr. W. Jeff Wallis, chair; and Dr. Brenda Myers, committee member. Dr. Wallis you have been a mentor and advisor to me throughout this entire process from start to finish. I would like to thank you for always remaining patient with me, providing counsel and advisement and getting me to the finish line. Dr. Myers, your insight and counsel provided a fresh perspective to my work. Thank

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Biographical Sketch

Angela Luisa Rios is currently the Director of Advising and Transfer Services at a community college in the State University of New York system. She holds her Bachelor of Arts degree(s) in Communication and English from University of Hartford, and her Master of Science degree in Counseling from Central Connecticut State University. She has been committed to academic achievement in higher education positions for more than 10 years. Ms. Rios came to the Ed.D. program in Executive Leadership at St. John Fisher College in the summer of 2017 and pursued the study of community college students' academic success under the direction of Dr. W. Jeff Wallis and Dr. Brenda Myers. She received the Ed.D. in 2019.

Abstract

As degree completion rates have steadily declined nationwide, colleges are exploring student success initiatives for retention purposes. The intrusive advising approach has shown a positive relationship with retention of students from at-risk populations. The purpose of this study was to determine whether intrusive advisement impacted the retention and academic success of underprepared community college students in their first year. This study took place in a mid-sized, suburban, public community college located in New York State. Using a quantitative methodology, this study examined archival data from the fall 2017 student cohort to determine if intrusive advisement had an impact on educational outcomes through comparison of advised and not advised student groups. The results indicated that there is a statistically significant relationship between intrusive advisement and first semester retention. This is true when examining the results of the *t*-tests and regression analyses. However, intrusive advisement had no significant relationship with other educational outcomes. The results showed that high school grade point average is the strongest predictor for all educational outcomes. Recommendations for practice include: development of an advisement survey, use of early alert software, budget to accommodate staffing for advisement needs, and colleges partnering with local high schools to provide pathways for college. Additionally, the recommendations for future study include: expanding research to multiple community colleges with differing student populations, examining advisement in multiple semesters of study, including part-time and non-traditional students in the research, including the

frequency of advisement students receive, and a qualitative study about student's experiences with intrusive advisement.

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Chapter 1: Introduction

Enrollment in college has grown considerably during the past two decades, as a college degree is related to greater economic and social mobility (Nakajima, Dembo, & Mossler, 2012). The increasing number of students who enroll in college and dropout before their second year is a national concern (Levinstein, 2018). With dropout rates nearing 50%, community colleges in particular are experiencing rising levels of student departure during the first college year (Chen, 2017). This phenomenon, commonly referred to as college attrition is impacting the economic growth of young professionals as more students leave college prior to completing their degree with student loan debt. In addition, Price and Tovar (2014) posited that without an improvement in degree attainment rates, the national workforce will not have enough skilled professionals to meet the labor needs of the 21st century. To increase degree completion and retain students, colleges nationwide are investing in student success by growing and enhancing academic advisement initiatives (Bettinger & Baker, 2014). The literature on student retention has identified academic advising as one of the most effective academic interventions supporting student persistence towards degree completion (Darling 2015; Levinstein, 2018; Ohrt, 2016; Swecker, Fifolt, & Searby, 2013).

Presently, academic advisement is administered using a variety of approaches, ranging from very prescriptive models to more developmental approaches (Brenner, 2010). Studies suggest that the intrusive advisement approach can be most effective when working with students in their first academic year, and particularly for students from

underrepresented populations (Davis, 2015). The intrusive advisement approach is characterized by advisors proactively contacting students and providing academic interventions during the first signs of academic struggle (Varney, 2012). This study was designed to examine the impacts of intrusive advisement on the academic success of academically underprepared community college students in their first college year.

The research took place at a public community college in New York State that employs an intrusive advisement approach. The participants of this study enrolled in college for the first time during the fall 2017 semester and attempted a full-time credit-load (12 credits). A quantitative methodology was used to examine the academic success of students who received intrusive advisement during their first year in college compared to students who did not receive intrusive advisement. The academic success metrics served as the dependent variables for this study and included: first semester and cumulative grade point average, enrollment in the spring and fall 2018 semesters, the percentage of credits completed during the first academic year, and completion of remedial coursework for those who placed into remediation.

History of Community Colleges

Interest in the retention rates of higher education institutions in America has grown as more students enroll in college and fewer graduate (Kelly & Schneider, 2012). Grounded in its historical mission of service, higher education in America has evolved over the decades from its origins of advancing piety and providing enrichment for upper-class, White men to offering opportunities for upward social and economic mobility for all Americans. Modeled after European forms of education, colleges were historically tasked with educating the previously mentioned majority demographics about civility,

education, and the Christian doctrine in order to prepare them to assume leadership positions in the church and education. Other colleges focused on a mission of service that specifically prepared clergy for the Anglican church (Miller, 2010; Ward, 2003).

During the period of 1750-1800, Benjamin Franklin and President Thomas Jefferson called for an expansion in college curriculum to include commerce, agriculture, and more access for Americans. However, it was not until the mid-1800s that denominational colleges (colleges located within the community) were formed, which provided more opportunities for more middle-class and lower middle-class people to receive access to higher education. In addition, this expansion of geographic locations of colleges and curriculum allowed for institutions to respond to the educational needs of the community in which they resided (Potts, 1977; Ward, 2003). The Morrill Act of 1862 (Land Grant College Act) awarded federal land to each state for higher education with curriculum that included agriculture, mechanical, and the liberal arts. The second Morrill Act of 1890 withheld federal funds from any institutions that denied admission based on race unless separate institutions were created for minorities to attend (Drury, 2003).

The Morrill Act was pivotal in terms of access and curriculum because it provided publicly supported education to those for whom financial circumstances would have excluded college. In terms of curriculum, the new emphasis of land grant college was on providing a more utilitarian education, thus attracting to higher education people who previously had attended technical institutions or did not attend higher education at all. (Ward, 2003, p. 25)

Mission of Access

As higher education transitioned towards a mission of access and expanding curriculum to include vocational learning, in 1901 the first community college (junior or 2-year college) was established (Drury, 2003). Community colleges were designated as institutions that could provide social, cultural, and economic mobility for local residents by offering curriculum that provided education on the needs of the community. Thus, as college education became increasingly important for career advancement, the populations of students attempting to earn a degree became increasingly diverse (Ishler 2005; Miller, 2010). Presently, community colleges are predominately open access institutions and serve a more diverse student population than any other sector. The community college mission is to prepare local residents academically. The college provides affordable education and maintains flexible course scheduling that accommodates traditional (students ages 18-24) and non-traditional (students 25 or older) student populations, and the curriculum is responsive to the social and workforce needs of the community in which they are situated (Boggs, 2011).

Inherent in its mission to educate people from all levels of academic preparation and experiences, community colleges are educating the nation's most at-risk student populations. Kuh (2008) defined the characteristics of students most at risk of college attrition as students who are “academically underprepared for college work, enter college years after completing high school, are single parents, are employed while attending school, and are the first in their families to attend college” (p. 69).

Retention in Community Colleges

Fowler and Boylan (2010) reported that as many as 75% of students who completed the ACT exam had scores that indicated they were not performing at college level in mathematics, English, social science, or natural science. In addition, students who enroll while academically underprepared have greater difficulty with course completion and overall college retention. Thus, community colleges have sustained difficulty with retaining students each academic semester with few students persisting towards graduation and many choosing to stop attending after their first year (Kelly & Schneider, 2012). “Only 37% of high school graduates finish an associate’s degree or higher in 8 years. While disadvantaged students experience even lower completion rates” (Rosenbaum, Becker, Cepa, & Zapata-Gietl, 2016, p. 520). According to the National Center for Education Statistics (Chen, 2018), the national average to complete a 2-year associate degree is 3 years. The national overall 3-year graduation rate for associate degrees is 22%.

Due to the steady increase in enrollment with an associated lack of degree completion, there is growing interest in ways to increase rates of degree completion and focus on initiatives designed to keep students engaged and persisting to graduation (Donaldson, McKinney, Lee, & Pino, 2016). Thus, institutions are implementing student support initiatives, such as tutoring, supplemental instruction, and advising, to enhance the quality of the learning experience and to engage students throughout their academic journey (Kelly & Schneider, 2012). Researchers have posited that student engagement initiatives that connect students with curriculum, faculty, professional staff, other students, and the campus community as a whole have the strongest correlation with

retention and academic success, particularly for at-risk student populations (Boggs, 2011; Donaldson et al., 2016; Fike & Fike, 2008; Kelly & Schneider, 2012; Kuh, 2008; Tinto, 2012). However, research on the subject has not suggested causal effects (Nakajima et al., 2012; Price & Tovar, 2014).

At-Risk Student Populations

The only criterion for enrollment in community college, as an open access institution, is a high school diploma or successful completion of the high school equivalency exam. As a result of this open access, community colleges are enrolling students from a range of academic preparation, most of whom require a semester or more of remediation (Fowler & Boylan, 2010). In addition, community colleges have played an integral role in providing access to higher education for students from a wide variety of cultural and economic backgrounds. These demographic shifts are most notable in terms of ethnicity, age, socioeconomic status, family educational background, and academic preparation (Miller, 2010; Upcraft & Stephens, 2000). Much of the research with regard to student retention has suggested that the student demographics most closely associated with attrition are academic preparation, family educational background, race and ethnicity (Glennen & Baxley, 1985; Nakajima et al., 2012; Pascarella & Terenzini, 2005; Price & Tovar, 2014; Tinto, 2012).

Academic preparation. Valentine, Konstantopoulos, and Goldrick-Rab (2017) posited that there is a rising trend of college entrants arriving academically underprepared, which has resulted in more than half of first-year students requiring remediation during the first college year. According to Valentine et al., “Nationally about 60% of students taking a placement exam are recommended for placement into remedial

education” (p. 807). Students taking remedial coursework can often take a longer time to graduate and may start to feel disengaged from the academic work as a result. High school grade point average is another critical indicator of a student’s academic preparation and is the factor that most strongly predicts retention in the first college year (Price & Tovar, 2014). According to Hurford, Ivy, Winters, and Eckstein (2017), the national high school grade point average is a 3.0. Any grade point average below that is considered to be in the lower 50th percentile.

Students who earn a high school equivalency diploma (HSE), previously named general education development diploma (GED), are a group of students who are at a particular disadvantage in terms of college attrition (Boykin, 2015). According to Tokpah and Padak (2003), most students who earn high school equivalency diplomas have done so because of personal and or academic barriers in the traditional classroom setting. In addition, Patterson, Song, and Zhang (2009) reported that most GED/HSE completers are unsuccessful in obtaining a college degree, citing 77% of GED/HSE completers who enroll in a public community college or technical college withdraw during their first semester.

Family educational background. As defined in the literature, first generation students are students whose parents have not completed any college. There is collective interest in this group of students, as their enrollment in college has grown over the past few years. Aud, Fox, and KewalRamani (2010), in their National Center of Education Statistics (NCES) report, asserted that first generation students make-up almost 46% of first-year students in higher education; however, these first generation students are less

likely to graduate (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Ohrt, 2016).

According to Kuh et al. (2006):

First- generation students are less likely to graduate because they earn fewer credits in their first year, take more remedial courses, are more likely to repeat courses, tend to major in vocational and technical fields, and are less likely to choose a major in the first year of college. (p. 21)

Similarly, Ohrt (2016) argued that first generation students are 1.3 times more likely to leave college in their first year when compared to their peers, which also is related to other demographic factors. “First generation students are overrepresented in the most disadvantaged racial, income and gender groups that exemplify factors contributing to an increased rate of attrition” (p. 1).

Ethnicity. The research on college retention and completion has consistently found that students from Black and Hispanic cultural backgrounds are not retained or completing college at the same rate as their White and Asian counterparts. This phenomenon is commonly referred to in the literature as the achievement gap (Strayhorn, 2008; Tinto, 2012). According to Kuh et al. (2006), “There are large differences at every grade level between Whites and Blacks and Whites and Latinos in terms of being college ready, with no narrowing of these gaps from 1990 to 2000” (p. 18).

Community College Students

Community colleges have an overrepresentation of students who historically have been marginalized from higher education. This includes students from diverse backgrounds, low- socioeconomic status, and academically underprepared and adult student populations. With increased access, enrollment in community colleges has

expanded over the past years and now accounts for almost half of students enrolled in higher education nationally (Boggs, 2011; Crawford Sorey & Harris Duggan, 2008; Ryan, 2013). In fact, when compared to their 4-year counterparts, community college students are more likely to be underprepared academically, work while attending school, attend college part-time, and come from an underrepresented ethnic background, all characteristics considered to be risk factors for attrition (Fong et al., 2017).

Community colleges have served as a pipeline to higher education for many students from underrepresented backgrounds; however, community college students are more likely than 4-year students to drop out prior to degree completion (Bailey, 2012). According to Bailey (2012), more than 60% of community college students have not completed a degree after 6 years of starting college. Bailey also found that community college students from underrepresented backgrounds are not completing their degrees at the same rate as their White counterparts, with 29.5% of White community college students completing a degree compared to only 16.5% of Black community college students completing a degree.

A focus on first-year initiatives that integrate students to the college and engage them in campus life is especially critical for community college students who are typically balancing outside responsibilities with their academic work and may not feel as engaged or connected to the campus community (Tinto, 2012). Research has highlighted that the first year of college is critical to retention and degree completion, as most students who drop out of college prior to completing their degree do so within their first academic year; retention into the second year increases the likelihood that students will

complete their degree (Boggs, 2011; Hatch & Garcia, 2017; Nakajima et al., 2017; Yue & Fu, 2017). According to Nakajima et al. (2012):

A large number of students drop out of college without obtaining a degree or completing a certificate. This is more apparent in the 2-year institutions compared to four-year institutions and it is particularly apparent during the first year of enrollment. (p. 592)

Importance of the First Year

The first year of college is a period of adjustment for all students. They start their academic career on a new campus, meeting new faculty, making connections with other students, and setting goals for an academic path that will prepare them for a career.

According to Tinto (2012), relating to the college community and building relationships with other students and faculty within the first college year is critical to the retention of the student. Tinto explained:

The first year proves to be an especially important year in the process of persistence. The character of one's experience in that year does much to shape subsequent persistence. By the same token, the largest proportion of institutional leaving occurs in that year and prior to the beginning of the second year. (p. 14)

Tinto further posited that the first-year attrition rate is a national concern, particularly for community colleges, as they experience the highest first-year attrition rate (48%), a rate that is higher than any other higher education sector.

Although the first year is difficult for all students, community college students are at a particular disadvantage, as many arrive academically underprepared for college level work, experience difficulty connecting with the academic environment, and often lack

clear goals or academic direction (Drake, 2015; Fike & Fike, 2008; Wilmer, 2008). Givens (2008) further suggested that community college entrants have a wider range of learning needs than their counterparts who attend four-year institutions. As a result, community college students can experience a lack of connection to their academic study, making it hard for them to feel motivated to learn or commit to earning a degree (Givens, 2008).

Pascarella and Terenzini (2005) suggested that community college students may have difficulty adjusting to the college environment as a result of competing life obligations that prevent them from reserving time for their coursework and fully engaging with the campus community. One way that community colleges are engaging students to the campus community is by connecting them with academic advisement during their first year in college. According to Swecker et al. (2013), “Academic advising offers an effective retention strategy for individuals considered at most risk for dropping out, including first-generation students” (p. 46).

Academic Advising

Kuhn (2008) defined academic advising as “situations in which an institutional representative gives insight or direction to a college student about an academic, social or personal matter. The nature of this direction might be to inform, suggest, counsel, discipline, coach, mentor or even teach” (p. 3). Present day academic advising has undergone evolution from its original practice in 1636-1870, when it was not an official role of any member of the college. During this time period, the college curriculum was prescriptive with very little variety or elective coursework; students mostly took the same classes, studied with the help of tutors, and little to no advisement was present.

According to Cook (2009), after the Morrill Acts of 1863 and 1869, land grant institutions and Black colleges emerged. Their curricula included more applied subjects and more course offerings. As the diversity of the student population and the curricula grew, a more pressing need for focused advisement emerged.

In 1877, as a response to the need to provide guidance to students on selection of elective coursework, Johns Hopkins University created seven areas of study (majors) and had faculty serve as advisors for students (Brenner, 2010; Kuhn, 2008). As time progressed, advisement became more central to the work of faculty. Enrollment at institutions was rising and curriculum had expanded to various disciplines, offering students more options. In 1889, Johns Hopkins University appointed the first Dean of Advisement, whose role was to provide guidance for the faculty in their advisement work. Harvard University soon followed and created a faculty board of freshmen advisors for first-year students.

From the 1900s to the 1930s, college enrollment continued to grow nationwide and colleges began implementing faculty advisement systems that concentrated on integrating students to the college during their first year. After World War II, veterans began enrolling in college at high rates, mostly attributed to the Servicemen's Readjustment Act of 1944, commonly known as the G.I. Bill. These veteran students had difficulty adjusting to the college environment and required educational and vocational counseling, which led to greater demand for focused advisement (Cook, 2009).

Throughout the 1940s and 1950s student support centers were established nationally, with faculty working alongside tutors and administrators to advise students; however, it was not until the 1970s that advisement was recognized as its own field.

During this time period, the expansion of community colleges, open admissions, and federal financial support programs brought a variety of students from different economic, racial, and educational backgrounds who required specialized advisement. As more disciplines were included and a variety of curricula were offered in colleges, there was an increased demand for faculty to commit more time to research and specialize in their area of study. This pulled faculty away from advising students and more institutions started to hire professional advisors who would work with students full-time on advisement.

In 1973, as a response to the growth of diversity in the student population, Glennen (1975), introduced intrusive advisement as an effective retention strategy for first-year students from underrepresented populations. The National Academic Advising Association (NACADA) was established in 1979 to provide a professional organization for advisors (Brenner, 2010). During the 1980s, the field of advisement continued to expand with more colleges hiring professional academic advisors and building advisement models.

