Summer 2024

# The Impact of Financial Wellness on Student Success

Holly Hamilton

THE IMPACT OF FINANCIAL WELLNESS ON STUDENT SUCCESS

by

HOLLY HAMILTON

(Under the Direction of Elise Cain)

## ABSTRACT

For many traditional-aged students, college can be their first major financial undertaking. Along with navigating the task of funding a college education, traditionally aged students may face additional financial challenges while entering adulthood. This financial responsibility can cause added stress for students and have a bearing on their financial wellness. This study explored the impact of financial wellness on students' abilities to succeed in college. Through the exploration of four financial wellness measures, financial self-efficacy, financial socialization, financial strain, and financial optimism, the researcher sought to first understand the relationships among the various wellness measures and then to determine what impact, if any, financial wellness has on student success as measured by student GPA. Bandura’s (1977) theory of self-efficacy guided this study. Findings from this study revealed that financial socialization, strain, and optimism all had a statistically significant relationship with financial self-efficacy. However, the aforementioned financial wellness measures did not have a significant relationship with student GPA. This study makes the case for future research to take a different approach by exploring more financial wellness measures as well as different measures of student success, in particular holistic development measures.

INDEX WORDS: Financial wellness, Student success, Financial self-efficacy

THE IMPACT OF FINANCIAL WELLNESS ON STUDENT SUCCESS

by

HOLLY Y. HAMILTON

B.S., Georgia State University, 2011

MBA., Florida Institute of Technology, 2014

A Dissertation (or Thesis) Submitted to the Graduate Faculty of Georgia Southern University

in Partial Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

COLLEGE OF EDUCATION

THE IMPACT OF FINANCIAL WELLNESS ON STUDENT SUCCESS

by

Holly Y. HAMILTON

Major Professor: Elise Cain

Committee: Steven Tolman

Antonio Gutierrez de Blume

Electronic Version Approved:

July 2024

# DEDICATION

This dissertation is dedicated to my late Aunt, Juanita E. Gay. She dedicated her life to the education of young people as she worked 30-plus years in P-12 education. She poured into young people regularly, and not just on the clock in the Dougherty County School System. Not only was she passionate about P-12 education but she was equally as passionate about higher education. She did not have any children of her own but treated my siblings, cousins, and me as her own, and she pushed us to seek as much education as we could. She regularly asked me when I would apply for a Doctoral program, and I must say that I shrugged her off several times before I decided to take the leap. She is huge part of the reason that I decided to pursue this degree and although she passed before she could see me walk across the stage, I felt as though I owed it not only to myself but also to her to see it through and finish strong. She believed in me even when I did not believe in myself, and I am forever grateful for her support and encouragement. It is my mission to do what I can to keep her legacy going. Most knew her as Ms. Gay, but her siblings simply called her “Sister.” Eventually she was given the nickname of Sis-Sis. No matter the name or title, as far as I’m concerned, she was one of God’s greatest gifts to this world. Sis-sis, this is for you!

# ACKNOWLEDGMENTS

I would like to offer special thanks to my committee members:

Dr Cain, you have been an amazing chair. I have always had an appreciation for your care, diligence, and attention to detail. I am truly a better writer because of you and your efforts. Thank you for your patience and hard work. There was never a time in this process that I regretted my decision to request you as my chair, and I am eternally grateful for your assistance.

Dr. Tolman, you brought a different perspective to my committee. Your suggestions were always extremely helpful. I can truly say that I am a better scholar thanks to your feedback and assistance.

Dr. Gutierrez de Blume, I can’t say enough about how helpful you’ve been through my coursework and this dissertation process. You are an extremely sharp statistician, and I am so grateful to have had you as my methodologist.

I also want to thank my family for the support provided throughout this process. There were many times you all stepped in to keep my daughter busy so that I could get my work done. I know there were times when I projected my stress onto you all, but everyone was always understanding. You all kept me on track and I am forever appreciative of the support.

# TABLE OF CONTENTS

Page

# LIST OF TABLES

Page

# LIST OF FIGURES

# CHAPTER 1

# INTRODUCTION

The transition into college can create new challenges for students and perpetuate challenges and stressors that students may have faced before college (Sabaner & Arnold, 2021). For many students, this is the first time they have had significant educational expenses in tuition and fees. Many students are also entering a new level of financial responsibility and independence and are not equipped with the knowledge and tools to navigate the financial world successfully (Sachitra et al., 2019). This study examined how these newfound financial responsibilities and the associated challenges can affect student wellness ultimately, their success in higher education settings.

Student success can be defined in many ways, as the literature review shows. Based on this literature review, to be discussed in the subsequent section, student success measures can be grouped into the following four categories: academic achievement, student advancement, persistence, and holistic development. Most often, student success is tied to those measures within the category of academic achievement (Arellanes et al., 2022; York et al., 2015). Grade Point Average (GPA) is one such measure. GPA is an easily quantifiable method for measuring student success and is directly tied to a student’s performance in their classes. This measure is of particular importance to this study as GPA was used as a dependent variable.

When considering how to evaluate student success, one must also consider other factors that affect students’ abilities to succeed, including personal, social, and institutional characteristics. One such factor, and the focus of this study, is financial wellness. Financial wellness is a holistic concept focused on the overall financial health of students, considering financial capability, financial strain, precarity, and debt (The Ohio State University Office of

Student Life, n.d.). College presents a unique point of reference for financial wellness considerations and for those students who attend directly following high school because it begins the journey to financial independence and more financial responsibility (Astin & Astin, 2015). This pivotal point in students' lives is a time at which great emphasis should be placed on all forms of wellness and success to ensure that students are prepared for their future lives. To best serve students, institutions and their agents must understand the relationship between students' financial positions and their collegiate successes.

## Background

This study focused on the impact of financial wellness on student success. To effectively determine that impact, the first step was to explore the concept of student success. This background section will explore student success, the various metrics, and the associated factors. Beyond student success, this background will also review the various financial wellness measures explored in this study and the theoretical framework of self-efficacy, which was used to guide this study.

### Student Success

Student success is a term used to describe various aspects of student achievement but is most commonly used in the context of GPA, retention, and graduation(Arellanes et al., 2022). Other factors, such as student levels of determination and resilience, also fall under the general concept of student success and are more commonly mentioned when asking students how student success is measured as opposed to the institutions' and governing entities' definitions (Delahunty & O'Shea, 2019). Such student-centered factors, therefore, are not explored as much through research.

When reviewing various student success frameworks, most student success measures fall under one of the following categories: academic achievement, student advancement, persistence, and holistic development. Academic achievement is most often associated with GPA and grades (York et al., 2015). It is one of the more commonly used categories of student success. These measures exist because of the need to quantify student success. By utilizing quantifiable metrics of student success, one can compare student success among various students across different institutions and demographics. Similarly, student advancement is based on creating a definitive measure of student success concerning degree completion (Cuseo, 2017). However, student achievement goes beyond degree completion and explores the next steps after degree completion, including post-graduation employment and educational advancement, as evident in studies such as the Baccalaureate and Beyond Study (B&B), administered by the National Center for Education Statistics (NCES) which tracks employment as well as professional and graduate program enrollment (Institute of Education Sciences, 2021).

A third category of student success measures is persistence, which can be grouped with retention because both concepts are aimed at students' continuous enrollment. The Student Clearinghouse Research Center's *Persistence and Retention Snapshot Report* (2021) describes persistence as continuous enrollment at any institution, whereas retention represents continuous enrollment at one institution. Persistence is effectively a student-centered indicator of student success, while retention is an institution-specific indicator (Chen et al., 2019).

The final category of student success to be discussed is holistic development. Holistic development refers to students' abilities to develop as a whole person, including emotional, physical, social, intellectual, and ethical development (Cuseo, 2017). Holistic student success measures include institutional reputation, student well-being, transformative learning, self-efficacy, and self-esteem (Bowden et al., 2021). These measures are all related to the concept of thriving. This concept is influenced by many factors, including learning engagement, time management, healthy connections, optimism about the future, and commitment to meaningful contributions to the world (Schreiner, 2013). Holistic development, along with academic achievement, student advancement, and persistence, create a complete picture of what student success in higher education looks like.

## Student Success Factors

After exploring various student success measures, one can then determine what factors have an impact on those measures. Based on Han and Rideout (2022), the factors that influence student success can be divided into three main categories: personal, social, and institutional. Personal factors are those that are based on an individual’s circumstances and include background factors and individual characteristics. One such factor is stress level. Higher levels of stress have been linked to lower retention in college students (Auerbach et al., 2016). College students report financial constraints as a source of increased stressed and an inhibitor of success (Denning et al., 2019; Eng & Matsudaira, 2021; Roksa & Velez, 2012). Thus, the financial aspect of college should be included in conversations regarding student success factors.

Alternatively, social student success factors include those that are tied to the dynamics of various relationships that students have with peers, university faculty and staff, and their family units (Wen & Lin, 2012). The relationship between family dynamics and student success will be explored within this study by considering the impact of family financial socialization on student success as measured by GPA. The family unit is a significant source of social support for college students (Dorrance-Hall et al., 2017). Family financial socialization looks specifically at the role of the family in consumer behavior (Gudmunson & Danes, 2011). Specifically, parental engagement has been found to be positively associated with student success (Roksa & Deutschander, 2018). This study went a step beyond general family socialization and looked at how knowledge and exposure to financial subjects within the family setting are related to students' college performance as measured by GPA.

Lastly, institutional factors of student success include those factors and characteristics of a school that have a significant impact on the student experience (Millea et al., 2018). Some factors within this category include class size, institutional commitment, and college costs. College costs are of particular importance to this study because it will explore the financial aspects of the lives of college students, including students' abilities to pay for college. Although the causes of the college financial burden can differ, several studies have found a negative association between college costs and student success (Conger & Turner, 2017; Destin & Svoboda, 2018). This negative association validates the need for institutions and other interested parties (e.g., legislators, other government officials, and communities) to focus on reducing students' chances of failing in higher education because of financial burdens.

Each of the three categories of student success (i.e., personal, social, and institutional) factors mentioned above plays a significant part in this study. The importance of those categories will be discussed in further detail within the literature review. Self-efficacy, the theoretical framework discussed in the following section, forms the basis of the connection between personal, social, and institutional factors and student success.