Self (2008) suggested that the presence of professional advisors on campus shows the college's commitment to academic success. "Unlike faculty advisors, whose primary focus is on teaching or research, professional academic advisors are able to spend the majority of their time and availability meeting with students" (Self, 2008, p. 269). Seminal research by O'Banion (1994) suggested that the prescriptive approach to advising students, which specifically focuses on course selection and scheduling, was not appropriate for the diverse population in community colleges; however, the author further argued that a faculty-only advisement model does not suit the changing demographics of community college students. O'Banion postulated that advisement is a developmental

progression for the community college student and occurs in a 5-step process during a student's academic career. According to O'Banion:

The dimensions of the process of academic advising: (1) exploration of life goals, (2) exploration of vocational goals, (3) program choice, (4) course choice, and (5) scheduling courses. Any well-conceived program of academic advising will include activities related to these dimensions. It may be possible for each of these dimensions to be explored in a single day; most colleges however, are likely to consider the process of academic advising as continuous. (p. 11)

Thus, the professionalization of academic advising as a strategy for student success and retention has led to the development of different approaches to advising students.

According to Hernandez (2016), academic advisors are often the first point of contact for community college students and different advisors practice utilizing varying theoretical perspectives. This was further evidenced by Brenner's (2010) qualitative study examining the theoretical frameworks that advisors employed to advise students. The study found that advisors used a variety of theories within their work. Crocker, Kahla, and Allen (2014) asserted that the three most utilized theories in advisement are developmental advising, prescriptive advising, and intrusive advising.

Developmental advising. Developmental advising theory originated from the work of O'Banion (1994) and earlier practices of academic advisement. It is acknowledged within the field as a classic approach to advising students (Hernandez, 2016). Grounded in student development theory, developmental advising centers on the progressive stages of students throughout their academic career and emphasizes student learning. As a seminal researcher, Crookston (1972) defined developmental advising as

the shared responsibility between student and advisor to problem solve, set goals, and focus on personal growth. Brenner (2010) posited that developmental advising is comprehensive and tailored to where students are in their personal maturation. In this approach to advisement, advisors and students are partners in the student's academic journey. Developmental advising has a strong focus on the relationship between the advisor and the student. The advisor engages the student in the advisement process by educating the individual on the curriculum, registration protocols, and the degree planning process. The developmental advisor believes in the autonomy of the student and enables the student to become an independent problem-solver (Dedmon, 2012).

Prescriptive advising. Prescriptive advising, which is the historical approach to advising, is most commonly defined as advisement that focuses on course sequencing and academic policies (Hernandez, 2016). The role of the advisor in this approach is to design a course of study for the student and to inform them of their next steps. Prescriptive advising is often characterized by advisors who have large student caseloads and do not focus on the relationship between the advisor and the student. As a result, students have a more passive role and must rely on their advisor throughout their academic career. Prescriptive advisement is meant to provide clarity for students about curriculum and academic policies. It is preventive in that it tailors curriculum plans for students that will be most feasible for their academic progression. Price and Tovar (2014) stated that community colleges can revamp the academic support they provide to students by offering more prescriptive advisement. The authors further argued that this approach is more suitable for the changing student demographics at community colleges. Unlike Price and Tovar (2014), Bahr (2008) argued that the prescriptive approach to advisement

does not enable students to develop critical problem-solving skills needed for personal and professional development.

Intrusive advising. Intrusive advising is an advisement approach that blends the holistic part of developmental advising with the preventive part of prescriptive advising. Intrusive advising emphasizes intentional advisor outreach and early intervention for students experiencing academic difficulty. According to Varney (2012), intrusive advisement differs from developmental and prescriptive advisement in that advisors are initiating contact with students. Varney (2007) defined intrusive advisement as a proactive, hands-on approach to encouraging students to seek help when needed. An intrusive advisement model includes advisors providing outreach to connect with students throughout the semester in order to build relationships and to provide students continuous counsel on academic progress (Schwebel, Walburn, Klyce & Jerrolds, 2012). An intrusive advisement model does not depend on students voluntarily requesting assistance and is often characterized by early warning systems that identify first signs of an academic struggle. This allows advisors to have timely and active follow-up with students (Fowler & Boylan, 2010). Academic advisement itself has many different theoretical frameworks and approaches; however, this study remained focused specifically on intrusive advising.

Intrusive Advising

Intrusive advising has recently been referred to as proactive advising (in the literature and in the field), due to the initiative that the advisor takes to establish a relationship with the student and to encourage them to receive advisement. Intrusive advising seeks to connect students with the campus community and to help them navigate

various student support services. Intrusive advising originated from the seminal work of Robert Glennen (1975). In 1973, Glennen was President of Emporia State University and implemented intrusive advising in the student advisement center. Faculty advisors from all disciplines were charged with advising first-year and undeclared studies students. The advisement objectives were to orient students to the college, assist them with their academic goals, and resolve academic struggles early. To achieve this goal of engaging students, faculty advisors were instructed to provide outreach and encouragement to students in an effort to spur interest in advisement and to provide interventions for students who received concerns from faculty. Intrusive advisement theory emphasizes that advisors actively seek their students and assess the need for intervention (Glennen & Baxley, 1985). Researchers have regarded intrusive advisement as the most appropriate form of advisement for community college students and at-risk populations because it involves outreach and a proactive approach needed to engage a diverse student population, and in particular, first-year students (Earl 1988; Glennen & Baxley, 1985; Schwebel et al., 2012; Varney, 2012; Vowell & Karst, 1987).

Problem Statement

Nationally, higher education institutions are experiencing a prevailing issue as the number of students who enter college each year and leave prior to completing their degree continues to rise. Currently, only 49% of students in community colleges are retained within their first year, and only 22% persist towards degree completion in 3 years (NCES, 2015; Smith, 2004). Researchers in the education field are dedicated to understanding this phenomenon of student departure; particularly within the community

college setting, which is the sector experiencing the lowest graduation rate in the nation (Boggs, 2011; Drake, 2015; Fike & Fike, 2008; Wilmer, 2008;).

In a study of effective retention strategies for community college students in their first year, Kot (2014) found that students who participated in advisement during their first year had higher cumulative grade point averages than those who did not and persisted to their second year at greater rates. Further research on retention of at-risk students has posited that intrusive advisement is the most successful approach for retaining students in their first year and ensuring persistence towards degree completion (Davis, 2015; Earl, 1988; Glennen & Baxley, 1985; Levinstein, 2018). Thus, this study focused in particular on the retention and academic success of academically underprepared, first-time full-time (FTFT) community college students who participated in intrusive advisement during their first year in college.

Theoretical Rationale

Student departure theory. Most student development theories attribute student departure to the cognitive skills and psychological development of the individual (Tinto, 2012). These theories are grounded in the concept of development through chronological age. Students' maturity and personal growth are thought to progress as they move through different life stages (Gillett-Karam, 2016). Student departure theory (Tinto, 2012), originally adapted in 1975 and further developed in 2012, argues that the social environment of the college and the academic support systems within the college contribute to the retention of its students. Thus, the theory attributes retention to inclusive learning environments and a strong on-campus social community (Tinto, 2012). The theory identifies triggers that students can experience like homesickness, isolation,

and confusion as they leave the community they know behind and seek membership in this new world (Tinto, 2012). Student departure theory examines best practices that colleges use to welcome students in their first year. These practices assist the students in community integration and foster a sense of belonging in the college (Tinto, 2012).

Tinto's theory of student departure has served as the foundation for over 700 studies pertaining to retention of college students (Bensimon, 2007; Gambino, 2012). Utilizing student departure theory, many institutions have created academic support initiatives, such as centralized academic advisement, to assist students in their academic progression. Tinto's (2012) student departure theory originated from the work of anthropologist Van Gennep's (1960) studies of the rites of passage and sociologist Durkheim's theory of suicide (1951). Van Gennep's rites of passage (separation, transition, incorporation) in tribal societies centers on the stability of societies and communities over time, particularly during times of change. Similarly, Durkheim's theory of suicide used sociological principles to explain why suicide rates differed among different communities. The focus was on the voluntary departure of the individual from the community.

Challenge and support theory. Sanford's (1968) theory of challenge and support argues that it is the role of the campus community, faculty, and administrators to challenge their students academically, professionally and personally. By fostering an environment of academic excellence, colleges provide the format to challenge their students' intellectual growth and holistic development throughout their academic career. To equip students to meet the challenges of their environment, the appropriate academic and social support must be instituted so that students are able to move through the

process of academic, professional, and personal progression. The challenge and support theory coupled with Tinto's (2012) student departure theory provide a framework from which this study investigated advisement as an academic support initiative.

Statement of the Purpose

The purpose of this study was to examine the impact of intrusive advisement on the retention and student success metrics of academically underprepared students in their first academic year. For the purposes of this study, academically underprepared students were defined as students who were placed into remediation and/or students whose high school grade point average was below a 3.0. Student success metrics were measured by first semester and cumulative grade point averages, enrollment into the subsequent spring and fall semesters, percentages of credits completed, and passing remedial coursework for students placing into remediation. This quasi-experimental, quantitative study used archival data from fall 2017 first-time full-time (FTFT) college entrants. These students were divided into two groups: those who participated in intrusive advisement and those who did not.

This study took place in a mid-sized, suburban community college located in New York State. The enrollment at the college is about 5,500 students per semester with the student population demographics of 64% White, 12% Black, 18% Hispanic, 3% Asian/Pacific Islander, and 3% of the student population reported having more than one race.

Research Questions

Declining retention rates in community colleges has an impact on the workforce and economy. According to Swecker et al. (2013), "Academic advising offers an

effective retention strategy for individuals considered at most risk for dropping out” (p. 46). It is therefore crucial to examine the impact that academic advising can have as a retention strategy in community colleges, specifically for at-risk student populations. Thus, this study focused on the retention and academic success of community college students with at risk variables who participated in intrusive advisement during their first semester in college.

RQ1. Does participation in intrusive advisement during the first semester improve student’s first semester grade point average among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ2. Does participation in intrusive advisement during the first semester improve student’s cumulative grade point average among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ3. Does participation in intrusive advisement during the first semester increase retention to the spring 2018 semester among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ4. Does participation in intrusive advisement during the first semester increase retention to the fall 2018 semester among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ5. Does participation in intrusive advisement during the first semester increase percentage of credits completed in the first year among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ6. Does participation in intrusive advisement during the first semester increase the percentage of remedial credits completed among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

Hypothesis

Based on the research questions the accompanying null hypotheses will be tested:

H₁₀: Intrusive advisement has no impact on the first semester grade point average of academically underprepared community college students in their first year.

H₂₀: Intrusive advisement has no impact on the cumulative grade point average of academically underprepared community college students in their first year.

H₃₀: Intrusive advisement has no impact on the first semester retention of academically underprepared community college students in their first year.

H₄₀: Intrusive advisement has no impact on the fall to fall retention of academically underprepared community college students in their first year.

H₅₀: Intrusive advisement has no impact on the percentage of credits completed by academically underprepared community college students in their first year.

H₆₀: Intrusive advisement has no impact on the percentage of remedial credits completed of academically underprepared community college students in their first year.

To test these hypotheses this study examined the following independent and dependent variables:

Independent Variables

1. Intrusive advisement during the fall 2017 semester
2. Racial and ethnicity background; Black and Hispanic
3. Gender
4. Pell recipient as identifier for economic status
5. Residing in residence hall
6. High school grade point average
7. High school attended
8. Enrolled in remedial coursework during first semester

Dependent Variables:

1. First semester grade point average
2. Cumulative grade point average during the first year
3. Enrollment in the spring 18 semester
4. Enrollment in the fall 2018 semester
5. Percentage of credits completed
6. Percentage of remedial course work completed

Significance of the Study

With the high attrition rates of community college students in their first academic year, direct research on the impact of intrusive advising on retention and academic success can evidence its effectiveness as an academic support initiative, particularly for at-risk student populations. This study was intended to identify how and if intrusive

advisement impacts the retention and student success metrics of academically underprepared community college students. Intrusive academic advising may foster a positive learning environment by connecting students to critical academic support resources, providing guidance throughout academic progression, and educating students about the use of technology tools that can increase their agency, helping first-year students in their transition to college.

This study addressed the existing gaps in the literature that focus on the advisement within the community college sector, and the relationship between intrusive advising and first-year retention. The need for recent research about advisement, particularly within the community college sector, is evidenced by the fact that there has been a decrease in the articles published about advisement and even fewer that focus on advisement in community colleges (Miller, 2010).

Definition of Terms

Retention: Completion of one semester and enrollment into the next. Nationally, retention is measured from fall to fall enrollment and completion (Tinto, 2012).

Persistence: Continuous enrollment towards graduation. Students do not stop or break in their studies (Levitz, Noel, & Richter, 1999).

First-time Full-time (FTFT) students: These are undergraduate students who are enrolling as a college student for the first time. They will typically start college during the fall semester and attempt a minimum of 12 credits throughout their first semester (NCES, 2015).

First Generation students: Students whose parents/guardians did not attend college (Ohrt, 2016).

Non-Traditional students: Students aged 25 and older (Boggs, 2011).

Academic Advising: Institutional representative provides guidance on curricula, academic and social support services, and setting an academic plan (Kuhn, 2008).

Intrusive or Proactive Advising: Intrusive advising seeks to connect students with the campus community and help them navigate various student support services. The advisor initiates contact with the student and frequently monitors their progress through the use of early alert systems (Varney, 2012).

Developmental Advising: Developmental advising is a shared partnership with the student and the advisor. The advisor is concerned with both the academic and personal growth of the student (Miller, 2010)

Prescriptive Advising: In prescriptive advisement, the advisor focuses on building the academic plans and setting academic goals for the student. This method of advisement is very concerned with curricula and academic progression, but the advisor does most of the work (Christian & Sprinkle, 2013).

Chapter Summary

With many first-time full-time college entrants enrolling in community colleges and few graduating, there is a national focus on initiatives that will support students personally and academically. Community colleges are serving the students most at risk of attrition and most of the dropouts are occurring during the first college year. Reason, Terrizini, and Domingo (2006) argued that the first year in college is critical to degree completion and overall academic success. In addition, previous research has suggested a relationship between increased student engagement and greater academic performance (Brenner, 2010). Utilizing student departure theory (Tinto, 2012) and challenge and

support theory (Sanford, 1968) as a framework, this study examined the impacts of intrusive advisement on the retention and success metrics of academically underprepared community college students in their first academic year. Following this chapter, Chapter 2 provides a comprehensive review of related literature, Chapter 3 describes the methodology used for the study, Chapter 4 details the data analysis and results, and finally, Chapter 5 provides a discussion of the results in the context of the research questions of the study and the prior literature.

Chapter 2: Review of the Literature

Introduction and Purpose

For many students, particularly those from marginalized populations, community colleges present an opportunity to earn a college degree. However, as Juskiewicz (2016) reported in the educational statistics from the national clearing house, less than half of first-year students make it past the first college year. With declining retention and graduation rates at community colleges, there is an interest in how community colleges are creating environments that foster student development and academic success (Hernandez, 2016). Given the importance of assessing strategies for increasing retention and supporting first-year students, the purpose of this study was to examine the intrusive advising approach and its influence on the retention of academically underprepared, first-year, community college students. The studies below provide more insight into this phenomenon of attrition in community colleges, and academic advisement initiatives designed to aid students in their progression.

Retention in Community Colleges

Importance of the first year of college is consistent in the student retention literature. Hatch and Garcia (2017) facilitated a cross-sectional, quantitative study that explored the persistence of community college students specific to the first few weeks of enrollment, utilizing data from the community college center for student engagement. The findings reported suggest that there are lower odds of non-persistence for students who have a clear academic plan and pathway for degree completion. In addition, the

findings stressed the importance of students having access to their advisors and discussing outside commitments when designing academic plans. However, the more intensive advising practices were related to higher odds of non-persistence. This finding of intensive advisement practices having a negative effect on student persistence was in contrast to most of the literature on the effectiveness of intrusive advisement, which is considered the most intensive form of advisement (Varney, 2012).

With a focus on first-year community college students, researchers Fike and Fike (2008) analyzed predictors of fall to spring and fall to fall semester retention for 9,200 first-year students enrolled in a community college over a four-year period. A quantitative, retrospective methodology was utilized to assess predictors of student retention. Findings reported that the retention rate for fall to fall varied from 45.8%-49.4%. More than half of the students who enrolled in the fall did not enroll for the following fall. Spring retention ranged from 65.7%-70.7%. The strongest positive correlate with retention was successful completion of a reading course. Other predictors included successful completion of remedial math, receiving financial aid, taking an online course, semester hours enrolled in first semester, and participation in student support services (Fike & Fike, 2008).

The findings reported in Fike and Fike's (2008) study support the literature on strategies for improving retention at community colleges, as it indicates participation in student support services as predictive of retention within the first year. However, the student support service mentioned in the study is generalized and not specific to any particular type of student support service to achieve a positive influence on retention. This study by Fike and Fike was one of the largest studies conducted about the retention

of community college students within their first year. In addition to a large sample of students, the study occurred over a span of 4 years, adding significance for a field that has limited literature. As a result, the study has been referenced often in regard to community college student retention.

Furthering the research on retention in community colleges, Nakajima et al. (2012) facilitated a study examining factors that influence a student's decision to stay in school. The sample included 427 community college students in a southern California school who completed a 63 item survey assessing psychosocial variables. The findings indicated that cumulative grade point average, enrollment units, and English proficiency were the only variables that predicted student persistence; neither academic integration nor psychosocial variables predicted student persistence (Nakajima et al., 2012). These findings present a unique perspective, as much of the literature about retention of at-risk students suggest that academic integration and use of student support services are closely associated with persistence and retention. In addition, many studies have suggested that psychosocial variables are closely associated with a student's risk for attrition. Conversely, the study did not find correlations among either factor. However, the study did continue to underscore the importance of cumulative grade point average on retention and persistence of community college students.

The research by Hatch and Garcia (2017), and Fike and Fike (2008) included a large number of participants and reported similar findings, reporting that student support services and academic integration are consistently associated with greater rates of retention. Hatch and Garcia additionally posited that advisement is the factor most predictive of student persistence, and the more intrusive the advisement, the greater the

rate of retention. Conversely, Nakajima et al. (2012) did not find any correlation with student support initiatives or psychosocial variables, which have been referenced in the literature as predictors of retention (Fong et al., 2017).

Student Support Initiatives in Community Colleges

For first-year students to successfully adjust to a new college environment, they must obtain knowledge of the academic institution's policies, practices, and available academic support resources. In order to facilitate awareness of campus resources and academic information, administrators and faculty play an important role in promoting participation in advisement, tutoring, and other academic support services (Jones, 2011). The literature generally credits academic advisement as a student support initiative that has an impact on the retention of community college students, particularly during their first year (Capstick, 2018; Chen, 2017; Hernandez, 2016; Miller 2010).

Ryan (2013) examined the effectiveness of incorporating faculty advisement into first-year seminars at a 2-year technical community college. The findings reported suggested that first-year students do better during their first semester and are more likely to be retained if they know their academic advisor and meet regularly with him or her during their first semester. Similar to first-year seminars, pathways programs include integration of support services into a first-year experience for new students.

In a similar study, Fowler and Boylan (2010) examined the effectiveness of this program on the retention of community college students at a public, 2-year college. Findings supported that cumulative grade point averages were greater for those in the pathway program. The percentage of students in good academic standing increased from 46% to 70% for students in the pathway program and those placed on probation also

slightly decreased. Fall to fall retention increased for pathway students from 29% to 52%. The findings between this study and Ryan (2013) add to the literature regarding successful programs and retention of community college students, providing evidence of advisement as a support initiative positively associated with the retention and persistence of community college students.

To assess the effectiveness of student support initiatives on retention, Talbert (2012) facilitated a study that took place in Minnesota universities and technical colleges. A questionnaire was sent to 104 academic leaders to gain their insights on how to increase enrollment retention and graduation. The findings of the study suggested that colleges and universities need to establish tracking systems to (a) review student failures, achievements, and successes, and (b) track high-risk students. This study had comparable findings to the studies by Ryan (2013) and Fowler and Boylan (2010), all of which suggested that there is a positive correlation with participation in student support services, specifically academic advisement, and the retention rates of first-year students.

Academic Preparation for College

Nationally, fewer than 60% of students at 4-year colleges graduate within 6 years, and at community colleges the graduation rate nationally is 22% (Bettinger, Boatman, & Long, 2013). The research on completion and persistence rates suggests that this completion phenomenon has some correlation with the growing number of students entering college academically unprepared.

Some estimates suggest that only one-third of high school graduates finish ready for college work; the proportion is even lower among older students. Colleges have responded to the poor preparation of incoming students by placing

approximately 35 to 40 percent of entering freshmen into remedial or developmental courses, along with providing academic supports such as summer bridge programs, learning communities, academic counseling, and tutoring, as well as student supports such as financial aid and child care. (Bettinger et al., 2013, p. 93)

According to Valentine et al. (2017), about 60% of students nationally taking a placement exam are recommended for placement into remedial education and community colleges have the highest instances of students' placing into remedial courses. Valentine et al. (2017) conducted a meta-analysis to examine the effects of students placed into developmental coursework and the findings highlight these students as being at a high risk for attrition. The findings further detailed that placement into developmental education resulted in statistically significant negative impacts. These students earned fewer college credits after three years, were about 8 percentage points less likely to eventually pass the college level course in remediation, and were 1.5 percentage points less likely to earn a degree or certificate. This study is one of the most rigorous examinations of the effects of college student placement in remediation. The study provided detailed outcomes for these students and added to the literature about academic preparation.

In a similar study, Strayhorn, Tierney, and Sablan (2014) explored the factors that impact college readiness for underrepresented student populations. This longitudinal study utilized quantitative data of 15,000 students from 750 colleges nationwide. The findings indicated five statistically significant predictors were common across all underrepresented student populations: gender, socioeconomic status, attendance of

college preparatory programs, time spent studying, and frequently discussing college with parents. The findings also reported that remedial math, perception of high school math preparation, and talking with faculty were significant predictors of high school grade point averages for Hispanic students. This study was groundbreaking in that the study was one of very few studies that took into account what was known about predictors of college success for entering college students and applied it specifically to underrepresented student populations to provide insight on factors that influence the academic progression of these students.

Underrepresented Students and Academic Support Initiatives

Over the past few decades there has been a significant shift in the college population nationwide. College populations are no longer predominately White. In fact, Capstick (2018) reported from fall 1976 to fall 2014, the percentage of White students attending college declined from 84% to 58% nationally. In addition, during this time, the numbers of racial and ethnic minority students increased substantially, with Hispanic college students accounting for the student population with the largest growth of 4% to 17% (Capstick, 2018). However, despite the growth in the enrollment of diverse student populations in college, the racial and ethnic student populations have had difficulty persisting towards degree completion (Alvarado, 2017). As a result, racial and ethnic minority student departure prior to degree completion has become a nationwide prevailing concern for higher education institutions. Research on the academic progression of Black and Hispanic students in particular highlight that their retention and completion rates from college are among the lowest nationally when compared to other races and ethnicity (Alvarado, 2017).

Black students. The research on retention and persistence rates of college students highlight the most pronounced gap of college completion among Black students, particularly Black male students (Tollivar, David, & Miller, 2018). In a quantitative study, Strayhorn (2008) examined the association between supportive relationships and success in college among a sample of Black men. The findings of the study suggested that supportive relationships are associated with higher levels of satisfaction, but not academic achievement as measured by grades. The study added to what is known about the impacts of student and academic support initiatives for Black students. The findings of this study were consistent with other research that has suggested the importance of student support initiatives to foster a sense of belonging among underrepresented student populations; however, the study findings related to academic success were not consistent with prior literature, which suggests support initiatives are especially academically beneficial for Black students (Jones, 2011).

Tollivar et al. (2018) facilitated the qualitative, phenomenological study with 11 Black males with advanced degrees. The study examined the effective strategies and resources that colleges implement to provide increased opportunities for the retention and graduation of Black students. Their findings underscored four dominant themes associated with Black men graduating from college: mentorship, socialization, on-campus supports, and family and community expectations. Both the studies conducted by Strayhorn (2008) and Tollivar et al. (2018) are consistent in their finding that student support initiatives are critical for Black students to feel connected to the campus community. However, Tollivar et al. found positive outcomes between support initiatives and academic success, whereas Strayhorn did not.

Hispanic students. For Hispanic students, adjusting to college and managing the responsibilities of being a college student can pose additional challenges due to various factors that place them at a disadvantage when compared to other cultural groups (Torres & Hernandez, 2009). According to Torres and Hernandez (2009), “Most Latino students may lack the social knowledge of how to navigate the college environment successfully and do not recognize when they should be asking questions” (p. 142). In this longitudinal, mixed method study, Torres and Hernandez examined the college experiences of 541 Hispanic students attending three, public, 4-year colleges. The findings of the study indicated that students who had identified having an advisor/mentor persisted at greater rates than students who did not. The results of this study paralleled research findings regarding successful interventions for at-risk student populations.

In a similar study, Museus and Ravello (2010) examined the role of the academic advisors on facilitating success among Hispanic students. This qualitative study identified three advisement themes that contribute to the academic success of Hispanic students, which included (a) the importance of advisors who humanized the practice of academic advising, by focusing on relationship development; (b) advisors adopting a multifaceted approach to advising; and (c) the importance of intrusive/proactive academic advising in facilitating academic intervention. The outcomes of this research indicated that students found their connections with advisors meaningful and integral to facilitating their academic success and progression. Museus and Ravello emphasized intrusive/proactive advisement as key to providing intervention during academic hardship.

Student Characteristics and Perceptions

In order to best meet the needs of new college entrants, higher education institutions must be familiar with the changing demographics, characteristics, and experiences of students (Kennedy & Ishler, 2008). All students, independent of their academic preparation and background, can be successful in their academic pursuits with intentional academic support. Harding (2008) postulated that students who arrive to college academically underprepared, or come from underrepresented student populations will often lack the confidence or autonomy they need to ask for help when they need it. In addition, these students may have difficulty adjusting to the new college environment, and be unaware of their role as a student or how to engage with campus community. Harding argued the importance of promoting out-of-classroom connections with students as critical to providing resources that will meet their needs.

In a meta analytic study by Fong et al. (2017), the student characteristics most closely associated with persistence and retention in community colleges were identified as:

- Self-perceptions - “The composite view of one’s self and beliefs in one own abilities” (p. 391).
- Motivation - “Process of both initiating and sustaining behavior” (p. 392).
- Attributions – “How people evaluated why a particular incident occurred and how attributions toward the outcome of that incident guided subsequent behavior” (p. 394).

- Self-regulated learning – “Active, constructive process of setting goals and monitoring and controlling cognitive, motivational and behavioral aspects of learning” (p. 394).
- Anxiety – “Emotional responses related to the threat of evaluation, such as worries students experience when taking exams, giving presentations, or writing research papers” (p. 395).

In this study, Fong et al. (2017) statistically integrated past research on these five student characteristics through a quantitative, longitudinal, event history analysis. The results of the study indicated that these student characteristics had a marginal, but practically significant correlation with community college persistence and achievement. Correlations were larger for motivation and self-perceptions when related to student engagement. This research went beyond the scope of demographic characteristics, providing insight into how these factors affect community college students and their retention. According to Yeager and Walton (2011), much of the research regarding student characteristics has focused on how demographic and socioeconomic factors influence student retention, yet psychosocial characteristics are more malleable and can be developed through student support initiatives. Thus, by examining student attitudes and dispositions, Fong et al. (2017) contribute to the growing literature about the impact of psychosocial factors on student success.

In a related study with students of varied demographic and psychosocial characteristics, Rosenbaum et al. (2016) examined student perceptions of how well community colleges met their expectations for learning. Participants included 757 students from eight community colleges and two occupational colleges in Illinois and

California. The researchers concluded that students had three expectations about college, which included (a) that they would make dependable progress towards credentials, (b) that they would take courses relevant to their degree and career aspirations, and (c) that they would have a network for future employment. Further, the findings suggested that students in 2-year occupational colleges had more confidence because the college provides relevant coursework. This factor was found to mediate the relationship between the college program and the student's overall experience at the college. The outcomes that relate specifically to relevant course work and academic progression suggest the need for academic advisement to improve students' college experiences by providing guidance. This research supports academic advisement as a retention strategy for community college and adds a unique focus on student perceptions of their educational experience.

Attitude and Perceptions of Advisement

According to Dweck (2006), student academic achievement is directly connected to their attitude towards learning and their beliefs about intelligence. Dweck postulated that students with a fixed mindset believe that intelligence is limited to certain people and cannot be developed through learning, while students with a growth mindset believe that their intelligence can be developed through learning and studying. The author further argued that students with a growth mindset are more likely to seek help when needed, and more likely to be retained independent of personal characteristics. In a similar study, Yaeger and Walton (2011) found that psychosocial interventions similar to those provided by academic support programs have impacted students' attitude towards learning. Thus, students are more likely to utilize the resources that can help them

succeed. Yaeger and Walton noted in their research discoveries that these interventions, “allow students to take better advantage of learning opportunities that are present in schools and tap into existing recursive processes to generate long-lasting effects” (p. 287).

Advancing the research on student perceptions and attitude specific to academic advisement, Smith and Allen (2014) introduced five cognitive and three affective outcomes reflective of judgments and attitudes that could be connected to quality advising encounters. Additionally, these outcomes have a positive correlation with retention (Smith & Allen, 2014). Results showed that students in the frequently advised and occasionally advised groups scored significantly higher than students in the not advised group, and further, students in the advised frequently group scored significantly higher than those in the advised occasionally group (Smith & Allen, 2014).

In a prior study, researchers Allen, Smith, and Muehleck (2013) investigated the types of advisement that are most beneficial to community college students, both before and after they transfer to a 4-year school. In their research, five domains of advising with 12 functions were identified and utilized in the study: integration, referral, information, individuation, and shared responsibility. The findings of their research indicated that low income and minorities valued advisement more than their White counterparts. With regard to the advisement domains, providing accurate information was rated the highest among both pre and post transfer groups, while out-of-class connect and referral for nonacademic functions were rated the lowest for both groups. This study contributed to the literature regarding student perceptions of advisement and stressed specified advisement domains that are valued by students throughout the transfer process. Allen et

al. (2013) explored the element of transfer advisement that is typically not the focus of much of the research about advisement and retention. In addition, by incorporating both community colleges and 4-year institutions, this study provides insight into how students in two different types of institutions perceive advisement and the benefits associated with advisement.

In a related study, Christian and Sprinkle (2013) investigated the student perceptions of different advisement approaches and their preferences for advisement. The study explored developmental and prescriptive advising approaches facilitated by advisors in a mid-sized southeastern public university. There were a total of 125 graduate and undergraduate students who completed the survey during class time; ages ranged from 19-50, with 50% of students within the 19-21 age range (Christian & Sprinkle, 2013).

Descriptive data analysis indicated respondents felt that they were receiving developmental advising (Christian & Sprinkle, 2013). According to Christian and Sprinkle (2013), the data also revealed that students had a preference for developmental advising; however, male students were more likely to find prescriptive advising to be ideal. Older participants of this study were more active participants in the advising process and more willing to accept responsibility for their educational process than younger participants. The results suggested students with higher grade point averages were more likely to prefer easier coursework and were more concerned with degree completion than personal and professional growth. Results showed mentor characteristics valued by students included those who mentor, motivate, and are accessible.

Parallel to the research by Allen et al. (2013), Christian and Sprinkle's (2013) study provided awareness of how students perceive the role of advisement as part of their educational process. The inclusion of graduate students provides a comprehensive review of students' advisement preferences and also details what students at different academic levels may need. The finding of the male students overall preferring a prescriptive approach adds an important distinction of how different genders may need or may learn better from different advisement approaches. The study by Christian and Sprinkle is significant in that it includes both undergraduate and graduate student perspectives with regard to advisement, and allowed for a focus on a variety of student demographics.

Donaldson et al. (2016) wanted to expand the research about community college students and how they perceived the intrusive advisement approach. The authors conducted a qualitative, case study and interviewed 12 first-year students at a large urban community college in Texas. Their findings indicated that increased student participation in advising and confidence in degree planning improve success related behaviors like seeking advising and tutoring, preventing negative consequences of not utilizing these academic support resources. The findings also showed student preferences for intrusive advisement, which was in opposition to the findings from Christian and Sprinkle (2013), who reported that students generally preferred the developmental advising approach. Because the study by Donaldson et al. only included community college students and Christian and Sprinkle's (2013) study included both graduate and undergraduate participants in 4-year schools, this contrast could be suggestive that community college at-risk students, specifically, prefer an intrusive advisement approach.

Seminal Intrusive Advising Literature

Research examining critical student concerns about academic progression has recognized the significance of academic advising in the lives of students (Hendel & Tomsic, 2000; Rosenbaum et al., 2016; Smith 2004). Advisors provide a crucial connection for students to campus resources and can help them to design a course of study that is relevant to their academic goals and career aspirations. The studies below provide evidence of the field of advisement, and more specifically, an intrusive advising approach as a critical retention strategy for community college students.

Intrusive advising is credited in the literature as having significant impact on the success of at-risk student populations (Earl, 1988; Glennen & Baxley, 1985; Vowell & Karst, 1987). After Glennen successfully implemented his intrusive advising approach at Emporia State College (1973), Glennen and Baxley (1985) facilitated a study on the influence of intrusive advisement on reducing attrition at Western New Mexico University. This university experienced an increased student attrition rate annually that peaked at 66% for the first-year students.

Glennen and Baxley (1985) implemented intrusive advisement for all new students and held weekly appointments for students considered most at risk, based on their high school grade point average and placement into remedial coursework. Their findings supported an observed reduction in attrition for first-year students from 66% to 48% in the first year of implementation, which then was reduced from 48% to 25% in its second year. The author's recommendations were to implement an intrusive advisement program for colleges with high attrition concerns and at-risk student populations. The work of Glennen and Baxley was seminal to the field of advising, particularly to

academic advising theory. Their work forms the foundation of later studies on intrusive advising.

As a follow-up to the study conducted by Glennen and Baxley (1985) on the impacts of intrusive advisement in reducing attrition and improving the success of students in their first academic year, researchers Vowell and Karst (1987) facilitated a qualitative study at Emporia State College. A total of 59 students were randomly selected to participate in the study. Participants received a questionnaire regarding their feelings about their advisor and their thoughts of how advisement has impacted their progress. The findings reported by Vowell and Karst suggested that students had positive associations with the student advisement center (SAC), with 75% indicating that they connected well with their advisor, and 85% indicating that they benefited from the advisement they received. This study was innovative in that it was the first qualitative study conducted regarding students' perceptions of intrusive advisement, and it paved the way for more research on the student experience with this approach to advisement.

Earl (1988) sought to explore whether or not intrusive advisement could be effective when working with students on academic probation. In a three-semester, quantitative, longitudinal, study Earl examined the impact of intrusive advisement on first-year probation students at Old Dominion University. Study findings showed that students who received intrusive advisement had higher grade point averages and were retained at greater rates than students who did not receive intrusive advisement. Earl's work is considered to be seminal to the field of advisement and student support initiatives for academic probation students. The study was credited as one of the first empirical studies regarding intrusive advisement and academic probation student populations

(Alvarado, 2017; Varney, 2012). The findings of more recent research, such as Glennen and Baxley (1985), who found intrusive advisement to be an effective retention strategy for at-risk student populations, remain consistent with those of Earl. The limitation of Earl's study was that it was specific to 4-year institutions and it was therefore not generalizable to all sectors of higher education.

Intrusive Advising

The intrusive advisement approach focuses on increasing academic success through proactive academic interventions that assist students struggling both academically and personally (Levinstein, 2018). Intrusive advisement is also focused on increasing students' use of campus resources and creating awareness of how to seek assistance. This approach has been referenced in the literature as highly effective for integrating students from marginalized communities into the college (Alvarado, 2017; Jones, 2011; Varney, 2012).

Past literature about the effectiveness of the intrusive advisement has focused on how the intrusive advisement approach works for differing student populations; however, Schwebel, Walburn, Jacobsen, Jerrolds, and Klyce (2008) facilitated a randomized control study that explored specifically how the outreach facet of the intrusive advisement approach impacted the engagement of the student. The study examined whether the outreach, which was provided to 501 first-year students at the University of Alabama – Birmingham, affected the overall engagement of the students. Students were split into two groups: one group that received outreach from their advisor and another group that only received general announcements about advisement through university email. The findings showed that students in the outreach group were more likely to attend

their scheduled appointments and had a shorter length of time for advisement appointments in the following semester (Schwebel et al., 2008). The study remained focused on the impact of outreach and the responsiveness of students to their participation in advising; however, unlike other studies, it did not examine the differences of grade point averages, retention, or other student success metrics for either student group.

In follow-up study, Schwebel et al. (2012) focused specifically on outreach and its impact on student retention. This follow-up study was longitudinal, utilizing the data obtained from the 501 participants in their original study. The findings showed that differences among both student groups in graduation and retention were not statistically significant; however, there was a slightly higher retention rate (60%) for those who received advising outreach compared to the rate for those who received no outreach (55%). This study was different than previous studies that have found strong correlations between intrusive advisement and student success metrics. In addition, the study was original in its specified focus on the outreach portion of intrusive advisement. Schwebel et al. (2012) suggested that the outreach part of intrusive advisement may not be the factor of intrusive advisement that is impacting student success, but is impacting the likelihood that students will seek advisement.