## Theoretical Framework: Self-Efficacy

Albert Bandura's definition of self-efficacy and its surrounding theory was the basis for this study. Bandura (1977) defines self-efficacy as the conviction that one can execute a given behavior, resulting in a certain outcome. He hypothesized that self-efficacy levels determine coping behavior, effort, and ability to sustain in the face of adversity (Bandura, 1977). Bandura's (1977) theory of self-efficacy includes four sources: mastery experiences, vicarious experiences, verbal persuasion, and emotional and physiological states. Bandura's theory asserts that one's self-efficacy is directly affected by each of these sources. Each of the four sources of self-efficacy will be briefly addressed below.

The most direct source of self-efficacy is mastery experience. It refers to exposure to and participation in experiences that can build one's familiarity and comfort with a particular task (Bandura, 1977). Mastery experiences can help individuals understand their abilities via a real-life application of concepts that can be used when performing similar actions.

Vicarious experience offers an outside view of a real situation. Bandura (1977) identifies using others and their experiences as models or examples of vicarious experiences. Model observer similarity can explain the significance of the effect that vicarious experience has on one's self-efficacy. Model-observer similarity refers to the perceived similarity between the subject and the individual providing the vicarious experience (Schunk & Hanson, 1985). These experiences can be used to build self-efficacy even when one has little to no mastery experience.

While mastery experience and vicarious experience are directly related to acts or performance of activities, verbal persuasion is concerned with using conversation to build confidence. Lent et al. (2017) describe verbal persuasion as the social motivation of encouragement. For college students, verbal persuasion can come from peers, teachers, subject matter experts, or oneself.

Lastly, emotional and physiological states are concerned with the value of emotional arousal to personal competencies. Bandura (1977) hypothesized that emotional and physiological states help to determine the value that one places on their personal competencies. Each of the other three sources of self-efficacy can work in conjunction with emotional and physiological states to affect one’s level of self-efficacy. When looking at financial wellness, which was the focus of this study, each of these sources of self-efficacy can be tied to the various aspects of financial wellness, which will be discussed below.

## Financial Wellness Measures

This study focused on financial wellness measures used in the Ohio State University Study on Collegiate Financial Wellness (Ohio State University Office of Student Life, n.d.). For the purposes of the aforementioned survey, financial wellness reflects all aspects of students' financial experiences, going beyond traditional measures of income and debt to explore attitudes, knowledge, and beliefs. Of the various financial wellness measures included in the Survey on Collegiate Financial Wellness, this study focused particularly on four measures, including financial self-efficacy, financial socialization, financial strain, and financial optimism. Each of these will be briefly discussed below.

Financial self-efficacy was at the forefront of this study. Financial self-efficacy concerns students’ financial confidence and preparedness (Ohio State University Office of Student Life, n.d.). Financial confidence and preparedness are measured by one’s ability to make sound financial decisions and navigate financial responsibilities (Noor et al., 2020). Generally, a positive relationship exists between financial self-efficacy and financial productivity (Amatucci & Crawley, 2011). Additionally, higher financial self-efficacy has been linked to lower overall stress in college students (Heckman et al., 2014). However, further research is needed to evaluate a more specific relationship between financial self-efficacy and student success.

Financial socialization refers to how parents engage students in financial learning opportunities (Ohio State University Office of Student Life, n.d.). The family financial socialization theory introduced by Shim (1996) establishes the value of family financial socialization on young adult decision-making. Financial socialization brings the self-efficacy source of verbal persuasion into the conversation on financial wellness.

Financial strain refers to feelings of worry or stress levels related to finances (Ohio State University Office of Student Life, n.d.). Alternatively, financial optimism concerns students' attitudes regarding their financial futures (Ohio State University Office of Student Life, n.d.). Both of these wellness measures bring the self-efficacy source of emotional and physiological state into the conversation on financial wellness. When looking at students, financial strain has been linked to lower academic performance (Britt et al., 2017). Though literature connecting financial optimism to student success is virtually nonexistent, financial optimism and strain have been found to have a negative relationship with each other (Rehr et al., 2022). These financial wellness concepts tie to Bandura's theory of self-efficacy and were used to help determine if a relationship existed between the various measures and student success as measured by GPA.

## Statement of the Problem

College can create a challenge for students who are not only transitioning from one level of education to another but also transitioning from childhood to adulthood. Financially, college can be a significant undertaking for students and their families. Many students may face new financial challenges they've never experienced prior to the transition into college. This can create additional pressure and adverse psychological conditions that threaten the well-being and success of students. Student well-being is paramount to student success in terms of advancement and goal attainment. Within the conversation of general well-being, student financial well-being and its effect on student success is often overlooked. However, with college often being a major financial undertaking, further research is needed on the connection between one's financial situation and the ability to succeed as a college student. Therefore, this study will seek to contribute to the small body of research by further exploring the connection between financial wellness and student success.

On a college campus, financial aid practitioners have a particularly significant role in helping students navigate the financial aspects of college and ultimately set students up for success. Financial literacy is one of the many focuses of financial aid offices. To provide effective financial literacy education, practitioners must first understand where students are concerning their understanding of and comfort with financial topics. Practitioners must also understand the sources of influence from which they are obtaining knowledge (i.e., family socialization, personal experience, prior educational opportunities). Only then can they build effective approaches to financial literacy education and go beyond to impact student wellness and overall success.

## Purpose Statement

The purpose of this quantitative study was to determine what impact, if any, financial self-efficacy has on student success. In studying financial self-efficacy, the researcher also sought to determine if financial socialization, strain, or optimism can be used to predict financial self-efficacy. Additionally, this study explored the impact of financial socialization, strain, and optimism on student success. For the purposes of this study, student success was measured by self-reported GPA. Through the proposed analysis, the researcher determined whether or not financial wellness impacted student success.

## Research Questions

This study explored undergraduate students’ general perceptions and competencies related to financial subjects and the impact of those on their collegiate performance. Through a quantitative approach, this study addressed the following questions:

- What is the predictive effect of financial socialization, strain, and optimism on financial self-efficacy?
- What is the impact of financial self-efficacy on student success as measured by GPA?
- What are the impacts of financial socialization, strain, and optimism on student success as measured by GPA?

## Significance of the Study

This study sought to gain an understanding of the impact that financial wellness has on student success. For many traditionally-aged students, college can be their first major financial undertaking. Although some students have assistance from their families to help cover college costs, the students are ultimately responsible for ensuring that the bill is paid because their education is at risk if a balance is not resolved. Along with the task of funding a college education, traditionally-aged students may face additional financial challenges while coming into adulthood such as new financial obligations, and the task of personal budget management. This financial responsibility can cause added stress for students. Therefore, this study aimed to determine what impact financial responsibility and the associated stress have on students' abilities to succeed. Gaining a greater understanding of this impact can help to inform future higher education practices aimed at students’ wellness, particularly financial wellness.

# Procedures

This study utilized quantitative approach for analysis. Using archival data from the 2020 Ohio State University Survey on Collegiate Financial Wellness (Ohio State University Center for the Study of Student Life, n.d.), the researcher performed a series of least square regressions. This procedure section will further discuss information pertaining to the research design, participants, setting, data collection and data analysis.

## Research Design

The researcher utilized a quantitative research design to explore the research questions. The study used archival data obtained from the 2020 Ohio State University Survey on Collegiate Financial Wellness (Ohio State University Center for the Study of Student Life, n.d.). The 2020 survey was the third administration of this survey, having been proceeded by the 2014 and 2017 administrations. This survey included a total of 60 questions concerning college students' financial attitudes, practices, and knowledge regarding financial subjects. The analysis included a series of least squares regressions to answer the three research questions.

## Participants and Setting

This multi-institutional survey included students across 60 different institutions, including both public and private, as well as two-year and four-year institutions. Students were selected to participate via a random sample. The survey had a total of 29,883 respondents, indicating a response rate of approximately 12.7% (Ohio State University Office of Student Life, n.d.). The survey was administered in the spring semester of 2020 by the Ohio State University Center for the Study of Student Life and the College of Education and Human Ecology.

## Data Collection

The researcher obtained appropriate permissions via IRB approval from Georgia Southern University. Permission to use data was also granted by the Ohio State University's Office of Student Life via an online request system. The survey included demographic questions along with various categories of questions, including the following: financial socialization, financial self-efficacy, financial strain, positive financial behavior, negative financial behavior, financial optimism, financial dependence, academics, general financial knowledge, and consumer debt. For the purposes of this study, questions from the categories of financial socialization, financial self-efficacy, financial strain, financial optimism, and academics were utilized.

## Data Analysis

The researcher received anonymous data files in a Microsoft Excel format. All data from the original data set was exported to the Statistical Package for the Social Sciences (SPSS). Data analysis was performed in SPSS, so the Excel file was converted to an SPSS file for analysis.

Research question one addressed whether or not financial socialization, strain, and optimism can be used to predict financial self-efficacy. The dependent variable for this question was the financial self-efficacy mean, which was described as one's confidence and level of preparedness pertaining to financial matters (Ohio State University Office of Student Life, n.d.) and was determined based on respondents' answers to several self-efficacy-related questions. The independent variables were socialization mean, strain mean, and optimism mean, which, similarly to self-efficacy, were determined based on respondents' answers to several questions related to each subject. The survey described financial socialization as the degree to which parents engage with children on financial topics, financial strain as the presence of stress or worry resulting from financial situations, and financial optimism as one's attitude regarding the financial aspects of their future (Ohio State University Office of Student Life, n.d.).

Question two addressed the impact of financial self-efficacy on student success. The dependent variable for question two was student success. For the purpose of question two, student success was determined based on self-reported Grade Point Average (GPA). GPA was reported by respondents as a raw number and then rounded to two decimals. Financial self-efficacy became the independent variable for this question.

Finally, question three addressed the impacts of financial socialization, strain, and optimism on student success. Student success was the dependent variable for question three and, as in question two, was determined based on self-reported GPA. The financial socialization mean, strain mean, and optimism mean were the independent variables for this research question.

This study also included descriptive analyses to include means and standard deviations for each of the individual variables. Analyses included a series of least squares regressions. These regressions were utilized to reveal what relationship, if any, existed between the various financial wellness categories and student success as measured by GPA.