Intrusive Advising and Academically At-Risk Students

Expanding the literature on the impact of intrusive advisement on academic probation students, Abelman and Molina (2001) conducted a randomized, longitudinal study at an urban, Midwestern, open-enrollment university that had a total student population of approximately 17,000. A sample of 210 probation students were randomly

selected into three groups: non-intrusive advisement, moderately intrusive advising, and full intrusive advisement. Grade point averages and retention rates were utilized as success metrics for these students. The findings indicated that more intrusive advisement groups produced higher cumulative grade point averages overtime and were also retained at higher rates (Abelman & Molina, 2001). This study represented one of the first longitudinal studies to examine the impact of intrusive advisement on student success metrics. Although the study was specific to academic probation students, the study added to the literature on at-risk student populations.

VanderSchee (2007) examined the effectiveness of an insight-oriented (high-involvement) approach to intrusive advisement with academic probation students. The author facilitated an experimental study with 51 students on academic probation in a private university. The findings supported that students who participated in the insight-oriented, intrusive advisement had a mean increase in grade point average that was statistically significant compared to those who did not participate. In addition, VanderSchee found that a minimum of three advisement sessions were necessary for an appreciable improvement in students' grade point averages.

In a similar study, Rodgers, Blunt, and Tribble (2014) explored the impact of intrusive advisement on academically at-risk STEM students, as defined by low high school grade point average and scoring into developmental coursework. Prior to the study, fewer than 10% of the students in STEM majors graduated in 4 years. The findings indicated an increase in the 1-3-year retention rate for at-risk STEM students. Prior to intrusive advisement, the retention rate was 32%, whereas after the implementation of intrusive advisement the rate increased to 53%. All three studies are consistent with the

findings that full intrusive advisement models utilizing high frequency outreach and advisement appointments produce greater academic success for probationary students over time.

Intrusive Advisement Versus Prescriptive Advising

As colleges are tasked to increase their retention and graduation rates, academic advisement models have been implemented in colleges nationwide. The two models most frequently implemented are intrusive and prescriptive advisement. In prescriptive advising, students have a more passive role and are instructed on their degree plan and curriculum by their advisor. The student is reliant on his/her advisor for curriculum information, registration, and graduation requirements (Alvarado, 2017). In the intrusive advisement approach the advisor provides initial outreach to the student and will inform them of campus resources that could be helpful to the student. The advisor will continue to monitor the student's progress and provide interventions at the first sign of struggle (Brenner, 2010). The studies below provide more insight into how each approach has been utilized to assist students in their academic progression.

In a qualitative study, Jeschke, Johnson, and Williams (2001) examined the impacts of an intrusive advisement approach versus a prescriptive advisement approach, specifically with students majoring in psychology. There was a total of 511 non-traditional, psychology students at an urban, comprehensive university who participated in the study. Advisement was delivered by a faculty only model and students were split into two groups: those who received intrusive advisement and those who received prescriptive advisement.

Findings reported by Jeschke et al. (2001) showed that students who received intrusive advising expressed higher levels of satisfaction than did those who received prescriptive advising. Students who received intrusive advisement reported feeling more connected to the department. However, among both student groups, there was no statistically significant difference in grade point averages. Of notable importance, there were a group of students who left the prescriptive track and went to the intrusive track because they felt they would receive better advisement. This study was one of the few studies that examined the differences among advising approaches. It was, however, limited in that it was conducted specifically with non-traditional students in one field of study. The findings could suggest that advising for non-traditional students may receive benefits from either approach to advisement.

In an effort to increase retention at a community college in the Northeast, Smith (2007) facilitated a mixed method study utilizing advisement logs, focus groups, and pre-matriculation surveys. Participants included 10 faculty members who facilitated intrusive advisement and 14 faculty members who followed a more prescriptive approach (Smith, 2007). The findings of the study by Smith suggested that intrusive advising increases faculty advisor communication with students and has the potential to increase retention. The study was unique in its concentration on faculty as the facilitator of the advisement. Utilizing student success metrics for both advisement approaches with a focus on a faculty only advisement model contributed to the literature of intrusive advisement within the community college sector (Smith, 2007). Although Jeschke et al. (2001) previously facilitated a similar comparative study between prescriptive and intrusive advisement

approaches delivered by a faculty only model, the results of student success metrics are contrasting.

Advisement as a Retention Strategy

The literature on retention in colleges has suggested advisement is a successful strategy for increasing retention. However, Clark (1960) theorized that advisement, particularly for underprepared students in community colleges, is overly prescriptive and has created a phenomenon he termed *cooling-out*, which he posited leads to student departure. This theory described a process in which underprepared students at community colleges are often encouraged by advisors to pursue academic studies that require fewer academic credentials, and are often dissuaded from studies that require higher levels of math and science, as these fields are perceived to be over ambitious. Throughout this process, students develop a lack of confidence in their skills and are often less engaged in their academic studies (Clark, 1960). The theory further described advisement of underprepared community college students as associated with higher levels of non-persistence. Clark's theory posited that advisement is a hazard to the retention of underprepared community college students. As one of the first studies conducted on the impacts of advisement in community colleges, this study was rather controversial to the field and is contrary to the findings of most research related to the impacts of advisement on retention of community college students and at-risk students. The theory of *cooling-out* described by Clark has been the inspiration for follow-up studies on how advisement impacts the retention and academic progression of community college students.

One such follow-up was Bahr's (2008) replication study, in which the author utilized a hierarchical discrete time event history analysis to examine the effects of

advising on student success among community college students. The participants of this study were first-time students who enrolled in any of California's 107 community colleges. Bahr's finding reflected a positive association between advisement and student success in community colleges. According to Bahr, "I find that advising is actively beneficial to students' chances of success, and all the more so for students who face academic deficiencies" (p. 704). These findings remain current with most of the research on advisement and retention, and could suggest that Clark's original findings are not relevant to today's community college students and advisement practices.

Most of the literature presented focused on advisement models that were delivered predominately by faculty and some professional advisors. However, Kot (2014) examined the impact of centralized advising delivered by all professional advisement staff on the academic performance and second year enrollment behavior. The study was facilitated at a large metropolitan university utilizing archival data of 2,745 first-year students. The findings showed that students who used centralized advising during their first term had a net gain of 31 percentage points, the equivalent of one grade average more than those who did not. Kot also found that academic advising was the second most important predictor of first semester grade point average next to high school grade point average. Students who used centralized advisement in the second semester were more likely to come back in their second year. This study contributed a specified concentration on the delivery of advisement by professional advisors, which has identified a gap in the literature with regard to the differences of advisement delivery methods.

Synthesis of the Literature

The studies referenced in this research inform what is known about strategies for building retention and overall persistence to degree completion for community college students. A comprehensive review of community college students is featured and emphasizes that the community college student population are at greater risk for attrition than their 4-year college counterparts. Research related to at-risk student populations has specified the importance of student support initiatives that integrate students to the college community and provide connections to faculty and academic support resources. The literature on academic support initiatives suggested that academic advisement can be an effective strategy for building retention among community college students in their first year. The intrusive academic advising approach in particular was credited as a successful intervention to reduce attrition for community college students in their first year, especially for at-risk and academic probation student populations.

Chapter Summary

To examine the relationships between intrusive academic advisement and community college retention for first-year students, it is important to identify the factors that research suggests are present for community college students and their attrition rates. Many of these students must overcome numerous obstacles to successfully complete their coursework and graduate. According to Smith and Allen (2014), academic advising has been linked with retention, as it assists students with overcoming some of these obstacles. The research reviewed in this study explored retention strategies in community college, supporting academic advising with an intrusive approach as positively associated with the retention of community college students, especially those within their first year. The

evolution of academic advising as a professionalized field is also investigated. The main approaches to academic advising (developmental, prescriptive, and intrusive) are each studied in more detail and their relation to student success. With a focus particularly on the academic success of community college students who are varied in both their academic and social preparation for college, the literature suggests that intrusive advisement can be an effective approach for engaging and retaining these students (Bahr, 2008; Earl, 1988; Hernandez, 2016; Vowell & Kurst, 1987).

Chapter 3: Research Design Methodology

The literature about college retention continues to suggest that college bound students are increasingly entering institutions academically underprepared (Fowler & Boylan 2010; Rosenbaum et al., 2016; Seltzer, 2016). As open access, public institutions, community colleges are frequently left to enroll academically underprepared students, who are referred to in the research as being at the greatest risk for attrition (Boggs, 2011). Tinto's (2012) theory of student departure posits that students are better engaged with the campus community and retained when they have developed personal connections with faculty and staff who are supporting and guiding them to graduation.

Researchers have focused attention on the needs of at-risk student populations and have identified that the most effective way to help engage and retain at-risk students is to provide information about curriculum requirements, campus culture, and university policies, all of which are done through intrusive advisement (Levinstein, 2018; Torres & Hernandez, 2009; Varney, 2012). The intrusive advising approach is a retention initiative designed to impact the academic success of academically underprepared students in an effort to increase retention rates (Davis, 2015).

This study reviewed the impact of intrusive advisement on the retention and overall academic success of at-risk students enrolled at a community college located in New York State, during the fall 2017 semester. Nationally, the (fall to fall) retention rate for community colleges is 49%, with 22% persisting to degree completion in 3 years (NCES, 2015). Comparatively, the community college in this study reported a retention

rate of 62.3%, which is higher than the national average, with only 28% persisting to graduation in 3 years, which is only slightly above the 22% national 3-year completion rate. This study provided a comprehensive review of the impact of intrusive advising on the academic success and retention of first –year community college students, which no study to date has examined directly in terms of the impact of the intrusive advising approach overall on the academic success and retention of underprepared community college students.

Research Context

This study took place in a mid-sized, suburban, community college located in New York State. The enrollment at the community college is about 5,500 students per semester, with the overall student population demographics that include 55% female, 45% male, 64% White, 12% Black, 18% Hispanic, 3% Asian/Pacific Islander, and 3% having more than one race. Comparatively, the student population demographics for the fall 2017 first-time full-time cohort (1,554 students) was 47% female, 53% male, 52% White, 15% Black, 22 % Hispanic, 2% Asian/Pacific Islander 4% having more than one race, 4% unknown, and 1% international.

This quasi-experimental, quantitative study used archival, private data from the 1,554 first-time full-time (FTFT) fall 2017 community college entrants. The study focused specifically on students who placed and took remedial coursework during their first semester, which was a total of 110 students, and students whose high school grade point average (GPA) was below a 3.0, which was a total of 446 students an additional 629 students had a high school GPA below a 3.0 and placed and took remedial

coursework during their first semester. Therefore, an overall total of 1,185 academically underprepared community college students represented the focus of this study.

The important issue was to discover the impacts of intrusive advisement on the academic success and retention of academically underprepared community college students in their first year. The students were divided into two groups: those who participated in intrusive advisement and those who did not participate in intrusive advisement. The independent variables in this study were mostly nominal data with the exception of high school cumulative grade point average, which was collected as interval data. Of the six dependent variables, spring and fall 2018 retention were the only dichotomous variables, first-term and cumulative grade point averages were interval data and percentage of credits completed and remedial coursework completed were ratio data.

Research Participants

This study examined the first-year retention and student success metrics of academically underprepared, FTFT, fall 2017 community college entrants. A total of 1,554 FTFT students were initially eligible for this study based on their FTFT status. As this study was specifically focused on students who were at the highest risk of attrition based on their academic preparation and other at risk factors anyone who did not meet the criteria was removed. Thus, at-risk variables, as designated by the community college's institutional research department, included: students with high school grade point averages of 2.9 and below, students who placed into and took one or more remedial course(s) during their first semester, and students who resided on campus.

These at-risk variables were based on attrition studies completed by the office of institutional research that identified these variables as most closely associated with

college attrition in the first year (S. Schnackenberg, personal communication, August 23, 2017). Once the students who were not at risk and non-traditionally aged students were removed, the total number of eligible participants was 1,185 students. Maintaining the study focus on academically unprepared students, 110 students were identified as having placed into and registered for developmental course(s) during their first semester. An additional 446 students whose high school grade point average was below a 3.0 were identified, and 629 students had high school grade point average below a 3.0 and placed into and took remedial coursework in their first semester, totaling 1,185 academically underprepared, FTFT, fall 2017 community college entrants.

Research Questions

The research questions for this study were designed to closely examine if there is a difference in the completion and retention rates for the fall 2017 students who participated in intrusive advisement during their first semester and the fall 2017 students who did not participate in intrusive advisement during their first semester.

RQ1. Does participation in intrusive advisement during the first semester improve student's first semester grade point average among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ2. Does participation in intrusive advisement during the first semester improve student's cumulative grade point average among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ3. Does participation in intrusive advisement during the first semester increase retention to the spring 2018 semester among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ4. Does participation in intrusive advisement during the first semester increase retention to the fall 2018 semester among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ5. Does participation in intrusive advisement during the first semester increase percentage of credits completed in the first year among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ6. Does participation in intrusive advisement during the first semester increase the percentage of remedial credits completed among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

Hypothesis

There were six null hypotheses to account for the possibility that intrusive advisement does not have an impact on either grade point average, retention, and percentage of credits completed. Based on the research questions the accompanying null hypotheses were tested:

H₁₀: Intrusive advisement has no impact on the first semester grade point average of academically underprepared community college students in their first year.

H₂0: Intrusive advisement has no impact on the cumulative grade point average of academically underprepared community college students in their first year.

H₃0: Intrusive advisement has no impact on the first semester retention of academically underprepared community college students in their first year.

H₄0: Intrusive advisement has no impact on the fall to fall retention of academically underprepared community college students in their first year.

H₅0: Intrusive advisement has no impact on the percentage of credits completed by academically underprepared community college students in their first year.

H₆0: Intrusive advisement has no impact on the percentage of remedial credits completed by academically underprepared community college students in their first year.

Independent Variables

Creswell (2014) defined independent variables as “those that probably cause, influence or affect outcomes” (p. 52). There were a total of eight independent variables that were examined in this study.

Intrusive advising. Intrusive advising is different from other advisement forms, as the advisor seeks to connect students with the campus community and assist their navigation of various student support services. Intrusive advising originated from the seminal work of Glennen (1985). Researchers have regarded intrusive advisement as the most appropriate form of advisement for community college students and at-risk populations due to the outreach and the proactive approach needed to engage a diverse student population, especially first-year students (Earl 1988; Glennen & Baxley, 1985; Schwebel et al., 2012; Varney, 2012; Vowell & Karst, 1987).

At the community college included in this study, the intrusive advisement model was instituted during the spring 2016 semester. Utilizing the early alert software (EAS), caseloads were assigned to all full-time and part-time advisement staff randomly and advisors connected with their assigned caseload throughout the semester. During the fall 2017 semester the intrusive advising model was fully integrated with most first-time full-time students assigned an advisor through EAS. A total of five full-time staff were assigned caseloads of about 200-300 students, all of which were assigned by the student's academic major. Each full-time advisor was given advisement responsibilities over students in designated majors within an academic department and was specialized in advisement for these curricula (referred to as academic liaisons). The full-time advisors worked in conjunction with the faculty of their respective departments and provided training to all staff on any curricula information for their areas. In addition to full-time advisors, there were a total of 12 part-time advisors who were assigned a student caseload of 150-230 students, these students were also assigned based upon their academic major. Whenever possible, advisors were chosen to advise students within an academic major that was representative of their own educational background. The intrusive advisement model at the community college encompassed five main characteristics:

1. Preliminary outreach to the assigned student from the advisor during the first 6 weeks of the first semester. This is deemed as a critical time to engage the students and foster a sense of belonging in the college (Glennen & Baxley, 1985; Tinto, 2012). According to Ohrablo (2017), consistent and informal purposeful outreach is an effective way to provide information to students while demonstrating concern.

2. Through the use of EAS, students schedule their own appointments to meet with their advisor and keep continued communication throughout the semester. If students do not schedule appointments, advisors can use the reporting system within the EAS to provide outreach to the student and encourage them to schedule an appointment.
3. Use of EAS to identify early signs of academic struggle. Faculty use the software to *flag* students who require follow-up and advisors use this information to provide targeted outreach and intentional academic intervention to their caseload students.
4. Advisors use EAS to refer students to other academic support services within the community college. Working with departments like tutoring, counseling, disability support services and the library, advisors educate students on how to engage with the college community by utilizing the resources available to them and learning how and when to ask for help.
5. Through the use of degree audit software, advisors educate students of curriculum requirements and design academic plans for degree completion. This tool is used throughout the student's academic progression and enables both the student and the advisor to ensure the student is on track.

In order to ensure that all 17 advisors in the community college are facilitating intrusive advisement with their assigned student caseload, the community college uses the EAS to house notes that recap the information provided during student appointments and also indicate the number of visits/ advisement appointments that a student has, as well as the number of outreaches that were provided to the student by the advisor.

In addition, the advisement center has routine weekly meetings where information regarding curricula, registration, and advisement practices are shared. This is to ensure that all advisors have the same information when working with their assigned student caseloads. Each semester, advisors are provided with an academic timeline that details deadlines for preliminary outreach, flag interventions, registration timelines, and creation of degree plans. With the use of the degree audit software, advisors can refer to the planner tab to see the curriculum plan that the advisor designed for the student and confirm whether the student is making adequate progress towards that plan. These are the main practices that ensure fidelity to the intrusive advisement approach among all the advisors at the community college.

Racial and ethnic background. The research on college retention and completion has consistently found that students from Black and Hispanic cultural backgrounds are not being retained or completing college at the same rate as their White and Asian counterparts; this phenomenon is commonly referred to in the literature as the achievement gap (Strayhorn, 2008; Tinto, 2012). Studies that have examined this phenomenon more closely have suggested that students from different cultural backgrounds experience additional challenges adjusting to college, which may prevent them from utilizing campus resources, connecting with faculty, and forging relationships with fellow classmates (Gillet-Karam, 2016; Ohrt, 2016; Strayhorn, 2008).

Gender. Independent of socioeconomic class, women are enrolling and completing college at higher rates than men (Semuels, 2017). In this community college, the enrollment trends for the past 9 years have shown that women account for more than half of the new students enrolling each year. In addition, over the past 9 years, women

have completed their degrees at much higher rates than men. The most recent graduation rates at the research site reported from the 2015-2016 academic year indicated that 58% of the graduates were women while 42% of the graduates were men (S. Riela, personal communication, June 2017). Given the enrollment and graduation trends at the community college, this study examined gender.