## Definition of Key Terms

Financial Wellness - a holistic view of one's financial outlook, which includes traditional measures of income, financial literacy, debt, knowledge behaviors, and beliefs. (Ohio State University Office of Student Life, n.d.)

Financial Self-efficacy - level of confidence and perceived preparedness for financial matters (The Study on Collegiate Financial Wellness National Descriptive Report, n.d.)

Financial Socialization - level of parental engagement between parents and their children concerning financial education (The Study on Collegiate Financial Wellness National Descriptive Report, n.d.)

Financial Strain - presence of worry or stress due to finances (The Study on Collegiate Financial Wellness National Descriptive Report, n.d.)

Financial Optimism - outlook regarding one's financial future (The Study on Collegiate Financial Wellness National Descriptive Report, n.d.)

Grade Point Average (GPA) - the average numerical value of grades earned in coursework over a particular period of time (The Glossary of Education Reform, 2013)

## Summary

Student success is critical for the higher education community. To ensure that students are being effectively served, institutions and their agents must understand the various factors that affect student success. With the financial commitment that students must make to attend college and the transition to a new level of independence for most traditionally aged college students, it is important to explore students' financial wellness and its effect on student success. This study explored that relationship and considered various financial factors that may affect student success.

# CHAPTER 2

# LITERATURE REVIEW

To determine the impact of financial wellness on student success, one first should consider the definition of student success. This literature review will cover an in-depth exploration of student success. The review of student success will explore four measures: academic achievement, student advancement, persistence, and holistic development. In reviewing student success measures, it is also important to explore the factors that affect students' abilities to have successful outcomes for the various measures. This literature review groups these factors into three main categories: personal, social, and institutional. The concept of self-efficacy, presented by Albert Bandura (1977), can be used as a lens to help one understand the effects of personal, social, and institutional factors on student confidence and success. Thus, self-efficacy served as the theoretical framework for this study. The study aimed to determine the impact of financial self-efficacy and other financial wellness items on student success. With that, it is important to understand the general concept of self-efficacy and the more specific concept of financial self-efficacy. Along with financial self-efficacy, this literature review will also explore additional financial wellness measures and their relationship to financial self-efficacy.

## Student Success

At the center of higher education operations is the concept of student success. Student success is a term commonly used to describe academic success as measured by retention and GPA, among other measures (Arellanes et al., 2022). When exploring various studies on student success measures, one can find that what matters most in student success varies depending on who is being asked. Students may prefer to define and measure student success with different metrics than those used by institutions and practitioners. When exploring student success from the lens of the student, the parameters under which student success is gauged may not be exclusive to grades, GPA, and completion. Weatherton and Schussler (2021) reviewed various research articles to determine how student success was most commonly defined and what frameworks informed those definitions. They found that approximately 40% of the 52 articles reviewed in the analysis failed to define student success explicitly and that others defined it based on academic outcomes. Furthermore, the study examined the differences in how students defined success versus the institutions, in that students measured success by outcomes, such as the acquisition of various skills and the ability to network, as opposed to traditional measures, such as GPA and time to completion (Weatherton & Schussler, 2021). Similarly, Delahunty and O'Shea (2019) found that while grades and time of completion matter to students, other factors that are not easily measured, such as students' determination or resilience, also matter.

Some common threads, however, do emerge when exploring literature on how student success is determined. Through a review of the literature on student success, York et al. (2015) determined that student success was often tied to students' grades and grade point averages (GPAs). Additionally, the researchers discussed six components that make up a broader picture of student success. Those components include academic achievement, satisfaction, acquisition of skills and competencies, persistence, attainment of learning objectives, and career success (York et al., 2015). These components suggest that student success can be evaluated based on more than just the academic success measure of overall GPA. Cuseo (2017) offers a different but similar set of indicators for student success: retention, educational attainment, academic achievement, student advancement, and holistic development. York et al. (2015) use the term persistence to represent graduation rates and retention, the latter of which is specifically mentioned by Cuseo. Both studies also share that attaining certain skills can also be used to measure student success. York et al. identify the acquisition of skills, which refers to measurable outcomes that identify points of development, and Cuseo uses the term holistic development to describe a similar idea. In both studies, academic achievement is directly related to class grades. Although not as closely related as the other components, Cuseo's component of student advancement is related to the idea of career success presented by York et al. Cuseo's student advancement is used broadly as it refers to career goals and further educational endeavors, such as continuing to a higher degree program. When merging the two frameworks, the following measures will be explored in this review: academic achievement, student advancement, persistence, and holistic development.

## Student Success Measures

Academic achievement, student advancement, persistence, and holistic development are used within this literature review to group together various measures of student success. The following sections will explore these four categories and a few more commonly used measures falling under each category.

### *Academic Achievement*

With academic achievement in the form of GPA being a widely used metric of student success and a determining factor for degree completion, a large body of literature exists to determine what factors affect student success in the form of academic achievement, some of which will be discussed below in further detail. Academic advising, also sometimes referred to as academic success coaching, is one such factor that has been thoroughly studied and shown to have some effect on student success. Academic advising can cover a variety of various tasks, all centered around student advancement and success. Larson et al. (2018) completed a qualitative study in which several academic advising practitioners were asked questions to define academic advising. After completing an analysis of responses, the common theme was empowering students to navigate the academic environment successfully (Larson et al., 2018).

Although much research validates the importance of academic advising on student success, much of it is based on outcomes such as student satisfaction (Hawthorne et al., 2022; Vianden & Barlow, 2015). There is, however, a body of work focused on the effects of academic advising on GPA. Centralized advising, where professional advisors are located in one administrative unit rather than individual academic units, is a concept utilized for many undergraduate programs (Pardee, n.d). A connection has been established between student use of centralized advising and GPA, indicating that those who utilize centralized advising, particularly within the first few semesters, have higher GPAs than those who do not (Kot, 2014; Mu & Fosnacht, 2019). As in the case of the literature mentioned above, letter grades and GPA provide a clearly quantifiable and significant measure of student success.

*Student Advancement*

Student advancement, as determined by Cuseo (2017), represents post-degree completion success. Two main sides of student advancement presented by Cuseo will be explored in this review: post-graduation employment and educational advancement. One can explore various data points concerning post-college employment, including obtaining employment within a certain time frame, salary amount, and relatedness to a degree. What is often overlooked in the study of post-college employment is the degree to which employment matches the college training of graduates as well as the human capital factor or skills and technical abilities (Martini & Fabris, 2017). Students may be obtaining employment, but research is not prevalent regarding how closely related employment is to students’ specific areas of study, which should be a direct indication of the effectiveness of students' education.

Post-college employment rates help determine institutional effectiveness, as evidenced by the data collected by the National Center for Education Statistics (Cataldi et al., 2014). College can be a pricey endeavor for many students, as the Baccalaureate and Beyond study reveals that the average amount of debt accumulated by students who earned bachelor's degrees during the 2007-2008 school year was approximately $48,309 (Institute of Education Sciences, 2021). With students incurring high levels of debt, post-college earnings are an important factor to consider, and that factor is also tracked within the same study. Overall, the median earnings of college graduates are significantly higher than those without postsecondary education (Ma et al., 2019). Additionally, unemployment rates are lower for college graduates (Ma et al., 2019). These outcomes for college graduates make the case for a continued focus on college enrollment and completion. Because of the impacts that college attendance and graduation have on adult success, post-college success can be an extension of student success.

A four-year degree, however, is not always the culmination of students' educational endeavors; graduate and professional degrees offer more training and preparation. The Baccalaureate and Beyond Study (B&B), administered by the National Center for Education Statistics (2021), revealed that approximately 23% of 2015-2016 baccalaureate recipients continued to master's or doctoral degrees within a year of graduation. When looking at the profiles of students who continue to a graduate program, certain demographic characteristics seem to play a role in the likelihood of enrollment, such as Pell eligibility, a Federally funded need-based grant, with Pell grant recipients going on to enroll in master's degrees at a higher rate than those who are not recipients of Pell. Student success goes beyond undergraduate graduation for students seeking employment and opportunities that either require or are enhanced by graduate and professional degrees. It has implications leading to those additional educational opportunities.

When looking at student success from the lens of advancement to advanced degrees, some of the same factors that inhibit other success measures, such as grades and GPA, can also affect students' abilities to enroll in and complete advanced degrees. Underrepresented populations, those who are a part of the minority in higher education in terms of race, gender, and socioeconomic background, often face more barriers to college admittance and enrollment than their counterparts (Smith, 2020). The previously mentioned Baccalaureate and Beyond study revealed that those who identify as Black or Hispanic were less likely to complete a professional program or other doctoral level programs than those students identifying as White (Institute of Education Sciences, 2021). Kovacs (2022) found that applicants from underrepresented populations, those who identified as Black, Indigenous, People of Color, first-generation college students, or having a lower socioeconomic status, had lower GPAs and GRE scores, both of which help to determine a competitive edge in the graduate application process. In addition, students from underrepresented populations were more likely to provide an application that was late or incomplete. For these students, some of the setbacks are not directly related to or attributable to their undergraduate experience. However, GRE test scores and undergraduate GPA directly reflect preparation that occurred at the undergraduate level and are, therefore, associated with student success at the undergraduate and graduate levels (Kovacs, 2022). This discussion on student advancement makes a case for why degree completion should not be the end of the road when considering what success is for college students.

*Persistence*

Persistence and retention are similar concepts aimed at students' continuous enrollment. The Student Clearinghouse Research Center's Persistence and Retention Snapshot Report (2022) describes persistence as one's continuous enrollment at any institution instead of retention, which represents continuous enrollment at one institution. Effectively, persistence is more of a student-centered indicator, while retention is more of an institution-centered indicator (Chen et al., 2019). Graduation is a commonly used measure of student success, going hand in hand with the concept of persistence (Lord et al., 2013; Millea et al., 2018; Shoulders et al., 2020). Graduation indicates that a student has persisted all the way to the point of completion. When studying persistence and graduation, academic engagement has been found to have a significant relationship with persistence, as those who engage more with faculty have better retention and graduation rates (De Villiers & Werner, 2016; Hu & McCormick, 2012; Johnson & Stage, 2018).

As discussed above, academic advising has been found to have a positive relationship with academic achievement measures. Academic Advisors are also a useful tool when attempting to improve persistence. For instance, the timing of academic advising sessions has been shown to affect retention, with Yang et al. (2021) finding that students who received advising within their first term were more likely to be retained in their third term. Instead of faculty advising housed in individual departments, centralized advising calls for an office staffed with professional advisors to serve the general student population. Chiteng (2014) studied the impact of centralized advising on GPA and attrition. Chiteng found that students who participated in centralized advising during their second term were likelier to return for their second year. Persistence is paramount to student success, and academic advising is just one tool to ensure student success through persistence.

Student persistence, however, can be directly affected by college costs. Students who cannot afford college tuition often face no option but to drop out. There have also been indirect links between financial status and persistence (Letkiewicz, 2014; Robb et al., 2011; Robb, 2017). For example, students with loan debt are generally more likely to have college persistence issues than those without debt (Robb et al., 2011). Financial stress and negative financial behaviors have also been found to affect students' academic preparation and performance, which can lead to voluntary or involuntary unenrollment (Hogan et al., 2013).

*Holistic Development*

Holistic development refers to students' abilities to develop as a whole person, including emotional, physical, social, intellectual, and ethical (Cuseo, 2017). Bowden et al. (2021) explored five institutional and student success outcomes that go beyond the more common measures of educational attainment, academic achievement, and student advancement. Institutional reputation, student well-being, transformative learning, self-efficacy, and self-esteem are outcomes. Bowden's study found that student well-being, self-efficacy, and self-esteem can be used to measure holistic student development and success.

When looking at holistic development from the student perspective, Students' definitions of student success do not always match those commonly used institutional measures. For instance, Delahunty and O'Shea (2019) explored academic success as determined by students rather than from an institutional point of view. Based on this qualitative study, while grades and time of completion matter to students, other factors that are not easily measured, such as students' determination or resilience, also matter. Determination and resilience are student characteristics that can be acquired or polished within the college environment. Although many student-centered measures of success, such as those mentioned by Delahunty and O'Shea, are not easily quantifiable, they are still important to consider as they can point to some impact that college experiences have on students' lives.

Thus far, several student-centered holistic development measures have been discussed. The concept of thriving is yet another student-centered holistic development measures. Schreiner (2013) lays out several factors that indicate whether or not a student is thriving: learning engagement, time management, healthy connections, optimism about the future, and commitment to meaningful contributions to the world. These factors presented by Schreiner were derived from five elements of well-being: positive emotion, engagement, meaning, accomplishment, and positive relationships (Forgeard et al., 2011). Han and Rideout (2022) used Schreiner's concept of thriving to study students' sense of belonging and task value. This mixed methods study reviewed students' perceptions during their senior year and recollected their perceptions from their first year. Sense of belonging and task value was higher during the students' senior year than freshman year. Also, students with a higher sense of belonging were found to have higher academic achievement. This is an example of the interconnectedness of various student success measures. Sense of belonging falls into the space of holistic development, which can be viewed as a catch-all to describe any student success measures that do not fit into a more standard frame, such as GPA, completion time, retention, persistence, and class grades. The concepts discussed in this section, determination, resilience, thriving, and a sense of belonging, do not fit the traditional view of student success but are all used to give a more holistic view of it.

When considering various categories of holistic development, financial wellness, therefore, can also be included. Financial wellness in this context refers to one's attitudes and experiences concerning personal finance (Rehr et al., 2022). This study was centered on the concept of financial wellness and its relationship with student success. The financial wellness section of this literature review will discuss the connection between financial wellness and student success.

## Student Success Factors

To understand and effectively interpret student success measures, the factors that affect those measures must be considered. While some student success factors were introduced in the previous section, this section will go into more detail regarding those factors that closely relate to the purpose of this study. Han and Rideout (2022) introduced three categories of influence that can be explored as factors affecting student success: personal factors, social support, and institutional factors. Saunders-Scott et al. (2018) explored the effect of several factors on student success and found similar results that can be categorized in the same manner as Han and Rideout. The three success factor categories introduced through Han and Rideout are the three general areas of student success factors that will be explored in this literature review. This section will furthermore connect all three categories of student success factors to financial wellness. Financial wellness, as defined by the National Financial Educators Council (2022), is concerned with one's skills and knowledge of financial information that can be used to build individual confidence to fulfill personal, family, and community goals. This review will look specifically at student success factors that relate to and are affected by financial wellness.

### *Personal Factors*

Personal factors include those items that vary based on individual circumstances and are personal, including student backgrounds and individual characteristics (Edwards, 2011). Mental health is one such personal factor. Stress and mental health have been shown to affect retention and completion significantly (Auerbach et al., 2016; Kivlighan et al., 2021). Findings from Kilvighan et al. (2021) indicate the importance of counseling for students coping with mental health issues, including stress and distress, as it was found that students who participated in counseling saw greater increases in GPA. Financial stress can affect mental health, and its relationship with student success will be discussed in more detail later in the financial strain and stress subsection. This study on financial wellness and student success can be used to expand on stress and student success as it explored the dimension of stress that directly pertains to students' financial wellness.

Financial constraints are another personal factor that can significantly affect students' abilities to succeed. Financial constraints can lead students to delay college entry, which has been found to have a significantly negative relationship with college completion (Roksa & Velez, 2012). Niu and Tienda (2013) acknowledge that most students who delayed college entry had lower socio-economic statuses and lower college readiness. Other financial factors have also been linked to student success outcomes. As in the case of Denning et al. (2019) and Eng and Matsudaira (2021), the amount of grant aid students received was found to have a significantly positive relationship with degree completion. Federal Student Aid, funding offered by the Department of Education, is determined based on students' perceived needs (Federal Student Aid, n.d.). Students who are determined to be independent are those who do not need to provide parental information. Independent students who otherwise qualify for student aid are automatically offered more loans than those considered dependent (Federal Student Aid, n.d.). Per Denning's (2019) study, independent students were more likely to graduate than those who were considered dependent and are required to provide parental data due to the understanding that parents of dependent students should bear some level of responsibility in funding the students' education. Furthermore, Denning's study found that time to degree completion was reduced with increased borrowing availability for dependent students deemed independent. This is consistent with findings from other studies exploring the positive association between the amount of aid and college completion (Barr, 2015; Goldrick et al., 2016; Silva et al., 2023).

However, some prior research has contradicted those of Denning and Goldrick, which indicated that higher levels of cumulative aid had been negatively associated with college completion (Herzog, 2018; McKinney & Burridge, 2015; Yang & Venezia, 2020). This could be because many students who borrow maximum loan amounts come from economically disadvantaged backgrounds and, as a result, face more challenges in pursuing higher education. Students who take out the maximum amount of need-based aid often face challenges in paying for college, as the aid is often insufficient to cover all costs (McKinney & Burridge, 2015). This body of research concerning student aid amounts and success indicates that as the availability of funding generally increases, students' abilities to succeed also increase.

The financial constraints discussed above can arise from the manifestation of educational disadvantages. When exploring educational disadvantages, several personal factors should be considered. Focusing on the financial aspect of college, as is the focus of this study, those from certain backgrounds can face heightened financial barriers to success. For example, students from rural backgrounds tend to accrue more college debt, affecting their overall ability to pay for college and their stress levels (Rhodes, 2022). Similarly, students who identify as Black and Hispanic generally accrue more college debt than students of European descent (Institute of Education Sciences, 2021). Additionally, those from lower socioeconomic statuses tend to borrow more money to pay for college and have a more difficult time meeting their financial needs, which can cause college plans to stall (Baker et al., 2017). These and other characteristics that meet the definition of disadvantaged groups are personal factors that can inhibit students in many ways, including their financial well-being.

*Social Factors*

Social support has been found to have a relationship with various student behaviors and other characteristics, such as procrastination (Yang et al., 2023), depression (Yu et al., 2023), anxiety (Cantekin et al., 2022), mental health (Hu et al., 2022), and financial stress (Murray et al., 2013). When looking at social support for college students, three main sources emerge: family, peers, and teachers (Wen & Lin, 2012). For this literature review, we will only explore the family source of social support as the literature will show that this source of support is more directly related to the financial focus of this study.

The family unit is a particularly significant source of social support for young adults entering college as they navigate this new endeavor, higher education (Dorrance Hall et al., 2017). In general, more parental engagement, including family conversation and parental interactions with schools, has been found to positively affect student success (Deutshlander, 2017; Kiyama & Harper, 2018; Roksa & Deutschander, 2018). Roksa and Kinsey (2019) studied the relationship between emotional family support and student success and the relationship between family financial support and student success. Within this study, family emotional support was more closely tied to student success than financial support. An interesting dynamic was discovered regarding family financial support in that financial support was negatively associated with GPA for first-generation students, and no significant relationship existed for continuing-generation students. However, continuing-generation students with more family financial support were more likely to accumulate 24 credit hours within the first year. This same dynamic did not exist for first-generation students, as there was no significant connection between credit hour accumulation and family support. The family connection for college students can affect the many aspects of a student's college endeavors, including academic achievement, general student well-being, and, more specifically, financial well-being.

*Institutional Factors*

Institutional factors include characteristics of a given school that affect the student experience. This can include characteristics, including but not limited to faculty-to-student ratio or class size (De Paola et al., 2013; Diette & Raghave, 2015; Millea et al., 2018), institutional commitment (Lancaster & Lundburn, 2019), and college costs (Becker et al., 2023; Destin & Svoboda, 2018). The latter institutional characteristic, college cost, is particularly important to this study as it is directly related to the financial aspect of students' college experiences and will be discussed below in further detail.

Although college costs can vary from student to student within any institution, some institutions carry more of a financial burden for students than others. Students' cognitive abilities can be affected by concerns related to financial burdens associated with higher education (Destin & Svoboda, 2018). When determining the effect of college costs on student success, it gives a better perspective to look at students who have experienced a significant price difference during their enrollment. This price difference could be due to transfer, loss of scholarships, or other funding (Deming & Dynarski, 2009), or, as in the case of Conger and Turner (2017), a loss of in-state tuition. In the aforementioned study, a loss of in-state status for undocumented students caused a significant acceleration in dropout for some students and a significant decrease in degree attainment among those affected. The financial burden of college can prove too much. It can derail students' higher education plans if ample financial resources such as scholarships and other aid forms are unavailable.