Economic status. Historic data from the community college has shown that the students who come from low-economic status backgrounds are at a higher risk for attrition (Boggs, 2011). Economic status is determined by household income information provided in the free application for federal student aid form (FAFSA). According to the Financial Services office of the college, most FTFT students complete the FAFSA form in order to receive financial aid. Students are awarded New York state aid (Pell) based on their household income. The community college has identified Pell recipients as students from low socioeconomic backgrounds. Financial services indicated that students who do not complete FAFSA pay for tuition out-of-pocket and are deemed not Pell eligible due to their household income. The limitation is that non-citizens do not qualify for financial assistance and do not complete FAFSA, therefore these students were removed from the study.

Residence hall. About 25% of community colleges in the nation have residence halls, but the number continues to increase throughout the nation, as 43 residence halls were built in community colleges during the past 10 years (Sheehy, 2015). At the research site, there are increasing challenges with retaining students who reside in the residence hall, particularly those students who have earned high school grade point averages below a 3.0 (S. Schnackenberg, personal communication, August 23, 2017).

These students often leave the institution prior to completing their first academic year. Of the 1,185 eligible participants for this study, 213 students resided in the residence hall during their first year. This phenomenon of resident students in this community college is in contrast to what the literature on student engagement and retention suggests about residence halls and academic success (Ishler & Upcraft, 2005; Pascarella & Terenzini, 2005; Tinto, 2012).

High school grade point average. The literature review on retention suggests that the strongest predictor for college completion is the high school grade point average (Hurford et al., 2017; Tinto, 2012; Valentine et al., 2017). Studies have found that selective colleges generally have stronger persistence and graduation rates than do less selective schools. As open access institutions, community colleges admit students with varying levels of academic preparation, and must rely on student support initiatives to connect students to the resources that they require (Ishler & Upcraft, 2005).

High school attended. Predictive analytics at the community college suggest that the high school that the students attend can impact the likelihood they will complete their first year successfully. More specifically, the research has identified four of the local high schools that most enrolled students graduate from; the graduates from high school one have much greater completion rates and overall academic success than graduates from high school four (S. Schnackenberg, personal communication, August 23, 2017). All four high schools were examined in this study. In addition, there were a total of 64 high school equivalency students who met the criteria for the study and were of traditional age. These students were included in the study.

Remedial or developmental coursework. Valentine et al. (2017) posited that there is a growing trend of college entrants arriving academically underprepared; “Nationally about 60% of students taking a placement exam are recommended for placement into developmental education” (p. 807). Comparatively, at the community college for this current study, a total of 71.5% of all the first time, full-time 1,554 fall 2017 college entrants tested into remediation. Of this population, a 40.1% required remediation in math and English, 20.1% required remediation in English, and 11.2% needed remediation in math, leaving only 28.5% of fall 2017 entrants college-ready in both math and English. It is additionally important to note that students can also score into remediation for reading; however, reading remediation is not a requirement for college students, and often students scoring into remediation for reading are also requiring remediation for English. It is, however, possible for students to need remediation in reading, but not in English, but this number is usually small and was not recorded by the college.

Dependent Variables

Creswell (2014) defined dependent variables as, “those that depend on the independent variables; they are the outcomes or results of the influence of the independent variables” (p. 52). For this study, there are a total of six dependent variables. All six dependent variables are consistent with the student success metrics of cumulative grade point average, percentage of credits completed, and completion of remedial course(s); these factors indicate the student’s academic progression (Levinstein, 2018).

The six dependent variables are:

1. First-semester grade point average

2. Cumulative grade point average for the first year
3. Retained for spring 2018 semester
4. Retained for fall 2018 semester
5. Percentage of remedial course(s) completed
6. Percentage of credits completed in the first year

Instruments/Measures Used in Data Collection

This retrospective study utilized Banner, by SunGard Higher Education. According to Gambino (2012), Banner, is the college's comprehensive student information software and it has been used in the research site since 2008 to manage student's academic records including; enrollment, registration, as well as demographic data. The data in Banner is migrated from a series of legacy systems that date back several decades, one of them being Starfish early alert software. Starfish is a software system that is utilized at the research site to house advisement information and tracks advisement appointments as well as advisor notes about their student sessions.

Procedures for Data Collection and Analysis

This study was retrospective, therefore most of the data were made available on the customized Argos report, which is exported to an Excel document. The data analysis strategies in the study used descriptive statistics, *t*-tests, and linear and logistic regression. Descriptive statistics were used to describe the participants' demographics and academic backgrounds, and included the following: Ethnicity, race, gender, economic status, high school grade point average, high school attended, and remedial status.

Vogt and Johnson (2016) defined *t*-tests as "a test of statistical significance. Often of the difference between two group means" (p. 456). *T*-tests were employed to test the

null hypotheses and to determine if there is a significant difference between the intrusively advised group and the not intrusively advised group. In order to gain more insight into the relationships between the independent and dependent variables, a linear regression was utilized for the continuous, numerical, dependent variables such as grade point average, and percentage of credits completed. According to Cronk (2018), “Linear regression assumes that both variables are interval or ratio scaled. In addition, the dependent variable should be normally distributed around the prediction line” (p. 56). Logistic regression analysis was used for dichotomous dependent variables, such as enrollment in the spring and fall 2018 semesters and percentage of remedial coursework completed. Both regression models controlled for the impact of the independent variables and also ensured that similar students in the intrusively advised and not intrusively advised groups were compared when examining each independent variable. This was used to indicate whether advisement has an effect on the dependent variables and whether the relationships, if any, are statistically significant. Past studies have utilized regression analysis in a similar fashion to test the significance that an intervention is having and predict associations.

Chapter Summary

This study was intended to identify if and how intrusive advisement impacts the retention and student success metrics of academically underprepared community college students during their first academic year. Intrusive academic advising may foster a positive learning environment by connecting students to critical academic support resources, providing guidance throughout academic progression, and educating students about the use of technology tools that can increase their agency, assisting first-year

students in their transition to college. The study addressed the existing gaps in the literature that focus on the advisement within the community college sector and the relationship between intrusive advising and first-year retention.

The need for recent research about advisement, particularly within the community college sector is evidenced by the fact that there has been a decrease in the current research published about advisement, and even less with a focus on advisement in community colleges (Miller, 2010). Direct research on the impact of intrusive advising on retention and academic success of first-year, community college students, particularly for at-risk student populations, can provide insight on how this intervention works and whether it is effective at addressing the needs of these students.

The study evaluated the impacts of intrusive advisement on retention and success metrics of students in a community college in New York. The fall 2017 FTFT entrants were utilized as the participants for this study and descriptive statistics identified student demographics and academic background of this cohort. *T*-tests were utilized to test the null hypothesis. Linear and logistic regression analyses were conducted to assess the association with advisement on the dependent variables.

Chapter 4: Results

The purpose of this quantitative study was to evaluate the impact of an intrusive advisement program on the retention and academic success of community college students in their first college year. The study presented was an analysis of archival data from Banner and Starfish which were used at the research site. The records were used to compare community college students from the fall 2017 cohort, who participated in intrusive advisement (915 students) during their first semester, with those who did not participate (270 students) in intrusive advisement during their first semester. The student success metrics measured in this study included percentage of remedial coursework completed, percentage of credits completed, retention rate, and grade point average during the first semester and first college year. This chapter contains a reintroduction to the research questions, a discussion of the quantitative methodology used to measure the effectiveness of intrusive advisement, which includes a comprehensive account of the research questions, hypotheses, descriptive statistics, inferential statistics (*t*- tests, linear and logistic regression analyses), and the results addressing the five research questions. This chapter concludes with an evaluation of findings and a summary of key points.

Research Questions

The focus of this study was academically underprepared community college students in their first year. As such, the sample was comprised of first-time full-time students who earned a cumulative high school grade point average below a 3.0 and students who scored into remedial coursework. In order to assess the impact of intrusive

advisement on retention and academic success, metrics for academic success were identified and included in the research questions. These research questions guided the study:

RQ1. Does participation in intrusive advisement during the first semester improve student's first semester grade point average among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ2. Does participation in intrusive advisement during the first semester improve student's cumulative grade point average among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ3. Does participation in intrusive advisement during the first semester increase retention to the spring 2018 semester among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ4. Does participation in intrusive advisement during the first semester increase retention to the fall 2018 semester among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ5. Does participation in intrusive advisement during the first semester increase percentage of credits completed among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ6. Does participation in intrusive advisement during the first semester increase the percentage of remedial credits completed among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

A quasi-experimental design was used to examine the educational outcomes of academically underprepared students. Therefore, the study was designed to examine whether the intervention of intrusive advisement affected the outcomes for those students who participated in advisement during their first semester. The review of the literature on the retention and academic success of at-risk student groups suggests that there is a correlation between intrusive advisement and academic success (Bahr, 2008; Earl, 1988; Hernandez, 2016; Vowell & Kurst, 1987). Based upon these findings and the research questions for this study the following null hypotheses were tested.

H₁₀: Intrusive advisement has no impact on the first semester grade point average of academically underprepared community college students in their first year.

H₂₀: Intrusive advisement has no impact on the cumulative grade point average of academically underprepared community college students in their first year.

H₃₀: Intrusive advisement has no impact on the first semester retention of academically underprepared community college students in their first year.

H₄₀: Intrusive advisement has no impact on the fall to fall retention of academically underprepared community college students in their first year.

H₅₀: Intrusive advisement has no impact on the percentage of credits completed by academically underprepared community college students in their first year.

H₀: Intrusive advisement has no impact on the percentage of remedial credits completed by academically underprepared community college students in their first year.

Data Analysis and Findings

The analysis of the data included the use of both descriptive and inferential statistics. Descriptive statistics were used to describe and compare the sample groups. Inferential statistics were used to compare groups to determine significant relationships and differences between the groups.

Descriptive statistics. Table 4.1 provides an overview of the first-time, full-time student demographics at the community college over the past 7 years. The first-time full-time population (FTFT) includes those students who never attended college prior to enrolling in the fall term and were registered for at least 12 credits during the fall term. As shown in Table 4.1, fall 2017 saw the largest number of males enrolled since fall 2014. As represented in Table 4.2, students in the fall 2017 cohort were predominantly White, male, non-Pell eligible, and commuter students. Economic status is designated by students who are Pell eligible as students are awarded New York state aid (Pell) based on their household income. The community college has identified Pell recipients as students from low socioeconomic backgrounds. Financial services at the community college indicated that students who do not complete FAFSA pay for tuition out-of-pocket and are deemed not Pell eligible due to their household income.

While the economic status and racial/ethnic background are consistent with enrollment trends at the community college, the gender breakdown for this cohort is not consistent with the enrollment trends at the community college, as it is male dominant (S. Schnackenberg, personal communication, February 14, 2019).

Table 4.1

Seven Year Community College Gender, Race and Ethnicity Demographics

		Community College Home Institution Student Count						
		Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018
Gender	Female	1,039	958	855	870	804	728	712
	Male	1,007	983	984	833	787	826	743
	Total	2,046	1,941	1,839	1,703	1,591	1,554	1,455
	% Female	50.8%	49.4%	46.5%	51.1%	50.5%	46.8%	48.9%
Race/ Ethnicity	Non-resident alien	24	25	13	15	12	12	16
	Unknown	9	7	10	10	51	62	33
	Hispanic/Latino	417	377	391	364	365	342	324
	American Indian or Alaska Native	2	5	5	3	3	2	2
	Asian	29	28	27	26	36	28	30
	Black or African American	298	238	281	235	203	239	194
	Native Hawaiian/ Other Pacific Islander	1	1	1	2	1	3	
	White	1,185	1,180	1,023	984	860	804	794
	Two or more race	80	79	87	64	60	62	62
	Total	2,045	1,940	1,838	1,703	1,591	1,554	1,455
	% Hispanic/Latino	20.4%	19.4%	21.3%	21.4%	22.9%	22.0%	22.3%
	% African- American	14.6%	12.3%	15.3%	13.8%	12.8%	15.4%	13.3%

Table 4.2

Fall 2017 First-Time, Full-Time Demographics (N = 1,554)

		Frequency	Percent
Gender	Female	728	47%
	Male	826	53%
Housing	Housing (On Campus)	230	15%
	Commuter (Off Campus)	1,324	85%
Pell Eligibility	Pell Recipient	711	46%
	Pell Non-recipient	843	54%
Race/Ethnicity	Black	239	15%
	Asian	28	2%
	White	804	52%
	Hawaiian or Other Pacific Islander	3	0%
	Hispanic	342	22%
	International	12	1%
	Native American	2	0%
	Two or More	62	4%
	Unknown	62	4%

Table 4.3 shows the demographics of the sample used for the study. When compared to the 1,185 fall 2017 students, there is a higher percentage of males (55%) in the sample. In addition, students in the sample are from a lower economic status, as defined by Pell eligibility, with higher percentages of Black (17%) and Hispanic (24%) students. Thus, the sample for this study is showing a larger representation of students from disadvantaged groups and groups that are at the highest risk for attrition. As the focus of this study is on at-risk community college students, this finding is supported by the literature on retention and academic success (Tinto, 2012).

Table 4.3

Fall 2017 Sample Demographics (n = 1,185)

		Frequency	Percent
Gender	Female	529	45%
	Male	656	55%
Housing	Housing (On Campus)	213	18%
	Commuter (Off Campus)	972	82%
Pell Eligibility	Pell Recipient	604	51%
	Pell Non-recipient	581	49%
Race/Ethnicity	Black	207	17%
	Asian	15	1%
	White	569	48%
	Hawaiian or Other Pacific Islander	2	0%
	Hispanic	287	24%
	International	9	1%
	Native American	2	0%
	Two or More	42	4%
	Unknown	52	4%

High schools. The students from the sample came from a total of 161 high schools with approximately 39% (448 students) of the students coming from four high schools within the neighboring communities as shown in Table 4.4. Of the 448 students who attended this community college, 173 students came from high school 1, 113 students came from high school 2, 94 students came from high school 3 and 68 came from high school 4. All four high schools are located in a suburban setting but vary in socioeconomic status and racial/ ethnic diversity (minority). Economic status is defined by the number of students in the high school (based on data reported to the government)

who are eligible for the free or reduced lunch program, which is determined by household income.

As shown in Table 4.4, high schools 1-3 have similar student demographics, but high school 4 has a more racially and ethnically diverse student body and is located in an area with low household income, which is defined by the eligibility for free or reduced lunch program. Thus, there is a significant racial/ethnic and socioeconomic disparity between the students, in general, in high school 4 and the students in high schools 1-3.

Table 4.4

Demographics for High Schools in the Surrounding Area

	Frequency	Percent
High School 1	3,106	100%
White	2,360	76%
Minority	745	24%
Free or Reduced Lunch Program	683	22%
High School 2	1,812	100%
White	1,214	67%
Minority	597	33%
Free or Reduced Lunch Program	453	25%
High School 3	2,031	100%
White	1,604	79%
Minority	426	21%
Free or Reduced Lunch Program	284	14%
High School 4	1,161	100%
White	116	10%
Minority	1,044	90%
Free or Reduced Lunch Program	812	70%

Academic preparation. Table 4.5 shows the academic preparation of the sample based on their high school grade point average (GPA) and placement/enrollment into remedial course(s). These data indicate that the majority (53%) of the students had a high school (HS) grade point average (GPA) that was below a 3.0 and also placed and enrolled into remedial coursework. It is important to note that of the 446 students whose HS GPA was below a 3.0, 64 of them were students who earned their HS diploma through the high school equivalency (HSE) exam. From this population, 14 students did complete some high school and for these students their HS GPA was used for this study. However, the remaining 50 HSE students did not have a HS GPA and they were therefore categorized in the HS GPA below 3.0 category.

Table 4.5

High School GPA and Remedial Placement of Fall 2017 Sample

	Frequency	Percent
HS GPA Below 3.0	446	38%
Placed and took remedial course(s)	110	9%
HS GPA Below 3.0 & Remediation	629	53%
Total	1,185	100

In order to examine the impact of intrusive advisement on the educational outcomes of the fall 2017 sample participants, the students were divided into two groups: those who received intrusive advisement during their first semester in fall 2017 and those who did not receive intrusive advisement. Because participating in advisement is voluntary, some students chose not to receive intrusive advisement during their first semester. As shown in Table 4.6, 915 students participated in intrusive advisement during their first semester and 270 students did not participate in intrusive advisement. The majority of students (77%) in the fall 2017 cohort elected to participate in intrusive

advisement. Also indicated in Table 4.6, students in both groups demonstrated similar mean high school GPA, which would indicate that students in both groups had similar levels of academic preparation and skills.

Table 4.6

HS GPA of Intrusively Advised and Not Intrusively Advised Student Groups

	Frequency	Percent	M	SD
Not Intrusive Advised	270	22.8	2.42	0.44
Intrusively Advised	915	77.2	2.44	0.42
Total	1,185	100.0	2.44	0.42

Table 4.7

Not Intrusively Advised Group Demographics (n = 270)

	Frequency	Percent
Gender		
Female	109	40%
Male	161	60%
Housing		
Housing (On Campus)	46	17%
Commuter (Off Campus)	224	83%
Pell Eligibility		
Pell Recipient	147	54%
Pell Non-recipient	123	46%
Race/Ethnicity		
Black	57	21%
Asian	3	1.1%
White	109	40.4%
Hawaiian or Other Pacific Islander	0	0%
Hispanic	74	27.4%
International	2	0.7%
Native American	1	0.3%
Two or More	11	4.1%
Unknown	13	5%

Advisement groups. Tables 4.7 and 4.8 provide additional information about both the not intrusively advised and intrusively advised student demographics. As shown in Table 4.7, the students who chose not to receive intrusive advisement were predominantly male (60%), over half (54%) came from lower socioeconomic backgrounds (as indicated by the Pell status) and just under half (48%) belonged to Black and Hispanic racial/ethnic groups. The not intrusively advised student group had the highest percentages of the at-risk student populations.