## Theoretical Framework: Self-Efficacy

A theoretical framework summarizes concepts derived from tested knowledge into a synthesized structure (Kivunja, 2018). The theoretical framework is used to create a foundation for the research performed. Grant and Osanloo (2014) described the theoretical framework as a blueprint of sorts for research. The theoretical framework for this study was the concept of self-efficacy. As this literature review will go on to reveal, self-efficacy impacts individual behaviors and outcomes in many ways. This study specifically sought to understand the relationship between self-efficacy and student success.

To properly understand how to promote student success in a higher education setting effectively, it is important to understand basic psychological concepts and how those concepts tie into student success. Self-efficacy is one such concept, having its roots in psychology but affecting students and practitioners in education. Albert Bandura's definition of self-efficacy and its surrounding theory is the basis for this study. Bandura (1977) defines self-efficacy as the conviction that one can execute a given behavior, resulting in a certain outcome. He hypothesized that self-efficacy levels determine coping behavior, effort, and ability to sustain in the face of adversity (Bandura, 1977). The American Psychological Association's (2009) definition of self-efficacy is centered around an individual's beliefs in their abilities. At the heart of self-efficacy theory is that people's beliefs influence what they do (Resnick, 2018). This framework and the sources of self-efficacy discussed below provided the theoretical foundation for this study.

### Sources of Self-Efficacy

Within his theory of self-efficacy and through his research, Bandura (1977) provided four sources of influence for perceived self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and emotional and physiological states. Each of Bandura's four sources of self-efficacy has been demonstrated through research to affect self-efficacy in various situations, as evident by the literature presented below.

Mastery experience refers to a person's direct activities and exposure (Bandura, 1977). Bandura hypothesized that lived experiences help people understand their abilities to perform in similar situations in the future (Bandura, 1997). This is transferrable to various aspects of life, for instance, in Hoffmann and Plotkina's (2021) study on using past financial experiences to improve self-efficacy and financial planning. In that quantitative experimental study, the researchers found that asking participants to recall and analyze prior financial experiences helped to increase their confidence in their abilities to employ successful money management techniques.

Bandura (1977) identifies using others and their experiences as models or examples of vicarious experiences. Rather than using direct and hands-on experience to improve self-efficacy, vicarious experience is thought to improve self-efficacy by giving the subject a peek at a particular situation through the eyes or experience of someone else. In an educational setting, vicarious experience can be used to help students complete tasks that are new to them. When exploring vicarious experience, model-observer similarity must also be considered. Model-observer similarity hypotheses created by Schunk and Hanson (1985) state that the effects of vicarious experiences depend on perceived similarity between the subject and the individual from whom the vicarious experience is coming.

Verbal persuasion involves using conversation to improve self-efficacy (Bandura, 1977). Verbal persuasion can be described as social motivation or social encouragement (Lent et al., 2017). Unlike mastery experience and vicarious experience, there is no physical act or performance to boost self-confidence. Verbal persuasion can take the form of peer influence, as in the case of Dortch (2016), a teacher or instructor (Kanadi, 2017), subject matter experts (Jiang et al., 2019), or self-motivation (Nurwendah & Suyanto, 2019).

In Bandura’s (1977) model, emotional and physiological states refer to emotional arousal and its value concerning personal competencies. That value level is what determines the effect of emotional state on self-efficacy. Emotional state has been shown to affect self-efficacy significantly (Anstiss et al., 2020; Liu et al., 2022; Samson, 2014). When looking specifically at students, manipulating one’s emotional state through the introduction of positive or negative messaging has been shown to affect students' academic self-efficacy (Adrian Medrano et al., 2016). This helps to validate Bandura’s inclusion of emotional and physiological states within the sources of self-efficacy.

## Financial Wellness Measures

Bandura’s (1977) theory of self-efficacy and the four sources he presents offer a unique perspective to explore financial wellness and student success. This portion of the literature review will discuss the connections between Bandura’s four sources and the financial wellness parameters of the utilized survey instrument. As defined by Joo (2008), financial wellness includes financial satisfaction, the objective status of the financial situation, financial attitudes, and behavior that cannot be assessed through one measure. The Ohio State University Survey on Collegiate Financial Wellness utilized six measures to determine financial wellness. Those measures include financial self-efficacy, financial socialization, financial strain, financial optimism, positive financial behavior, and negative financial behavior (The Study on Collegiate Financial Wellness National Descriptive Report, n.d.). The aforementioned descriptive report offers descriptions for each financial wellness measure. This literature review will address four wellness measures used in the analysis for this proposed study: financial self-efficacy, financial socialization, financial strain, and financial optimism. Financial socialization refers to how parents engage students in financial learning opportunities (The Study on Collegiate Financial Wellness National Descriptive Report, n.d.). Financial strain refers to feelings of worry or stress levels related to finances (The Study on Collegiate Financial Wellness National Descriptive Report, n.d.). Financial optimism concerns students' attitudes regarding their financial futures (The Study on Collegiate Financial Wellness National Descriptive Report, n.d.). This study will focus on financial self-efficacy and its relationship with student success while considering the additional financial concepts of financial socialization, strain, and optimism.

## Financial Self Efficacy

The general concept of self-efficacy can be isolated to specific categories of the human experience. This study was primarily concerned with financial self-efficacy and whether a significant relationship links it to student success levels. Financial self-efficacy refers to an individual's confidence in making sound financial decisions and navigating various financial responsibilities (Noor et al., 2020). This definition closely mirrors the definition offered in the Study on Collegiate Financial Wellness National Descriptive Report mentioned above.

Generally, those with high levels of financial self-efficacy are more financially productive or engaged in more positive financial behavior than those with low financial self-efficacy (Amatucci & Crawley, 2011; Deenanath et al., 2019; Farrell et al., 2016). Financial self-efficacy has been positively associated with several positive financial behaviors, including retirement planning (Asebedo & Seay, 2018), increased saving and investment (Farrell et al., 2016), attainment of professional financial advice (Letkiewicz et al., 2014), and lower debt accumulation (Festa & Knotts, 2021). Financial self-efficacy has also been shown to have a mediating effect on the relationship between procrastination and negative financial behaviors (Gamst-Klaussen et al., 2019).

Colleges and universities have been tasked with the responsibility of improving financial literacy among students. Financial literacy is thought to positively influence self-efficacy and financial behavior, which is particularly important in student populations who are possibly incurring debt for the first time (Singh et al., 2019). College students who have been exposed to targeted financial education, specifically focused on debt management and decision-making, tend to have higher financial self-efficacy compared to those without targeted education (Brady et al., 2021; Salas-Velasco, 2022).

It is important to note that previous studies have found that while financial knowledge does have a positive influence on financial behavior, it alone does not guarantee positive financial behavior (Allgood and Walstad, 2013; Japelli & Padula, 2013). Financial knowledge is only one tool (Friedline & West, 2016). However, additional inputs are needed to boost self-belief or financial self-efficacy. These inputs can be derived from direct experience such as personal financial opportunities, indirect experiences derived from second-hand knowledge, socialization or conversation with other individuals who've had relevant experiences, and exploration of the effects of emotional state on behavior which will be discussed in further detail in the following sections.

In a higher education setting, financial self-efficacy in students has been linked to lower overall stress (Heckman et al., 2014; Lim et al., 2014). Additionally, student financial situations have been found to affect retention and overall student wellness (Baker & Montalto, 2019; Britt et al., 2017; Letkiewicz et al., 2014). The prior literature shows that financial self-efficacy reaches beyond financial health and influences overall well-being. Since financial self-efficacy has been shown to have a positive relationship with student well-being, it is important to understand what impacts student financial self-efficacy levels. A student's personal background can play a part in financial self-efficacy levels. Historically, underserved populations face many disadvantages, with financial self-efficacy being one area where these populations generally suffer. First-generation students have been shown to have lower self-efficacy levels than students whose parents have attended college (Rehr et al., 2022). African American students have also been found to have lower financial self-efficacy than their White counterparts (White et al., 2021). Student income levels have also been proven to be related to self-efficacy, with income levels and self-efficacy being positively related (Heckman & Grable, 2011). When looking at the three student characteristics above, we can see a significant relationship between students' socio-demographic characteristics and financial self-efficacy levels. As evident in this literature, financial self-efficacy plays a significant part in students' abilities to succeed.

## Financial Socialization

Family financial socialization theory is derived from the general concept of consumer socialization (Lebaron & Kelley, 2021). Regarding self-efficacy theory, financial socialization closely relates to verbal persuasion as a contributor to self-efficacy. Consumer socialization highlights the importance of various socialization agents in one's decision-making (Shim, 1996). As listed by Shim (1996), those agents include but are not limited to parents or families, peers, schools, and media. The basic premise of consumer socialization is that an individual's interactions with various agents will affect their decision-making. Financial habits and decision-making improve financial well-being and build on the foundation created by financial socialization (Sheng et al., 2022).

Family financial socialization theory looks specifically at the role of the family in consumer behaviors. Gudmunson and Danes (2011) completed a critical review of financial family socialization. They established a conceptual model based on the thesis that research on finance has historically overlooked the importance of family socialization in the general field of personal finance. Family financial socialization theory will add to the conversation about young adults' financial self-efficacy by establishing the significance of family in young adults' financial behaviors. By understanding the role of the family, researchers can then understand how other knowledge gained from the family unit informs student financial self-efficacy.

Financial socialization is particularly important in the lives of college students who are young adults as they have likely had little experience with financial management up to this point and are beginning to establish financial standards and behaviors (Montalto et al., 2019). Parental financial influence can be both implicit and explicit. Explicit communication refers to verbal communication between parents and children, while implicit communication refers to modeling behavior (Rudi et al., 2020). Explicit communication is more aligned with the concept of family socialization, although implicit communication can also be included in the concept of financial socialization. A positive association has been drawn between implicit parent communication and students' practice of the same behavior that they have observed (Angulo-Ruize & Pergelova, 2015). Explicit communication has been linked to positive financial behaviors in young adults, which include avoiding credit card debt (Webley & Nyhus, 2013) and making regular payments on debt (Smith & Barboza, 2014).