Comparatively, the intrusively advised group had less males than the not intrusively advised student group (54% and 60% respectively). However, since the total fall 2017 student cohort was male dominated, it was expected that males would be overrepresented in both student groups. In addition, the intrusively advised student group were from a higher socioeconomic status (53% non-Pell), with only 39% belonging to the Black and Hispanic racial/ethnic groups, and a majority of the students (50%) being White. Although both groups were overrepresented by students from at-risk student groups, the intrusively advised group did not have as high of a representation when compared to the not intrusively advised student group. On campus housing did not seem to have an impact on whether or not students chose to receive advisement in their first semester, as both groups reported similar percentages. However, the greatest disparity among both groups appears to be socioeconomic status (Pell eligibility), with students from a higher economic status being more likely to choose to receive advisement in their first semester.

Table 4.8

Intrusively Advised Group Demographics (n = 915)

	Frequency	Percent
Gender		
	Female	420 46%
	Male	495 54%
Housing		
	Housing (On Campus)	167 18%
	Commuter (Off Campus)	748 82%
Pell Eligibility		
	Pell Recipient	434 47%
	Pell Non-recipient	481 53%
Race/Ethnicity		
	Black	150 16.4%
	Asian	12 1.3%
	White	460 50.3%
	Hawaiian or Other Pacific Islander	2 0.2%
	Hispanic	213 23.3%
	International	7 0.7%
	Native American	1 0.1%
	Two or More	31 3.4%
	Unknown	39 4.3%

Inferential Statistics

T-tests. To test the null hypotheses and to determine whether there was a significant difference between the intrusively advised group and the not intrusively advised group, a two-tailed *t*-test was calculated for each dependent variable, the significance was set at $p < .05$ for statistical significance and ($p < .10$) for marginally significant.

Null hypothesis 1. The first *t*-test compared the intrusively advised group with the not intrusively advised group. The purpose of the *t*-test was to test for significant difference between the intrusive advisement group and the nonintrusive advisement group in terms of first semester GPA, which would identify a relationship between the variables. Table 4.9 shows the earned GPA of both intrusive and not intrusively advised groups. It is important to note that good academic standing at the community college is a GPA of a 2.0 or above. Prior to calculating the *t*-test, the data were assessed via graphic visualization and appeared to be normally distributed. However, the Levene's statistic to assess the equal variance assumption provided a significant result ($F = 6.8, p = .009$), requiring the use of the *t*-test results for equal variances not assumed.

Table 4.9

Fall 2017 Intrusive Advisement Groups First Semester GPA

	Frequency	Mean	SD	SE Mean
Not Intrusively Advised	270	1.80	1.3	0.08
Intrusively Advised	915	1.95	1.2	0.04

Although the intrusively advised group had a mean GPA ($M = 1.95$) that was higher than the not intrusively advised group ($M = 1.80$; see Table 4.9), the difference was not statistically significant ($p = .092$), but was marginally significant at the $p < .10$ level (Table 4.10).

Table 4.10

T-test Results Comparing Semester GPA of Fall 2017

Term	t	df	Sig. (2-tailed)	Mean Difference	SE Difference	95% CI of the Difference	
						Lower	Upper
GPA	-1.69	421.81	0.092	-0.148	0.088	-0.321	0.024

Thus, the null hypothesis (H_10) was retained, supporting no significant difference in mean GPA between groups. However, the marginally significant results suggest that significance may be identified with a larger sample or a sample with more equivalent groups. Thus, practitioners should be mindful of the potential significance of intrusive advisement on term GPA, although not fully supported with the results of this study.

Null hypothesis 2. The second t -test evaluated between group differences in cumulative GPA. The distribution of the cumulative GPA data was assessed graphically for normality and the assumption of equal variance was assessed using the Levene's statistic, which failed to support equal variances ($F = 5.15, p = .023$). The results showed the intrusively advised group had a slightly higher mean cumulative GPA ($M = 1.89$) than the not intrusively advised mean cumulative GPA ($M = 1.78$), as seen in Table 4.11.

Table 4.11

Fall 2017 Cumulative GPA by Advisement Group

	N	M	SD	SE Mean
Not intrusively advised	270	1.78	1.18	0.072
Intrusively advised	915	1.89	1.12	0.037

However, as shown in Table 4.12, the difference in cumulative grade point average (H_20) between the two groups was not statistically significant ($t = -1.272, p = .274$) when the intrusively advised group was compared with the not intrusively advised group (equal variances not assumed). Therefore, the null hypothesis was accepted, suggesting no significant differences between groups (intrusively advised vs not intrusively advised) in terms of cumulative GPA.

Table 4.12

T-test Results Comparing Cumulative GPA of Fall 2017

	t	df	Sig. (2-tailed)	Mean Difference	SE Difference	95% CI of the Difference	
						Lower	Upper
Cumulative GPA	-1.272	422.342	0.204	-0.10262	0.08070	-0.26124	0.05600

Null hypothesis 3. The third hypothesis was used to examine whether intrusive advisement had an impact on first semester retention of the academically underprepared community college students in their first year (i.e., whether there were significant between group differences in terms of semester retention). Data appeared to be relatively normally distributed on graphic visualization, but equal variances could not be assumed due to a significant Levene's Test ($F = 16.88, p = .000$). Examination of the mean retention from fall 2017 to spring 2018 revealed an increase in retention from fall to spring among the intrusively advised students ($M = .081, SD = 0.013$) compared to the not intrusively advised students ($M = .074, SD = 0.437$), as seen in Table 4.13.

Table 4.13

Fall 2017 to Spring 2018 Retention by Advisement Group

	N	Mean	SD	SE Mean
Not Intrusively Advised	270	0.7444	0.43698	0.02659
Intrusively Advised	915	0.8055	0.39606	0.01309

The difference in mean retention was statistically significant on t -test, which revealed a mean difference of 0.061 ($t = -2.059, p = .040$). Table 4.14 provides the statistical results of the t -test. From this result, the null hypothesis was rejected,

supporting a significant difference in retention fall to spring based on advisement group, suggesting a significant influence of intrusive advisement on next semester retention.

Table 4.14

T-test Results Comparing Retention Fall 2017 to Spring 2018

	t	df	Sig. (2-tailed)	Mean Difference	SE Difference	95% CI of the Difference	
						Lower	Upper
Enrolled Spring 2018	-2.059	408.16	0.040	-0.061	0.0296	-0.119	-0.003

Null hypothesis 4. The fourth hypothesis was designed to examine whether intrusive advisement had a positive impact on the fall to fall retention of academically underprepared community college students in their first year (i.e., between group differences in fall to fall retention). The mean retention rates between the two groups (intrusively and not intrusively advised) were similar (0.567 and 0.586, respectively), with the intrusive advisement group showing only a slightly higher retention rate (Table 4.15). To determine whether the difference was significant, a *t*-test was calculated. Normality was assessed via graphic visualization of the data and Levene’s statistic supported the equal variance assumption ($F = 1.087, p = .297$).

Table 4.15

Fall 2017 to Fall 2018 Retention by Advisement Group

	N	Mean	SD	SE Mean
Not intrusively advised	270	0.567	0.496	0.030
Intrusively advised	915	0.586	0.493	0.016

As shown in Table 4.16, there was no significant difference between the groups ($t = -0.559, p = .576$) when comparing the fall 2018 retention dependent variable (H40), with groups defined as intrusively advised group and not intrusively advised group. Therefore, the null hypothesis was retained, supporting no significant difference or impact in fall to fall enrollment based on intrusive advisement group.

Table 4.16

T-test Results Comparing Retention Fall 2017 to Fall 2018

	t	df	Sig. (2-tailed)	Mean Difference	SE Difference	95% CI of the Difference	
						Lower	Upper
Enrolled Fall 2018	-0.559	1183	0.576	-0.01913	0.03419	-0.086	0.048

Null hypothesis 5. The GPA was only reflective of academic credit bearing courses, as remedial coursework was not calculated into the GPA; therefore, the percentage of remedial credits completed was added to the study to assess the impact of intrusive advisement on remediation. The fifth hypothesis was used to examine whether intrusive advisement had a positive impact on the percentage of credits completed of academically underprepared community college students in their first year.

Examining the percentage of credits completed comparing the intrusively advised and not intrusively advised groups, the intrusively advised group completed a higher percentage of credits with a mean credits completion rate of 61%, while the not intrusively advised group had a 57% mean completion rate (Table 4.17). To determine if this difference was significant, a *t*-test was calculated. Normality assumption was checked graphically and the equal variance assumption was checked using the Levene's

statistic, which revealed that equal variances could not be assumed ($F = 13.657, p = .000$).

Table 4.17

Percentage of Credits Completed by Advisement Group

	Frequency	Mean	SD	SE Mean
Not Intrusively Advised	270	0.57	0.38	0.02
Intrusively Advised	915	0.61	0.34	0.01

Results of the t -test failed to reject the null hypothesis at the set value of $p < .05$, but demonstrated a marginally significant result with a $p < .10$ ($t = -1.662, p = .097$). Although the results failed to demonstrate a significant impact on credits completed, the marginally significant results suggest a significant impact may be evident in a sample with more equivalent groups or in a larger sample.

Table 4.18

T-test Results Comparing Credits Completed

	t	df	Sig. (2-tailed)	Mean Difference	SE Difference	95% CI of the Difference	
						Lower	Upper
Year 1 Credit Success	-1.662	410.56	0.097	-0.04264	0.02565	-0.093	0.008

Null hypothesis 6. Finally, the sixth hypothesis for the t -tests was used to examine whether intrusive advisement has a positive impact on the percentage of remedial credits completed of academically underprepared community college students in their first year. Descriptive statistics showed that the intrusively advised student group successfully completed more remedial credits (57%) than the not intrusively advised group (52%), as seen in Table 4.19. However, to determine if that difference was

significant, a *t*-test was calculated. Normality and equal variance assumptions were assessed, with equal variances assumed ($F = 3.745, p = .053$).

Table 4.19

Percentage of Remedial Credits Completed Fall 2017 by Advisement Group

	N	Mean	SD	SE Mean
Not intrusively advised	179	0.521	0.472	0.035
Intrusively advised	593	0.569	0.451	0.019

As shown in Table 4.20, the between group difference in percentage of remediation completed (H_0) was not statistically significant ($t = -1.246, p = .213$) when the intrusively advised group was compared with the not intrusively advised group. Thus, the null hypothesis was retained and no significant differences were found between the two advisement groups, suggesting no significant impact of intrusive advisement on remedial course completion rates in the sample.

Table 4.20

T-test Results Comparing Fall 2017 Remedial Credits Completed by Advisement Group

	t	df	Sig. (2-tailed)	Mean Difference	SE Difference	95% CI of the Difference	
						Lower	Upper
Remedial Completion	-1.246	770	0.213	-0.04844	0.03887	-0.125	0.028

Summary of t-test results. The results of the *t*-tests were that $H_1, H_2, H_4, H_5,$ and, H_0 were not statistically significant and therefore, the null hypotheses were accepted for these hypotheses. However, it is noted that H_1 (term GPA) and H_6 (remedial course completion) were marginally significant ($p < .10$), suggesting that these may show significance in a larger sample, or a sample with more equal groups.

Because our group totals were quite different ($n = 915$ for the intrusive advisement group and $n = 270$ for the not intrusively advised group), although the intrusive group demonstrated mean GPA (1.89) that was closer to good academic standing (2.0) at the community college, the between group differences failed to show significance. However, Hypothesis 3, used to examine differences in the fall to spring retention rates based on advisement group, was the only hypothesis to demonstrate statistically significant between group differences, suggesting an impact of intrusive advisement. Although the fall to fall retention did not show statistical significance, the fall to spring retention dependent variable showed statistical significance at ($p = .04$). This finding suggests that attrition occurs at its highest rate from fall to fall indicating that strong intervention is needed for students during the second college semester in order to improve retention outcomes for the following fall semester.

Regressions. The t -tests revealed that the intrusively advised group was retained at higher rates fall to spring than the students who were not intrusively advised. In addition, marginally significant results were noted for term GPA and credit completion. Logistic regressions were completed for the spring and fall retention dichotomous variables and linear regressions were completed for the semester and cumulative grade point averages, as well as percentage of remedial and one year credits completed continuous variables.

Both regressions were completed using Rapid Insight's Veera Predict software, which will only show the independent variables that are predictors for the dependent variables at ($p < .01$). As Table 4.20 shows, high school GPA and high school (HS) attended were the only predictors for first semester GPA. Students who attended high

school 4 had a negative correlation with first semester GPA, suggesting these students were more likely to earn lower grade point averages in their first semester than students who attended other high schools.

Table 4.21

Fall 2017 Semester GPA

	Coefficient	Standard Error	t-value	p-value	Model Contribution
Intercept	0.217	0.156	1.397	0.163	
Square HS GPA	0.274	0.024	11.310	0.000	0.810
HS 4	-0.513	0.193	-2.662	0.008	0.190
R Square	0.184				

Similarly, Table 4.22 shows that for cumulative GPA, the independent variable most predictive of cumulative GPA was high school GPA. In addition, there was a positive correlation between White students and higher cumulative GPAs, as well as college credits earned in high school. This finding is consistent with the literature on college preparation (Hurford et al., 2017; Valentine et al., 2017).

Table 4.22

Fall 2017 Cumulative GPA

	Coefficient	Standard Error	t-value	p-value	Model Contribution
Intercept	0.199	0.131	1.516	0.130	
Square HS GPA	0.234	0.021	10.870	0.000	0.608
White	0.334	0.081	4.139	0.004	0.220
Earned Credit in HS	0.292	0.094	3.111	0.002	0.172
R Square	0.260				

Although the *t*-tests showed statistical significance for one semester retention, the logistics regression did not show intrusive advisement as predictive for spring 2018

retention. As Table 4.23 shows, high school GPA and college credits earned in high school are the only predictors for spring 2018 retention.

Table 4.23

Fall 2017 to Spring 2018 Retention

	Coefficient	Standard Error	Wald chi square	p-value	Model Contribution
Intercept	-0.363	0.452	0.645	0.422	
HS GPA	1.979	0.550	12.960	0.000	0.512
Earned Credit in HS	0.879	0.316	7.734	0.005	0.488
Cox and Snell pseudo rsquared	0.052				

For fall to fall retention, high school GPA, and high school attended were the independent variables that were predictive of annual retention (Table 4.24). This finding is consistent with the completion reports from the office of institutional research at the community college, which indicates students who graduated from HS 1 have the best educational outcomes as they earn high GPAs and are retained at greater rates (Schnackenberg, personal communication, August 23, 2017).

Table 4.24

Fall 2017 to Fall 2018 Retention

	Coefficient	Standard Error	Wald chi square	p-value	Model Contribution
Intercept	-2.517	0.543	21.520	0.000	
HS GPA	1.058	0.221	22.860	0.000	0.305
HS 1	1.160	0.289	16.160	0.000	0.277
HS 3	1.269	0.376	11.420	0.001	0.241
HS 2	0.843	0.311	7.359	0.007	0.177
Cox and Snell pseudo rsquared	0.094				

According to Boggs (2011), community colleges are often a pathway for higher education for many students. As such, the fall 2017 cohort was reviewed against the clearing house report in order to identify any students who may have successfully transferred to a senior college after completing their first year at the community college. When fall to fall retention is expanded to include students who transferred, credits earned in high school is shown as another predictor for retention as shown in Table 4.25.

Table 4.25

Fall 2017 to Fall 2018 Retention Including Transfer

	Coefficient	Standard Error	Wald chi square	p-value	Model Contribution
Intercept	-3.486	0.598	33.940	0.000	
HS GPA	1.536	0.250	37.960	0.000	0.474
Earned Credits in					
HS	0.788	0.235	11.270	0.001	0.268
HS 2	1.141	0.370	9.530	0.002	0.258
Cox and Snell pseudo rsquared	0.140				

In terms of predicting percentage of remedial credits earned and credits earned over the first year, HS GPA was the only independent variable that was a predictor for the percentage of remedial credits earned (Table 4.26) and percentage of credits earned during the first year (Table 4.27).

Table 4.26

Percentage of Remediation Completed

	Coefficient	Standard Error	t-value	p-value	Model Contribution
Intercept	-0.433	0.116	-3.734	0.000	
HS GPA	0.421	0.047	8.874	0.000	1.000
R Square	0.170				

Table 4.27

Percentage of Credits Completed in One-year

	Coefficient	Standard Error	t-value	p-value	Model Contribution
Intercept	-0.199	0.080	-2.505	0.012	
HS GPA	0.325	0.032	10.170	0.000	1.000
R Square	0.148				

Overall, the logistic and linear regression showed that the strongest predictor for educational outcomes in terms of GPA and retention is HS GPA and high school attended. In addition, college credits completed in high school showed a positive correlation with retention and cumulative GPA. However, because Rapid Insight's Veera Predict only shows statistical significance at the ($p < .01$) level, so an additional regression that included intrusive advisement was completed using the Statistical Package for Social Science (SPSS) software. The statistical significance for the regressions were set at ($p < .05$) and marginally significant at ($p < .10$). As with the t -tests, the results of the regression were that H_1 , H_2 , H_4 , H_5 , and, H_6 were not statistically significant, thus the null hypothesis was accepted for those tests. The remaining null hypothesis, H_3 was rejected as the regression result for H_3 was statistically significant at ($p = .04$).

As shown in Tables 4.28 and 4.29 HS GPA was the strongest predictor for semester and cumulative GPA, while attendance in HS 4 had a negative correlation with HS GPA in the first semester and college credits earned in high school had a positive correlation with cumulative GPA, which is consistent with the finding in the first regression analysis.

Table 4.28

Fall 2017 Semester GPA

Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.259	0.120		2.16	0.0307
HS_GPA_Squared	0.259	0.016	0.430	16.10	0.000
HS 4	-0.397	0.140	-0.076	-2.84	0.005
Intrusive_Advised_	0.106	0.078	0.037	1.36	0.174

Table 4.29

Fall 2017 Cumulative GPA

Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.207	0.106		1.96	0.05
HS_GPA_Squared	0.229	0.015	0.414	14.87	0.00
White	0.227	0.059	0.101	3.860	0.00
HS_Credits	0.359	0.069	0.143	5.193	0.00
Intrusive_Advised	0.052	0.069	0.020	0.765	0.44

Spring 2018 retention was significantly related to intrusive advisement ($p = .042$), as shown in Table 4.30, which was consistent with the significant result of the t -tests ($p = .040$). The fall 2017 to fall 2018 retention, however, does not show any correlation with intrusive advisement, but does show that HS GPA and high school attended are the independent variables most closely associated with retention (Table 4.31). The results for these two analyses suggest that intrusive advisement is having the greatest impact on students in their first semester.