As expected, parental financial disclosure has been found to have a significantly positive association with students' financial attitudes (Kim & Torquati, 2019). Parental financial communication, both implicit and explicit, has also been found to have a positive effect on the financial self-efficacy of college students (Rudi et al., 2020). What may be a less obvious connection is the connection between family financial socialization and student success in college. Financial parenting has been shown to be important for children's success as they continue to gain independence and adulthood (Serido et al., 2010). As in the case of Sabri et al.'s study (2020), parents' financial influence is positively associated with students' GPAs. A review of the literature on family financial socialization revealed that more research is needed on the connection between it and student success.

## Financial Strain

Strain and stress are more emotionally and physiologically driven parameters of financial wellness and, therefore, closely related to Bandura's self-efficacy source of emotional and physiological states. Financial strain can also be linked to mastery experience as it directly reflects a student's financial situation. As stated above, emotional and physiological states contribute to self-efficacy when discussing self-efficacy theory. This section covers the relationship between financial strain, stress, and student success.

A significant body of research has emerged regarding the impact of financial strain and debt levels on students' mental health (Adams et al., 2016; Cadaret & Bennett, 2019; Jessop et al., 2020; Peltz et al., 2021). For instance, Adams (2016) found that perceived stress could explain the relationship between financial strain and psychological symptoms or mental health issues. In some cases, financial stress can also cause students to work more, which, in turn, has been associated with depressive symptoms (Cadaret & Bennett, 2019). Debt accumulation in the forms of student loans and credit cards can lead to psychological distress in young adults (Zhang & Kim, 2018). Student loan debt amongst public and private school college students has constantly increased over the past several years (NCES, 2022). This is cause for concern, given the links that have been drawn between this form of debt and young adults' psychological well-being.

When looking at credit card debt, several factors play a part in whether students use credit cards in a healthy way to build credit or in an unhealthy way by accumulating and consistently carrying debt. Students’ general attitudes toward the concept of credit, family socialization and model behavior, demographic characteristics, as well as employment status can play a part in whether and how students utilize credit cards (Zhu, 2019). Though both student loan and credit card debt have been found to have a negative impact on psychological well-being, credit card debt appears to be more detrimental to psychological health (Zhang & Kim, 2018). Additionally, students who carry debt from month to month are less likely to attain a bachelor’s degree when compared to students who do not own a credit card and those who do own a credit card but pay off the balance monthly (Andrews, 2021).

When looking further at the direct impact of financial strain on student success, existing research is not as robust, although financial stress and strain have been linked to lower academic performance. Britt et al. (2017) studied the relationship between financial stress and undergraduate student retention, as well as the relationship between student debt levels and retention. In this study, financial stress generally had a negative association with retention. Although some students choose not to return in subsequent semesters, financial stress can cause some students to reduce credit hours rather than drop out (Robb, 2017). Financial stress has also been negatively associated with another measure of student success, GPA (Britt et al., 2017). It should be noted that the relationship between financial stress and academic performance may vary when looking at different levels of stress. Academic performance is not as easily associated with financial stress for students who are only moderately stressed versus highly stressed (Baker et al., 2021). These findings suggest that there may be a need for a targeted focus on students with high financial stress, as these students were more likely to drop out.

## Financial Optimism

Although a reasonable amount of research is aimed at other financial wellness measures for college students, there is not much research framed around financial optimism. As with financial strain, financial optimism also speaks to the emotional state, a source of self-efficacy. From a general standpoint, it is known that financial optimists tend to have more favorable financial outcomes and engage in better financial behaviors than those who have a pessimistic financial viewpoint (Gielan, 2019). One of the contributing factors to financial optimism is family socialization, as family socialization has been positively associated with financial optimism (White et al., 2021).

Positive financial behavior is thought to be directly tied to financial confidence and optimism. However, without motivation to engage in positive financial behaviors, financial confidence may not result in positive financial behaviors. Sinnewe and Nicholson (2022) provide an example of this when establishing a positive association between marital status and positive financial behavior. This study found that those in committed relationships were more likely to focus on long-term financial goals than those who were single, with the partnership serving as motivation (Sinnewe & Nicholson, 2023).

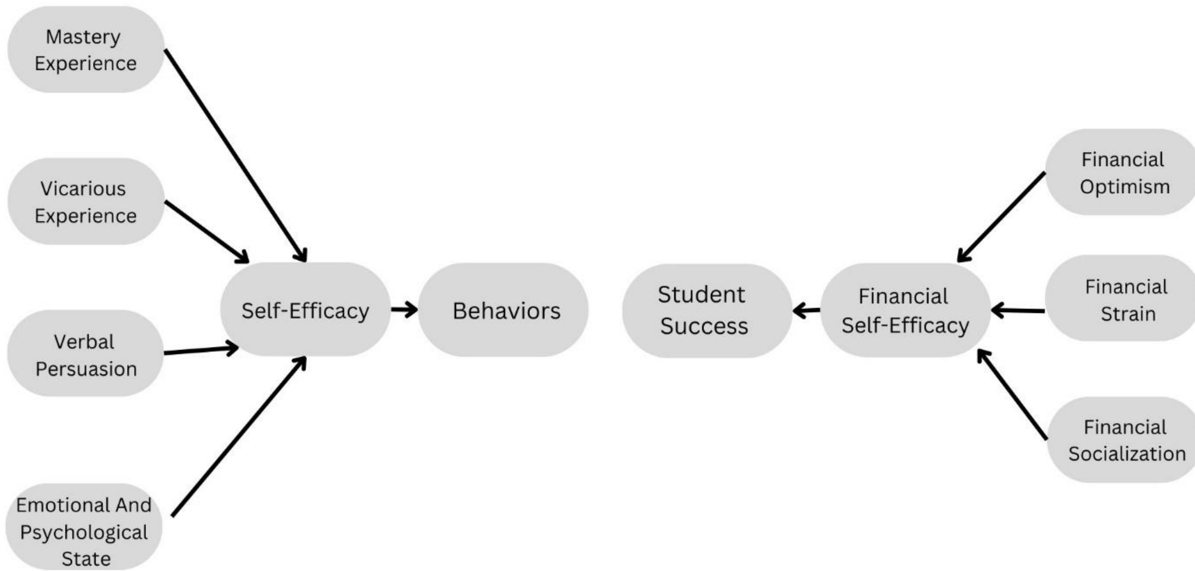
Additionally, financial fragility, which is concerned with one's ability to handle unexpected expenses, is negatively associated with financial optimism (Chhatwani & Mishra, 2021). When studied together, financial optimism and strain tend to have a negative association with each other (Geilan, 2019; Rehr & Regan, 2022; Rehr et al., 2022). While no literature could be found specifically linking financial optimism to student success, the inverse relationship between financial strain and optimism and the close relatedness of the two topics indicate the possibility of a positive relationship between financial optimism and student success. However, further research is needed to validate this idea.

## Conceptual Framework

This study sought to understand the impact of financial self-efficacy on student success. It was hypothesized that financial socialization, financial strain, and financial optimism come together to affect financial self-efficacy in the same way that mastery experience, vicarious experience, verbal persuasion, and emotional and physiological state come together to build one's general self-efficacy. Furthermore, just as Bandura theorized that self-efficacy affects behaviors in general, this study hypothesized that the same relationship exists when looking more specifically at financial efficacy and student success. Financial strain, optimism, and socialization are thought to funnel into financial self-efficacy and student success in the same way that the four sources funnel into self-efficacy and general behavior, creating a sort of mirror image between the more specific concept and the general concept from which it is derived (See Figure 1).

Figure 1

*Self-Efficacy and Behaviors versus Financial-self Efficacy and Student Success*




## Chapter Summary

Student success is paramount to the mission of any institution of higher education. This literature review covered several ways in which student success is measured. Understanding the factors affecting student success is necessary to ensure that students get what they need to achieve their educational goals. Self-efficacy is one such factor, as it points to a student's level of confidence in themselves, which has a direct impact on performance. General self-efficacy is needed to build students' self-confidence. This concept of self-efficacy can be broken down into sub-areas, such as financial self-efficacy, to be explored independently. While research on general self-efficacy and student success is prevalent, less has been established on the impact of financial self-efficacy and general financial wellness on student success. The financial self-efficacy of college students is important as this is a pivotal time in most students' lives and often the beginning of financial independence. This literature review has provided background on student success and financial wellness while making a case for this study that will contribute to the body of research on financial wellness and student success.

# CHAPTER 3

# METHODOLOGY

This chapter will provide a thorough overview of the methodology used in this study. It will provide information pertaining to the research design, participants, setting, data collection, and data analysis. The limitations, delimitations, and assumptions of this study are also included in this chapter.

## Statement of the Problem

College can create a challenge for students who are not only transitioning from one level of education to another but also transitioning from childhood to adulthood. Financially, college can be a significant undertaking for students and their families. Many students may be facing new financial challenges that they've not previously experienced. This can create additional pressure and adverse psychological conditions that threaten the well-being and success of students (Adams, 2016). Student well-being is paramount to student success in terms of advancement and goal attainment. Within the conversation of general well-being, student financial well-being and its effect on student success is often overlooked. However, with college often being a major financial undertaking, further research is needed on the connection between one's financial situation and the ability to succeed as a college student.

## Purpose Statement

The purpose of this quantitative study was to determine what impact, if any, financial self-efficacy has on student success. Bandura's (1977) theory of self-efficacy guided this study. In studying financial self-efficacy, the researcher sought to determine if financial socialization, strain, or optimism can be used to predict financial self-efficacy. Additionally, this study explored the impact of financial socialization, strain, and optimism on student success. For the purposes of this study, student success was measured by self-reported GPA. Through the completed analyses, the researcher sought to determine whether or not financial wellness impacts student success.

## Research Questions

This study explored undergraduate students' general perceptions and competencies related to financial subjects and the impact of those on their collegiate performance. Through a quantitative approach, this study addressed the following questions:

- What is the predictive effect of financial socialization, strain, and optimism on financial self-efficacy?
- What is the impact of financial self-efficacy on student success as measured by GPA?
- What are the impacts of financial socialization, strain, and optimism on student success as measured by GPA?

## Significance of the Study

This study sought to gain an understanding of the impact that financial wellness has on student success. For many traditional-aged students, college can be their first major financial undertaking. Although some students have assistance from their families to help cover college costs, they are ultimately responsible for paying all expenses. Along with funding a college education, traditionally aged students may face additional financial challenges while entering adulthood. This financial responsibility can cause added stress for students. This study was completed to help determine the impact financial responsibility and the associated stress have on students' abilities to succeed. Gaining a greater understanding of this impact can help to inform future higher education practices aimed at students' wellness, particularly financial wellness.

# Procedures

This study utilized quantitative deductive reasoning as the method of analysis. In particular, analysis included a series of least squares regressions, utilizing archival data. This procedure section will further discuss information pertaining to the research design, participants, setting, data collection and data analysis.

## Research Design

The researcher utilized a quantitative research design, as this type of research is aimed at understanding what factors or variables influence certain outcomes (Creswell & Creswell, 2018). Specifically, this study explored the relationship between financial wellness measures and student success. This study utilized an ex-post facto or after-the-fact research design through archival data. The analysis included a series of least squares regressions to answer the three research questions. Archival data was obtained from the 2020 Ohio State University Survey on Collegiate Financial Wellness (Ohio State University Office of Student Life, n.d.). The survey was administered in the spring semester of 2020 by the Ohio State University Center for the Study of Student Life and the College of Education and Human Ecology. The 2020 survey was the third administration of this survey, having been preceded by the 2014 and 2017 administrations. This survey included 60 questions concerning college students' financial attitudes, practices, and knowledge regarding financial subjects.

## Participants and Setting

The 2020 Ohio State University Survey on Collegiate Financial Wellness was a multi-institutional survey that included a random sample of students across 60 institutions and 85 campuses. Participating institutions included both public and private schools as well as two-year and four-year institutions. Of the 60 institutions participating, 38 were four-year public institutions, 13 were four-year private institutions, and nine were two-year public institutions. Students were selected to participate via a random sample. The survey was delivered to 236,112 students, of which 29,883 responded, indicating a response rate of approximately 12.7%. Of those who responded, 24,588 attended four-year public institutions, 23,601 attended private institutions, and 1,321 attended two-year public institutions (see Table 1).

Table 1

*Survey Participation by Institution Type*

| | Invited | Student Responses | Response Rate |
|---|---|---|---|
| 2-year institutions | 19,255 | 1,321 | 6.9% |
| 4-year public institutions | 193,256 | 24,588 | 12.7% |
| 4-year private institutions | 23,601 | 3,974 | 16.8% |
| All institutions | 236,112 | 29,883 | 12.7% |

Survey participants were mostly traditional-aged college students, with 87.6% of respondents being within the 18-23 age range (see Table 2). The majority of respondents, 68.7%, identified as White or European American, 11% as Asian American, 14.4% as Hispanic/Latinx, 8% as African American/Black or African descent, and 4.9% as either Middle Eastern/Arab American, Native American, Hawaiian/Pacific Islander, or did not disclose (see Table 3). These percentages combine to total more than 100%, as students could select all that applied.

Table 2

*Age of Respondents*

| | % | N |
|---|---|---|
| 18-23 | 87.6% | 26,187 |

| | | |
|---|---|---|
| 24-29 | 6.6% | 1,967 |
| 30-39 | 3.6% | 1,070 |
| 40-49 | 1.4% | 438 |
| 50-59 | 0.6% | 183 |
| 60 or older | 0.2% | 48 |
| Total | 100% | 29,883 |

Table 3

*Race and Ethnicity*

| | % | N |
|---|---|---|
| African American/Black or African Decent | 8.0 | 2,388 |
| Asian/Asian American | 11.0 | 3,279 |
| Hispanic/Latinx | 14.4 | 4,284 |
| Hawaiian/Pacific Islander | 0.7 | 21 |
| Native American/American Indian/Alaskan Native | 1.5 | 434 |
| Middle Eastern/Arab American | 1.4 | 423 |
| White or European American | 68.7 | 20,481 |
| Preferred Identity (in addition to or not listed above | 0.2 | 56 |
| Prefer not to disclose | 1.1 | 329 |
| Total | | 29,813 |

## Data Collection

The researcher obtained IRB approval from Georgia Southern University. The Ohio State University's Office of Student Life granted permission to use data via an online request system. Once permission was granted by the Ohio State University Office of Student Life, access was granted via a shared and encrypted drive to review raw de-identified data. Data was presented in an Excel spreadsheet. The spreadsheet contained all data points collected during the administration of the survey. The relevant data points for this study were extracted and converted to an SPSS file for analysis.

The researcher utilized GPA, self-efficacy mean, socialization mean, strain mean, and optimism means as variables from the archival data provided. Concerning GPA, respondents were asked to report using numbers only and rounding to two decimal places. The additional variables were mean scores based on each participant's responses to the various questions within each category and were provided within the data set. Each category, with the exception of financial optimism, contained a total of four questions. Financial optimism contained three questions. Responses were based on a four-point Likert scale with the following response options: strongly disagree, disagree, agree, and strongly agree (See Appendix A). For financial self-efficacy, socialization, and optimism, higher numbers indicate more positive outcomes. For financial strain, higher numbers indicate more negative outcomes. Table 4 contains composite means for all students who answered these questions.

Table 4

*Composite mean scores*

| Category | Score |
|---|---|

| | |
|---|---|
| Financial Self-Efficacy | 2.90 |
| Financial Socialization | 2.88 |
| Financial Strain | 2.65 |
| Financial Optimism | 2.77 |

Data Analysis

Each of the three research questions was addressed through a series of ordinary least squares regressions, which is used when needing to analyze a possible linear relationship between a dependent variable and independent variables (Cramer & Howitt, 2004). It does so by finding the best-fit line between independent variables and dependent variables (Lewis-Beck et al., 2004). Analysis included Pearson's Product-Moment correlation coefficients to determine the significance of individual independent variables. The researcher received de-identified data files in a Microsoft Excel document. All data from the original data set was exported to the Statistical Package for the Social Sciences (SPSS) and analysis was performed in SPSS. Any incomplete data points or erroneous points were removed through listwise deletion, completely omitting cases with any missing data relevant to this study (Schafer & Graham, 2002). Any cases missing a response or containing erroneous data for GPA, financial self-efficacy mean, financial socialization mean, financial strain mean, or financial optimism mean were omitted. Of the 29,833 respondents, 3,987 respondents, approximately 13.36%, were removed due to incomplete or erroneous data. The data points used as independent variables for questions one and three included the mean of socialization, the mean of strain, and the mean of optimism. Financial self-efficacy means served as the independent variable for research question two. Each of the dependent variables is a joint score resulting from multiple questions within each category. The mean score for each participant was provided with raw data from the Ohio State University Office of Student Life.

Research question one addressed whether or not financial socialization, strain, and optimism can be used to predict financial self-efficacy. The dependent variable for this question was the financial self-efficacy mean, which is described as one's confidence and level of preparedness pertaining to financial matters (Ohio State University Office of Student Life, n.d.) and is determined based on respondents' answers to several self-efficacy-related questions. The independent variables were socialization mean, strain mean, and optimism mean, which, similarly to self-efficacy, are determined based on respondents' answers to several questions related to each subject. The survey describes financial socialization as the degree to which parents engage with children on financial topics, financial strain as the presence of stress or worry resulting from financial situations, and financial optimism as one's attitude regarding the financial aspects of their future (Ohio State University Office of Student Life n.d.).

Research question two addressed the impact of financial self-efficacy on student success. The dependent variable for question two was student success. For the purpose of question two, student success was determined based on self-reported Grade Point Average (GPA). Respondents reported GPA as a raw number and then rounded to two decimals. Financial self-efficacy was the independent variable for this question.

Finally, research question three addressed the impacts of financial socialization, strain, and optimism on student success. Student success was the dependent variable for question three and, as in question two, was determined based on self-reported GPA. The independent variables were financial socialization mean, strain mean, and optimism mean.

The research also included descriptive statistics to include means and standard deviations. Cronbach's alpha was utilized to verify the reliability of financial socialization, strain, optimism, and financial self-efficacy means. Financial self-efficacy, socialization, and strain all had alpha values between 0.8 and 0.9. Financial optimism had an alpha value of 0.66. However, financial optimism had three data points compared to the four data points of each of the other groups (Ohio State University Office of Student Life, n.d). This could partially account for the lower alpha value as fewer data points can affect its strength. Scores between 0.8 and 0.9 are generally accepted as good. Scores within the 0.6 to 0.8 range are acceptable though not ideal while anything below 0.5 is unacceptable (Sheposh, 2023). Inferential statistics included a series of least squares regressions. These regressions were utilized to reveal what relationship, if any, exists between the various financial wellness categories and student success as measured by GPA.

## Limitations, Delimitations, and Assumptions

A limitation of this study was that data was limited to that of students who voluntarily participated, as there were no requirements for participation. Some respondents did not complete the survey in its entirety and were removed from the analysis. This study was limited in terms of diversity as 68% of respondents identified as White or European American, and 87% reported an age between 18 and 23. Additionally, the survey instrument utilized a self-reported GPA rather than official institution records. In addition to GPA, this study included financial self-efficacy, socialization, strain, and optimism as variables. While financial self-efficacy, strain, and socialization all generally had acceptable alpha scores, financial optimism had an alpha score of 0.66, indicating less-than-ideal reliability (Sheposh, 2023). Therefore, results should be evaluated with caution as a lower alpha score indicates a potential lack of inter-relatedness and consistency amongst items within the category (Tavakol & Dennick, 2011).

A delimitation of this study was that the data analyzed represented only one iteration of this survey and did not include previous administrations of the same survey instrument from 2014 and 2017. Additionally, although the Ohio State University Survey on Collegiate Wellness contains six financial wellness categories, this study only addressed four: financial self-efficacy, financial socialization, financial strain, and financial optimism. These four categories were selected based on their relatedness to the four sources of self-efficacy which are mastery experience, vicarious experience, verbal persuasion and emotional and physiological state. This study evaluated student success based on student GPA and did not include additional student success measures.