Table 4.30

Regression of Fall 2017 to Spring 2018 retention

Independent Variable	B	S.E.	Wald	df	Sig.	Exp(B)
HS_GPA_Log	1.85	0.397	21.64	1.000	0.000	6.33
HS_Credits	0.656	0.207	10.01	1.000	0.002	1.93
Intrusive_Advised_	0.347	0.170	4.15	1.000	0.042	1.42
Constant	-0.627	0.352	3.18	1.000	0.074	0.534

Table 4.31

Regression of Fall 2017 to Fall 2018 Retention

Independent Variable	B	S.E.	Wald	df	Sig.	Exp(B)
HSGPA	1.40	0.160	76.6	1.000	0.000	4.052
HS 1	1.05	0.195	29.0	1.000	0.000	2.85
HS 3	0.937	0.251	13.9	1.000	0.000	2.55
HS 2	1.006	0.234	18.5	1.000	0.000	2.74
Intrusive_Advised_	0.001	0.153	0.00	1.000	0.996	1.001
Constant	-3.38	0.409	68.0	1.000	0.000	0.034

When fall 2017 to fall 2018 retention is expanded to include students who transferred, credits earned in high school became another correlated variable predicting retention, along with HS GPA and HS 2 (Table 4.32). Students who graduated from HS 2 were retained at higher rates. These findings are consistent in both regressions.

Table 4.32

Regression of Fall 2017 to Fall 2018 Retention Including Transfers

Independent Variable	B	S.E.	Wald	df	Sig.	Exp(B)
HSGPA	1.33	0.17	60.9	1.00	0.00	3.80
HS 2	0.75	0.25	9.21	1.00	0.00	2.11
Intrusive_Advised_	-0.03	0.16	0.04	1.00	0.84	0.97
HS_Credits	0.79	0.17	21.7	1.00	0.00	2.21
Constant	-2.94	0.42	49.0	1.00	0.00	0.05

The regression results were the same for the percentage of remedial credits earned and one-year credits earned, indicating that high school GPA is the strongest predictor for completing remediation and credit completion as shown in Tables 4.33 and 4.34.

Table 4.33

Percentage of Remediation Completed

Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.420	0.0856		-4.91	0.000
HSGPA	0.396	0.0335	0.404	11.85	0.000
Intrusive_Advised	0.042	0.0365	0.0394	1.16	0.248

Table 4.34

Percentage of Credits Completed in One Year

Independent Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.25	0.058		-4.24	0.00
HSGPA	0.34	0.022	0.406	14.9	0.00
Intrusive_Advised_Indicator	0.04	0.023	0.042	1.55	0.12

Summary of Results

The findings of the analyses of the data indicate that there is a statistically significant relationship between intrusive advisement and first semester retention. This is true when examining the results of the *t*-tests and regression analyses. However, intrusive advisement had no significant relationship with one-year retention rates, semester and cumulative grade point averages, and credit completion, or completion of remediation. In addition, it is important to note that HS GPA was shown to be the independent variable

that had the strongest significance with all educational outcomes. High school attended and earning college credits in high school were also independent variables that showed significance to semester and cumulative GPAs, as well as fall 2017 to fall 2018 retention.

Although the results generally did not show significance in terms of the impact of intrusive advisement, all results showed that the students who received intrusive advisement in their first semester earned higher grade point averages, were retained at higher rates, and completed a higher percentage of remedial and academic credits. A detailed summary and discussion of the findings are presented in Chapter 5.

Chapter 5: Discussion

This chapter addresses six main areas: a summary of the research problem and research methods used in the study, an overview of the research questions and the findings, an analysis of how the findings pertain to the literature, the limitations of the study, recommendations for practice, and finally, recommendations for further research related to intrusive advising. This study was designed to examine the impacts of intrusive advisement on the academic success of academically underprepared community college students in their first college year at a public community college in New York State that employs an intrusive advisement approach. The findings indicated that intrusive advisement is significant for first semester retention only. High school grade point average was a predictor for all the other dependent variables.

Nationally, higher education institutions have been experiencing declining enrollment and are looking for ways to strategically retain and graduate more students. As a result, some institutions have developed programs and initiatives to engage students to the campus community and to provide timely academic interventions at early signs of academic struggle. Academic advisors can serve as a resource for entering students by connecting them to academic support networks and assisting them with designing a pathway for degree completion (Ohrablo, 2017). In addition, academic advisors who facilitate intrusive advisement assist students with academic intervention, problem resolution, campus engagement, academic planning, and decision making.

To examine the impact of intrusive advisement on the educational outcomes of academically underprepared community college students, a quasi-experimental study was conducted of the fall 2017 community college entrants. The participants of this study enrolled in college for the first time during the fall 2017 semester and attempted a full-time credit-load (12 credits). Archival records identified students who received intrusive advisement during their first semester ($n = 915$) and those who did not ($n = 270$). Using a quantitative methodology, the retention and academic success of both advisement groups were compared and analyzed with descriptive statistics, t -tests, and linear and logistic regressions to answer the following research questions:

RQ1. Does participation in intrusive advisement during the first semester improve student's first semester grade point average among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ2. Does participation in intrusive advisement during the first semester improve student's cumulative grade point average among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ3. Does participation in intrusive advisement during the first semester increase retention to the spring 2018 semester among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ4. Does participation in intrusive advisement during the first semester increase retention to the fall 2018 semester among academically underprepared community

college students when compared to similar students who did not receive intrusive advisement?

RQ5. Does participation in intrusive advisement during the first semester increase percentage of credits completed in the first year among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

RQ6. Does participation in intrusive advisement during the first semester increase the percentage of remedial credits completed among academically underprepared community college students when compared to similar students who did not receive intrusive advisement?

Research Question Findings

All research questions were examined via the results of the *t*-tests and linear/logistic regressions. Rapid Insight's Veera Predict (RIVP) and the Statistical Package for Social Science (SPSS) software were used to perform the regressions. Since RIVP only indicates independent variables that are predictors for the dependent variable at the $p < .01$ level, SPSS was utilized to showcase whether intrusive advisement had a statistically significant relationship ($p < .05$) with any of the dependent variables.

Research Question 1. The first research question examined the impact that intrusive advisement had on first semester grade point average (GPA) for the advised and not intrusively advised student groups. Although, the intrusively advised group had a mean GPA ($M = 1.95$) that was higher than the not intrusively advised group ($M = 1.80$), the *t*-test showed that the difference was not statistically significant ($p = .092$), but was marginally significant at the $p < .10$ level. This finding was consistent with the results of

the regression, which further indicated that high school GPA and high school attended were the only predictors for first semester GPA. In addition, students who attended high school 4 had a negative correlation with first semester GPA, suggesting these students were more likely to earn lower grade point averages in their first semester than students who attended other high schools.

These findings are not consistent with the literature that has shown improvement in grade point average for students who participated in intrusive advisement (Abelman & Molina, 2001; Glennen, 1975; Varney, 2012). It is possible that these results are not generalizable to community college students, as most of the research about intrusive advisement has been facilitated within 4-year institutions. Another possibility is that this study focused specifically on academically underprepared students in their first year, whereas other studies included student populations with a mix of academic preparation and class standing.

Therefore, the data showed that intrusive advisement did not have a statistically significant impact on first semester GPA when the intrusively advised group was compared to the not intrusively advised group. Although the intrusively advised group had a higher GPA than the not intrusively advised group, without statistical significance, the slightly higher GPA could be due to chance. The regression did show high school GPA as predictive of first semester GPA and a negative correlation between high school 4 (68 students) and first semester GPA. As shown in Table 4.3, high school 4 had a student body reflective of a predominantly low socioeconomic background and this was the greatest disparity between the students in this high school and the students in high

schools 1-3. This could suggest that socioeconomic background also is an indicator of first semester GPA.

Research Question 2. The second research question examined the impacts of intrusive advisement on the cumulative GPA of both advisement groups. The *t*-test results showed the intrusively advised group had a slightly higher mean cumulative GPA ($M = 1.89$) than the not intrusively advised group mean cumulative GPA ($M = 1.78$); however, the difference in cumulative GPA between the two groups was not statistically significant ($t = -1.272, p = .274$).

The regression results indicated that there was a positive correlation between White students and higher cumulative GPAs. This is consistent with the literature about the academic success of marginalized groups, which details that there is a disparity in the academic achievement of racial and ethnic minority students, specifically with regard to Black and Hispanic students when compared with White students. This is commonly referred to in the literature as the achievement gap (Kuh et al., 2006; Strayhorn, 2008).

In addition, the regression further detailed that high school GPA was the independent variable that most closely predicts cumulative GPA. This finding is consistent with the literature on college preparation (Hurford et al., 2017; Valentine et al., 2017). The regression also found that college credits earned in high school significantly predicts cumulative GPA. Though this is consistent in the literature, it was unexpected that this finding would reveal such a strong association with cumulative GPA, particularly because, despite earning college credits in high school, these students still arrived to college academically underprepared.

Therefore, the data showed that intrusive advisement did not have a statistically significant impact on cumulative GPA when the intrusively advised student group was compared with the not intrusively advised student group. The regressions did show, however, that high school GPA, race, and college credits earned in high school were all predictive of cumulative GPA. Similar to first semester GPA, high school preparation was the factor most significantly associated with cumulative GPA. However, when examining the mean GPA for both student groups neither student group achieved a GPA of 2.0 or above, which is considered good academic standing for the college. Thus, even though students in the intrusively advised group had a slightly higher mean GPA than the not intrusively advised group, both groups failed to meet good academic standing, suggesting that more intervention is needed for both student groups in order to have a meaningful impact on the cumulative GPA of the first college year.

Research Question 3. The third research question examined whether intrusive advisement had an impact on first semester retention. Review of the mean retention from fall 2017 to spring 2018 revealed an increase in retention from fall to spring among the intrusively advised students ($M = .081$, $SD = 0.013$) compared to the not intrusively advised students ($M = .074$, $SD = 0.437$). The difference in mean retention was statistically significant on t -test, which revealed a mean difference of 0.061 ($t = -2.059$, $p = .040$).

Although the t -tests showed statistical significance for one semester retention, the logistic regression, which was done using RIVP software, did not show intrusive advisement as predictive of spring 2018 retention at the $p < .01$ level. High school GPA and college credits earned in high school were the only predictors for spring 2018

retention. However, a second regression done in SPSS at the $p < .05$ level revealed spring 2018 retention was significantly related to intrusive advisement ($p = .042$), which was consistent with the significant result of the t -tests ($p = .040$). This finding also is consistent with the literature, which details intrusive advisement as an impactful intervention for retaining students (Earl, 1988, Glennen & Baxley, 1985; Hatch & Garcia, 2017; Hernandez, 2016).

Researchers Schewebel et al. (2008) examined the effectiveness of intrusive advisement and found that the outreach made by advisors in this model is impactful in ensuring students attend their advisement appointments and work consistently with their advisor. In addition, this engagement with advisors can lead to other productive student behaviors, such as utilizing other academic resources and increased engagement with the campus community. This could be the reason that students who were intrusively advised were more likely to be retained at greater rates in their first semester than the students who did not participate in intrusive advisement.

Tinto's (2012) theory of student departure posited that a student's engagement with the campus community during the first college year is critical to the retention of that student in the subsequent semesters. The first college year is a period of adjustment for all students, but those in a community college setting may have a harder time adjusting to a new campus community given that many of them commute. Community college students generally come to campus for classes only, and many of them work off-campus, which limits available time for participating in on-campus events and utilizing support services. In addition, many community college students continue to maintain the same relationships with their current communities and do not feel encouraged to develop new

relationships with faculty and students in their college (Boggs, 2011). By providing continuous outreach during the first semester, intrusive advisement can help to engage the student with advisement and the campus community as a whole (Capstick, 2018).

The data from this study showed that intrusive advisement does have a statistically significant impact on first semester retention when the intrusively advised student group was compared with the not intrusively advised student group. This finding suggests that academically underprepared community college students will benefit from the intrusive methods of outreach and advisement during their first college semester. It also suggests that intrusive advisement is an effective intervention for completion and semester retention for at-risk community college students.

Research Question 4. The fourth research question examined whether intrusive advisement had a positive impact on the fall to fall retention of academically underprepared community college students in their first year. The mean retention rates between the two groups (intrusively and not intrusively advised) were similar (0.567 and 0.586, respectively), with the intrusive advisement group showing only a slightly higher retention rate. There was no significant difference between the groups ($t = -0.559$, $p = .576$) when comparing the fall 2018 retention dependent variable (H_4), with groups defined as intrusively advised and not intrusively advised.

According to Boggs (2011), community colleges are often a pathway to higher education for many students. As such, the fall 2017 cohort was reviewed against the National Clearinghouse report in order to identify any students who may have successfully transferred to a senior college after completing their first year at the community college. When fall to fall retention was expanded to include students who

transferred, the results still failed to show any statistically significant improvement for the intrusive advisement group. High school credits earned in college, high school GPA, and high school attended were the independent variables that predicted one-year retention, additionally there was positive correlation between high school 2 and fall to fall retention. These findings are particularly surprising, given the statistical significance of first semester retention for the intrusively advised group and the literature on retention.

Therefore, the data showed intrusive advisement did not have a statistically significant impact on one-year retention when the intrusively advised group was compared with the not intrusively advised group. High school preparation, which included GPA, earning college credits while in high school, and high school attended, were the predictors for one-year retention. The high schools that showed a positive correlation with one-year retention were high schools 1-3. Students from high schools 1-3 all have similar socioeconomic status as defined by the percentage of students (below 25%) who are eligible for free or reduced lunch. The positive correlation of high school 1-3 suggests that socioeconomic status is also a nonacademic predictor of retention of academically underprepared, community college students in their first academic year.

Research Question 5. The fifth research question examined whether intrusive advisement had a positive impact on the percentage of credits completed of academically underprepared community college students in their first year. This metric provided information on progress towards degree completion. While GPA and retention are markers of persistence for college students, the percentage of credits completed will showcase whether the students are completing the number of credits they are attempting, which will ultimately designate the time it will take for them to earn their degree. When

examining the percentage of credits completed, the intrusively advised group completed a higher percentage of credits with a mean credit completion rate of 61%, compared to the not intrusively advised group mean completion rate of 57%; however, these results were not statistically significant.

Results of the *t*-test failed to reject the null hypothesis at the set value of $p > .05$, but demonstrated a marginally significant result with a $p < .10$ ($t = -1.662$, $p = .097$). Although the results failed to demonstrate a significant impact on credits completed, the marginally significant results suggest a significant impact may be evident in a sample with more equivalent groups or a larger sample. In addition, it is possible that the intrusively advised group received timely enough intervention from their advisors, which allowed them to utilize the support services to improve their course grades and complete a higher percentage of credits than the not intrusively advised group.

In terms of predicting percentage of remedial credits earned and credits earned over the first year, high school GPA was the only independent variable that was a significant predictor for the percentage of remedial credits earned and the percentage of credits earned during the first year. This result was consistent with the literature on retention (Tinto, 2012). When fall 2017 to fall 2018 retention was expanded to include students who transferred, college credits earned in high school became another correlated variable predicting retention, along with attending high school 2 and high school GPA. These findings were consistent in both regressions.

Therefore, the data showed that intrusive advisement did not have a statistically significant impact on the percentage of credits earned in the first year when the intrusively advised student group was compared with the not intrusively advised student

group. High school preparation was a predictor for the percentage of credits completed. In addition, high school 2 had a positive correlation with the percentage of credits completed in the first year. Thus, this finding suggests that students from high school 2 are earning more college credits during high school than students from other high schools and are consequently completing a higher percentage of credits in their first academic year.

Research Question 6. The final question examined the percentage of remedial credits completed. Because the grade point average at the community college does not include grades earned in remedial coursework, the percentage of remedial coursework completed was added to the study to assess if intrusive advisement had an impact on progression in remedial coursework. Descriptive statistics showed that the intrusively advised student group successfully completed more remedial credits (57%) than the not intrusively advised group (52%). However, the between group difference in percentage of remediation completed (H_6) was not statistically significant ($t = -1.246, p = .213$) when the intrusively advised group was compared with the not intrusively advised group, suggesting no significant impact of intrusive advisement on remedial course completion rates in the sample. High school GPA was the only predictor for the completion of remedial coursework.

Therefore, the analysis of the data showed that intrusive advisement does not have a statistically significant impact on the percentage of remedial coursework completed when the intrusively advised student group was compared with the not intrusively advised student group. The positive correlation between high school GPA and remedial credits completed suggests that high school preparation matters most to the completion of

remedial coursework. Overall, the logistic and linear regression showed that the strongest predictor for educational outcomes in terms of GPA, credit completion, and retention was high school GPA and the high school attended. In addition, college credits completed in high school showed as a positive correlation with retention, cumulative GPA, and the percentage of credits completed during the first year. These results are consistent with the literature that has noted academic preparation of college students as a measure of the college completion (Crawford Sorey & Harris Duggan, 2008; Fike & Fike, 2008; Valentine et al., 2017).

Implications of the Study

The researcher began this study with an inquiry about whether or not an intrusive advisement program was an effective intervention for the academic success and retention of academically underprepared community college students in their first year. The results of this study indicated that intrusive advisement had an impact on first semester retention, but did not improve retention after the first semester, nor did it have an impact on credit completion or GPA. The study revealed that many students in this sample were not completing their first academic year, and many who did complete their first year did not earn GPAs that were above good academic standing at the community college (a GPA of 2.0 is considered good standing). This is primarily because the students in this study arrived to college with little academic preparation for college work and most were in need of remediation.

Community colleges are the only types of colleges still offering remediation for academically underprepared students. Hence, in order to improve educational outcomes for this student population, more research about community colleges and their students is

needed, which underscores the importance of this study. Thus, the data analysis revealed that the greatest impact of intrusive advisement on retaining students was in their first college semester, and this was the only dependent variable to show a statistically significant relationship with intrusive advisement. Though first semester GPA did not demonstrate a statistically significant relationship with intrusive advisement, it did show marginal significance, which reinforces the relationship between intrusive advisement and first semester academic outcomes.

This finding of the study highlights the importance of advisement staff, particularly within the first semester. Because the relationship between the advisor and student is developed during the first semester, it is critical that the advisement staff are retained in order to ensure the consistency of advisement and further engagement of the student (Brenner, 2010; Christian & Sprinkle, 2013; Davis, 2015). However, despite the benefits obtained during the first college semester, in this study, intrusive advisement was not an indicator for retention beyond the first semester and also showed no correlation with GPA, percentage of credits completed, or completion of remedial coursework. This finding indicated that while intrusive advisement can be leveraged to engage students in the college during their first semester, additional research is needed to understand what interventions will aid the retention of students beyond their first semester.

This study revealed that high school GPA was the only independent variable that was a statistically significant predictive variable of all the educational outcomes. This is consistent with the literature that has referenced high school GPAs below 3.0 as an indicator of college attrition (Fike & Fike, 2008; Fowler & Boyaln, 2010; Hatch & Garcia, 2017). This finding is critical, as community colleges and higher education

institutions nationwide consider how to support academically underprepared and at-risk student populations. Moreover, when examining the importance of high school GPA on college success, researcher Choi (2004) found that high school GPA was the precollege characteristic that most strongly predicts retention and college completion. In the study, Choi further revealed that socioeconomic status was one of the strongest non-academic predictors for college success. Similarly, this study showed that the high school attended by the students also was significant to their academic success. The findings indicated that high school 4, the high school with the greatest number of students from low socioeconomic backgrounds, had a negative impact on first semester GPA. In addition, the study found that students who attended high schools 1-3 were more likely to be retained. These findings imply that socioeconomic status is a non-academic predictor for college retention.

Completion of college credits during high school was shown in this study to better prepare students for college. This finding is further supported by researcher Fara (2010), who found that students who completed college credits while in high school earned higher GPAs and were retained from fall to fall at much higher rates than students who did not earn college credits during high school. This finding offers insight into how colleges can work with neighboring high schools to improve college preparation for high school students, which could provide an important pipeline towards college degree completion, particularly for students from low socioeconomic backgrounds.

Limitations

The results of this study must be examined with an understanding of the limitations. The names of the community college students in the sample were not

disclosed to the researcher, and it is therefore difficult to know if the community college students represented in the dataset are representative of community college students nationally. In addition, the fall 2017 college cohort for this community college had a disproportionate number of males enrolled compared to prior years of enrollment that showed a fairly even distribution of males and females enrolled (with the exception of 2014). This meant that there was a greater risk of attrition for students in the sample, because nationally, males are not completing college at the same rate as females (Strayhorn & Sablan, 2014). The sample was composed of an intrusively advised group ($n = 915$) and not intrusively advised group ($n = 270$), which is not an even distribution of groups. Thus, the results may show significance in a larger sample, or in a sample with more equal groups, as the group totals were quite different.

Relative to retention, it must be acknowledged that the study only examined students who were retained within the community college during one continuous year of enrollment. Students who transferred to another institution during the first year were also included as retained, which is consistent with the benchmarks for community colleges. According to Gambino (2012), it is not uncommon for students at a community college to “stop out” for a semester or more. Therefore, a student who re-enrolled after the first year at this community college or another institution would not have been captured by the study as retained, despite completing two semesters. In addition, data concerning transfer was obtained using the National Clearinghouse report, which contains records from 92% of all colleges in the United States. It is, therefore, possible that some enrollments were not captured if the student attended a college not included in the Clearinghouse database.

The number of advisement sessions during the first semester was not specified. It is, therefore, not known if the frequency of intrusive advisement within the first semester contributed to any of the educational outcomes. The first semester (fall 2017) was the only semester that intrusive advisement was observed. Thus, with the significant findings for intrusive advisement positively impacting spring 2018 retention, the results of the data analysis could suggest that if intrusive advisement during the spring 2018 semester was observed, it may have had more of a meaningful impact on the fall 2017 to fall 2018 retention.

Finally, the retention of the advisement staff was a limitation in this study. The advisors at the community college are a mix of full-time and part-time professionals, which resulted in a high turnover rate for part-time advisors, due to changes in financial needs or securing full-time employment. This change in advisement staff means that different advisors have different years of experience working with students and although trained at the beginning of each semester, experience working with this vulnerable population likely increases effectiveness in reaching the students. In addition, the disruption in the advisor/advisee relationship may have impacted the effectiveness of the intrusive advisement intervention.

Recommendations for Practice

Presently, educational institutions are plagued with declining retention and graduation rates, which has led to the implementation of comprehensive advisement programs nationwide (Jones, 2011). Intrusive advisement, in particular, is noted in the literature as the advisement approach most likely to improve educational outcomes for students from at-risk populations (Varney, 2012). Thus, this study examined the impact

of a comprehensive intrusive advisement program on the retention and academic success of academically underprepared community college students in their first year.

Characteristics of intrusive advisement. Intrusive advising is different from other advisement forms, as the advisor seeks to connect students with the campus community and assist their navigation of various student support services. Intrusive advising originated from the seminal work of Glennen (1975). The literature is replete with research that designates intrusive advisement as the most successful form of advisement for at-risk student populations (Earl 1988; Glennen & Baxley, 1985; Schwebel et al., 2012; Varney, 2012; Vowell & Karst, 1987). Additionally, the research has identified five main characteristics of the intrusive advisement model which include; outreach, caseload management, referral, academic intervention, and proactive degree planning. These characteristics are defined below:

1. Outreach – advisors initiate contact with students from their assigned caseload during the first 6 weeks of the first semester. This is deemed as a critical time to engage the students and foster a sense of belonging in the college (Glennen & Baxley, 1985; Tinto, 2012). If no connection is made during the first 6 weeks outreach will continue throughout the first semester in order to encourage the student to meet with their advisor. According to Ohrablo (2017), consistent and informal purposeful outreach is an effective way to provide information to students while demonstrating concern.
2. Caseload Management – advisors track their appointments with their advisee's through the use of Early Alert Software (EAS). All notes pertaining to meetings with advisees are housed in the EAS which allows advisors to

remain updated on the student's progress. Most EAS systems have reporting features which provide information on frequency of advisement for all of the students on the advisor's caseload. Advisors will prioritize targeted outreach to the students not advised in order to encourage the advisee to meet with their advisor.

3. Referral – advisors work proactively with their students and refer them to other academic support services within the community college based upon their needs. Working with departments like tutoring, counseling, disability support services and the library, advisors educate students on how to engage with the college community by utilizing the resources available to them and learning how and when to ask for help.
4. Academic Intervention – faculty use the software to *flag* students who require follow-up and advisors use this information to provide targeted outreach and intentional intervention to their caseload students.
5. Proactive Degree Planning – starting with the first semester advisors are working with students to develop a degree plan. Through the use of degree audit software, advisors educate students of curriculum requirements and work with them to design academic plans for degree completion. This tool is used throughout the student's academic progression and enables both the student and the advisor to ensure the student is on track.

Thus the intrusive advisement model at the research site included these five main characteristics. Moreover, the results of this study lay the groundwork for a continued examination of intrusive advisement at community colleges and its impact on

academically vulnerable populations. The analysis of the results obtained in this investigation also has led to some conclusions that are recommended for professional practice. The results of this study indicated that intrusive advisement is positively correlated with first semester retention only. In addition, the first semester GPA was marginally significant at $p < .10$. The research did not show statistical or marginal significance for retention or GPA past the first semester. This could suggest that intrusive advisement is not an effective academic intervention for students beyond their first semester. Moreover, practitioners should not conclude that a favorable finding in first semester retention is associated with continued favorable academic outcomes towards degree completion.

Findings of the analyses of the data indicated that there is a statistically significant relationship between intrusive advisement and first semester retention. This is true when examining the results of the t -tests and regression analyses. However, intrusive advisement had no significant relationship with one-year retention rates, semester and cumulative grade point averages, credit completion, or completion of remediation. In addition, it is important to note that high school grade point average was shown to be the independent variable that had the strongest significance with all educational outcomes and college credits earned in high school was positively associated with retention and cumulative grade point average.

Recommendation 1. Therefore, it is recommended that advisement staff develop an advisement survey which could be administered to continuing students at the college to gather insight on the student's perception of advisement and whether they feel it has contributed to their academic progression. Facilitating focus groups for students in their

second and third academic semesters would also be a good way to gather information about the student's experience with advisement. These focus groups could provide more clarity on the advisement needs of students in those semesters.

Recommendation 2. The use of EAS was a critical aspect of the intrusive advisement model at this research site. This is consistent with recent research on the intrusive advisement model that references EAS being critical to caseload management and timely academic intervention (Varney, 2012). Practitioners acquiring EAS must have an implementation plan for its use on campus as advisors, faculty, and students will all interface differently with the software. Furthermore, most colleges that utilize the software have appointed a coordinator who will manage the use of the software and provide training campus wide. This is recommended as a best practice in advisement (Ohrablo, 2016).

Recommendation 3. Retention of advisement staff is critical to providing students with comprehensive advisement. It is recommended that institutions budget appropriately in order to provide a suitable number of full-time advisement staff for the degree seeking student population at the college. This is critical to ensure that advisement staff have reasonable caseload numbers that allows for them to know their students and develop a rapport with them. According to Chen (2017), students must feel that their advisor cares about them in order for students to develop trust in their advisor and engage consistently with them. High turnover in advisement is disruptive to the relationship of the advisor and advisee particularly with vulnerable student populations like at-risk students. In addition, access to advisement tools, such as degree planners and early alert

software, can assist advisement staff in providing timely and comprehensive advisement to students.

Recommendation 4. College credits earned in high school were found to have a positive correlation with the percentage of credits completed during the first college year as well as cumulative GPA and first semester retention. Thus, it is recommended that community colleges work with their surrounding high schools to offer more programs that allow students to obtain college credits while they are in high school. This could help to better prepare entering college students for the academic rigor of college coursework. In addition, expanding more opportunity for high school students to earn college credits will create a pathway for college that might encourage more high school students to attend college and would ultimately increase the number of students who arrive to college academically prepared. This pathway could also create opportunities for high school students who come from a low socioeconomic background, as it could potentially decrease the amount of coursework needed to obtain their degree and would be a quicker timeline towards degree completion making college more of an affordable option.

Recommendation for Future Study

This study adds to the limited literature on intrusive advisement and its impact on the educational outcomes of at-risk students. Additionally, this study is one of the first to explore the impacts of intrusive advisement on the retention and academic success of academically underprepared community college students in their first year. This study serves as a framework for future investigation into intrusive advisement and community college students. The researcher recommends the following areas for future study.

Recommendation 1. This study utilized students from one mid-sized, suburban, community college in the State University of New York college system. However, examining intrusive advisement programs across multiple community colleges with differing student demographics would be beneficial to understanding the effectiveness of the practice in a more comprehensive way. Furthermore, expanding the research to different community colleges would allow for a more in depth understanding of the environment and population where intrusive advisement best assists.

Recommendation 2. While the research in this study examined the academically underprepared student in his or her first college year, expanding the research to include students in each semester of study could give further insight into the time in which intrusive advisement is most beneficial for community college students. Particularly since the results of this study indicate that intrusive advisement is positively correlated with first semester retention but does not have any correlation with retention beyond the first semester.

Recommendation 3. The sample in this study was compromised of first-time full-time students who were of traditional college age (25-years or younger) at the time of entry (fall 2017). However, community colleges are overrepresented with students who are often employed, have dependents, and have outside home responsibilities that can increase the likelihood they are non-traditional in age and attend part-time (Chen, 2017). Including students who attended part-time and those of non-traditional age groups could have provided a more complete understanding of how intrusive advisement serves the varying student demographics of community colleges. In addition, inclusion of this

population may have provided more information about advisement trends of full-time, part-time, traditional, and non-traditional student populations.

Recommendation 4. Research on the frequency of advisement within the college year being studied would be important to enhance the understanding of how intrusive advisement can be impactful. Research regarding the frequency of advising will provide a more in depth understanding of how much intrusive advisement is needed to have an impact on educational outcomes. It will also provide information on how likely it is for a student who has been advised to continue to seek more advisement. Moreover, in a study about academic coaching, Capstick (2018) found that students who participated in five or more advisement sessions were more likely to be retained when compared to students who attended less than five advisement sessions. These findings suggest that higher frequency of advisement is more beneficial to educational outcomes than a one-time intervention.

Recommendation 5. While this study focused on the possible benefits of intrusive advisement on retention and academic success metrics of community college students in their first year, qualitative research would provide a more holistic perspective of the student experience with intrusive advisement that this study did not explore. Moreover, qualitative research would be helpful in gleaning students' overall experience with intrusive advisement and how they feel that intrusive advisement contributed to their academic success and progression. In addition, gathering pre- and post-intrusive advisement data with regard to the students' sense of belonging at the institution, understanding of curriculum, identification of academic/career goals, and mindset would provide more depth to the student experience and personal development gleaned through

the intrusive advisement relationship and practice. It could also help to identify what student support practices are felt to be most helpful for retaining students past their first semester.

Conclusion

Since their inception in the 1800s, community colleges have been committed to providing access to higher education (Ward, 2003). Presently, community college campuses nationwide are welcoming a more racially and ethnically diverse student demographic than ever before (Hernandez, 2016; Miller, 2010). However, community college students often arrive academically underprepared and lacking the skills needed to succeed in college, leading towards high rates of student departure during the first college year. This study was designed to explore the impact of intrusive advisement on the academic success and retention of academically underprepared community college students.

According to Drake, Jordan, and Miller (2013), academic advising is a key step towards an institutional commitment to student success. When done well, academic advising creates an opportunity for students to engage in intentional and purposeful academic planning and goal setting with a college administrator. As students continue to arrive to college campuses lacking academic preparation, advisors will need to be proactive in their outreach to students. Intrusive advisement, has been credited in the literature as the advisement approach that is most beneficial to connecting with at risk student populations (Abelman & Molina, 2001; Capstick, 2018; Davis, 2015; Earl, 1988; Glennen & Baxley, 1985; Levinstein, 2018).

Intrusive advising is characterized by advisor outreach to students during the first few weeks of the semester. This advisement approach seeks to connect the student with advisement early in the student's academic journey. Advisors develop strong relationships with their students and will often provide intervention with evidence of early signs of academic struggle, as identified by early alert software. Under this approach, advisors seek to connect students with the campus community and do so by encouraging students to meet with their faculty and by referring students to tutoring and other academic support services. The specific approach taken at this research site is a one-size-fits-all approach to intervention.

Thus, a one-size-fits-all intervention was applied to a broad array of students with varying pre-college academic measures, such as high school GPA and standardized test scores. Although the literature is replete with research indicating the intrusive advisement approach as being the most effective for academically underprepared and at-risk student populations, there is also research that has suggested different student populations benefit from different academic advising approaches and supports (Abelman & Molina, 2001; Allen et al., 2013; Brenner, 2010; Hernandez, 2016; Levinstein, 2018). In fact, Drake et al. (2013) posited that advisement practitioners should apply different advisement approaches in order to best suit the unique needs of each individual student. The authors further argued that a one-size-fits all approach to advising will limit the effectiveness of the advisement provided. This community college would benefit from a further segmentation of its student population and the application of different advisement approaches, based on the student's pre-college academic preparation, academic status,

credits towards degree completion, and personal development, but empirical research into intrusive advisement remains scant.

This study is one of the first to explore the effectiveness of an intrusive advisement program as a retention strategy for academically underprepared, at-risk, community college students in their first college year, while specifically looking at student demographics and high school performance to better explain the benefits of the program as a whole. Using a quasi-experimental, quantitative methodology, the study compared the academic achievement of intrusively advised and not intrusively advised student groups. Overall, the study showed that high school GPA is what most closely predicts college retention and college GPA. High school attended and earned college credits in high school also were shown to have an impact on the percentage of credits completed and cumulative GPA. First semester retention was the only variable in this study to show a positive correlation with intrusive advisement that was statistically significant.

Although the remaining results of study failed to show statistical significance, the educational outcomes revealed that intrusively advised students generally earned higher GPAs, completed more academic and remedial credits, and were retained at higher rates than the not intrusively advised group. However, these results do not support a conclusion of a positive impact of intrusive advisement. Without statistical significance, these improvements could be due to chance, supporting the need for additional research.

Moreover, the results of research showed that while the intrusively advised groups did perform better academically when compared with students who were not intrusively advised, both student groups failed to meet the standard 2.0 cumulative GPA that is

needed in this community college in order to be in good academic standing. Thus, community college students are still experiencing great difficulty during their first academic year. These difficulties can lead to higher rates of student attrition and lower rates of graduation, both at this research site and nationwide. An option is to turn to existing theory for frameworks to understanding why a wide variety of strategies might be effective in retaining students.

This study utilized Tinto's theory of student departure (2012) and Sanford's challenge and support theory (1968). Tinto's student departure theory (2012) underscored the importance of early outreach and the importance of student engagement during the first college year. The theory posited that a student's commitment to the institution and his/her commitment to degree completion is influenced by the student's degree of academic and social integration to the college. The data analyzed in this study of the intrusive advising approach for at-risk student success supports Tinto's theory with respect to first semester retention.

Sanford's (1968) challenge and support theory posited that for student development to occur, the college environment must balance the challenge and support presented to its students. Building on the work of Sanford, the intrusive advisement program at this community college merged the two most dominant professional subcultures of the campus—the faculty and the advisor to support and challenge their students. This dual role of support and challenge is especially relevant for the holistic development of students who arrive to community college lacking the academic preparation needed to succeed in college level coursework. The academic rigor of the curriculum challenge the students and the advisors provide support to the students by

connecting them with critical services, such as tutoring, and encouraging the continuous communication between the student and their faculty.

Keeping the above theories in mind, this study was intended to identify whether intrusive advisement had an impact on the retention and student success metrics of academically underprepared community college students. Through *t*-tests and linear and logistic regressions, the intrusively advised student group was compared with the not intrusively advised student group. The student success metrics included first semester and cumulative GPAs, retention of spring and fall semesters, and completion of college and remedial credits. The study revealed that high school GPA was the strongest predictor for all student success metrics.

Intrusive advisement was shown to have the most impact for retaining students in their first semester as evidenced by a statically significant finding ($p = .04$). There was marginal significance ($p < .10$) for first semester GPA and credits completed during the first academic year. However, these findings do not support application of intrusive advisement for all community college students as the results showed that intrusive advisement was not correlated with retention past the first semester. In addition, the data showed strong correlations with high school attended, which indicated that the high school attended mattered to the retention and academic success of the students at this community college.

Further examination into the four high schools surrounding this community college revealed a disparity in the socioeconomic status of students in high school 4. The study also noted a negative correlation with high school 4 and first semester GPA, and a positive correlation with high schools 1-3, and fall to fall retention, implying

socioeconomic status is a predictor for semester GPA and fall to fall retention. Thus, intrusive advisement was shown in this study to be an effective strategy for first semester retention; however, further research of academically underprepared, at-risk students attending community colleges is needed in order to address the disparity in degree completion for these student populations.

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