The researcher assumed that the sample was an accurate representation of the population in question. Additionally, it was assumed that participants answered questions honestly, as all data was self-reported. Finally, the researcher assumed that the survey instrument, the Ohio State University Survey on Collegiate Financial Wellness, exhibits reliability.

## Chapter Summary

By exploring the relationships among various financial wellness measures and the impact that those measures have on students' GPAs, this research will help inform the general body of research aimed at improving student success through a focus on student wellness. The financial focus of this study will help expand a scarce body of research aimed at student financial wellness and how this portion of students' lives interacts with their academic performance. The various financial wellness measures analyzed, financial self-efficacy, socialization, strain, and optimism, each focus on a specific portion of a student's financial picture, and this analysis will help to explore the variances between each category's impact on student success.

# CHAPTER 4

# RESULTS

The purpose of this study was to determine what impact, if any, financial wellness had on students' abilities to succeed. Specifically, this study explored the impact of financial self-efficacy, financial socialization, financial strain, and financial optimism on student GPA. Financial self-efficacy is described as the feeling of confidence related to financial matters (Ohio State University Office of Student Life, n.d.). Financial self-efficacy was thought to be influenced by each of the other financial wellness measures used as variables: financial socialization, financial strain, and financial optimism. Financial socialization refers to the degree to which parents and guardians actively provide learning opportunities concerning personal finances (Ohio State University Office of Student Life, n.d). Financial strain refers to feelings of stress pertaining to finances (Ohio State University Office of Student Life, n.d.). Finally, financial optimism refers to one's attitude regarding his or her personal financial future (Ohio State University Office of Student Life, n.d.).

Bandura's (1977) theory of self-efficacy was the theoretical framework guiding this study. The theory of self-efficacy asserts that an individual's behavior is influenced by several sources, which include mastery experience, vicarious experiences, verbal persuasion, and emotional and physiological state. Bandura (1977) defines self-efficacy as the conviction that one can execute a given behavior, resulting in a certain outcome. In Bandura's theory, each of the four aforementioned sources contributes to self-efficacy, which then influences behavior. Similarly, this research tested the hypothesis that financial socialization, financial strain, and financial optimism contribute to financial self-efficacy, which then influences student behavior in the form of academic achievement.

## Research Questions

The first research question addressed the relationship that financial wellness has with the other financial wellness measures of financial socialization, strain, and optimism. Research questions two and three addressed the impacts of each wellness measure on student GPA. The research questions for this study were as follows:

1. What is the predictive effect of financial socialization, strain, and optimism on financial self-efficacy?
2. What is the impact of financial self-efficacy on student success as measured by GPA?
3. What are the impacts of financial socialization, strain, and optimism on student success as measured by GPA?

## Study Overview

This research utilized archival survey data. The survey instrument for this study was the 2020 iteration of the Ohio State University Survey on Collegiate Financial Wellness (Ohio State University Office of Student Life, n.d.). This multi-institutional survey includes responses from 29,883 students across 60 institutions and 85 campuses, of which 25,986 were represented in this study after listwise removal and removal of data that did not fall within allowable metrics (e.x., GPA above 4.0). Additionally, respondents included students from both two-year and four-year institutions as well as public and private institutions. The survey included 60 questions concerning college students’ financial attitudes, practices, and knowledge regarding financial subjects. Each of the three research questions was addressed through a series of ordinary least squares regressions. Least squares regression analysis is appropriate when looking to analyze a possible linear relationship between a dependent variable and independent variables (Cramer & Howitt, 2004). A statistically significant linear relationship would indicate that as the independent variables increase or decrease, the dependent variable also increases or decreases, presenting some level of predictability. Data was analyzed using SPSS.

## Results

Descriptive statistics (means and standard deviations) for the variables of interest to the present study are located in Table 5 below. Each wellness variable was represented using a nominal scale of measurement: 1 represented the response of strongly disagree, 2 disagree, 3 agree, and 4 strongly agree. An average was used to represent responses to the four questions in each category of financial self-efficacy, socialization, and strain, and the three questions pertaining to financial optimism. GPA was reported using an interval scale and was self-reported. All responses were rounded to two decimal places, and responses falling outside of 0 and 4 were not included in the analysis. Pearson's Product-Moment correlation coefficients, Pearson's *r*, are presented in Table 6. Pearson's *r* was used to measure the linearity of the data. Student success, as measured by GPA, did not significantly correlate with any financial wellness variables, including financial self-efficacy, socialization, strain, and optimism. Nevertheless, all other correlations tied to research question one were statistically significant and in the expected direction, with financial strain inversely related to all other variables. Results specific to each research question will be explained in further detail below.

Table 5

*Zero-Order Bivariate Correlation Matrix of Financial Strain, Optimism, Socialization, Self-Efficacy, and GPA*

| Variable | *M* | *SD* | Min. | Max. | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Self-Efficacy | 2.90 | 0.64 | 1.00 | 4.00 | - | 0.25 | -0.42 | 0.48 | 0.06 |
| 2. Socialization | 2.87 | 0.81 | 1.00 | 4.00 | | - | -0.29 | 0.22 | 0.03 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3. Strain | 2.65 | 0.78 | 1.00 | 4.00 | | | - | -0.46 | -0.02 |
| 4. Optimism | 2.77 | 0.62 | 1.00 | 4.00 | | | | - | 0.01 |
| 5. GPA (Student Success) | 3.41 | 0.87 | 1.12 | 4.00 | | | | | - |

*Note*. *M* = Mean; *SD* = Standard Deviation; Min. = Minimum Value; Max. = Maximum Value. *N* = 25,986

Research Question One

*What is the predictive effect of financial socialization, strain, and optimism on financial self-efficacy?*

Financial self-efficacy was the dependent variable, while financial socialization, financial strain, and financial optimism were the independent variables for this regression. The results of the standard ordinary least squares regression concerning the first research question revealed a statistically significant omnibus model, $F(3,27839) = 3802.26$, $p < .001$, $R^2 = 0.291$. All three predictors—financial strain (-), socialization (+), and optimism (+) significantly predicted financial self-efficacy. The standardized regression coefficients were as follows: Socialization $\beta = 0.11$, t(25985) = 74.36, p < .01; Strain $\beta = -0.215$, t(25,985) = -36.78, p < .01; Optimism, $\beta = 0.360$, t(25,985) = 62.76, p < .01. The unstandardized regression coefficients of socialization, strain, and optimism are displayed in Table 6. The value of standardized coefficients will fall between -1 and 1. The stronger relationships are those whose $\beta$ value is closer to 1 or -1. A review of the standardized regression coefficients indicated that as financial socialization and optimism increased, and strain decreased, financial self-efficacy increased. Additionally, financial optimism was the strongest predictor of financial self-efficacy β=0.360, t(25,985) = 62.76, p < .01, whereas financial socialization was the weakest predictor of financial self-efficacy $\beta$=0.11, t(25985) = 74.36, p < .01 (See Table 6).

Table 6

*Regression Coefficients for Financial Socialization, Strain, and Optimism*

| Predictor | *b* | *S.E.* | *β* | *t* | *p* | $CI_{95\%}$ [a] |
|---|---|---|---|---|---|---|
| Socialization | 0.087 | 0.028 | 0.11 | 74.36 | < 0.001 | 0.079, 0.095 |
| Strain | -0.176 | 0.004 | -0.215 | -36.78 | < .0.001 | -0.185, -0.167 |
| Optimism | 0.371 | 0.006 | 0.360 | 62.76 | < 0.001 | 0.359, 0.382 |

*Key*. *b* = Unstandardized Regression Coefficient; *S.E.* = Standard Error; *β* = Standardized Regression Coefficient; *t* = *t*-statistic; *p* = Statistical Significance.

[a] 95% confidence interval of the unstandardized regression coefficients.

Research Question Two

*What is the impact of financial self-efficacy on student success as measured by GPA?*

For research question two, GPA was the dependent variable, and financial self-efficacy was the independent variable. A regression analysis was completed to evaluate this research question. Upon completion of analyses, the findings revealed that financial self-efficacy ($p$ = 0.29) was not a significant predictor of students' GPAs. As a result, the analysis concerning question two was halted, and no further results regarding research question two are included in the findings.

Research Question Three

*What are the impacts of financial socialization, strain, and optimism on student success as measured by GPA?*

GPA served as the dependent variable for research question three, while financial socialization, strain, and optimism served as the independent variables. A regression analysis was completed to test research question three. Regarding research question three, strain, optimism, and socialization ($p = 0.36$) were not significant predictors of students' GPAs. No linear relationship was identified. Similar to research question two, further results regarding research question three are not included due to the insignificance of the relationship.

## Chapter Summary

This chapter provided data regarding the relationships amongst various student wellness measures and the relationships that those wellness measures had with student success as measured by GPA. Data was obtained from the Ohio State University Office of Student Life Study on Collegiate Financial Wellness. A series of ordinary least square regressions were completed to explore these relationships.

A portion of this study yielded significant results while another portion of results were insignificant. Analysis revealed statistically significant relationships between financial self-efficacy and the financial wellness measures of financial socialization, financial strain, and financial optimism. Financial optimism was the strongest predictor of financial self-efficacy, while financial socialization was the weakest predictor. Analysis to test research question two revealed no statistically significant linear relationship between financial self-efficacy and student success as measured by GPA. Similarly, the analysis of question three revealed that the impact of financial socialization, financial strain, and financial optimism on student success, as measured by GPA, was not statistically significant.

# CHAPTER 5

## DISCUSSION AND IMPICATIONS

This study sought to gain a deeper understanding of financial wellness's impact on students' abilities to succeed at the collegiate level. Previous research has explored the relationships among various financial wellness measures such as self-efficacy, optimism, and socialization (Amatucci & Crawley, 2011; Deenanath et al., 2019; Farrell et al., 2016). Additionally, prior research has explored the relationship between financial wellness and overall stress among college students (Heckman et al., 2014; Lim et al., 2014; Murray et al., 2013; Rhodes, 2022). When looking at student success, the relationship with financial wellness has been explored primarily from the viewpoint of degree completion and retention rather than GPA (Barr, 2015; Goldrick et al., 2016; Roksa & Velez, 2012; Silva et al., 2023). This study specifically explored the GPA aspect of student success to determine what relationships, if any, exist between GPA and various financial wellness measures. Findings from this study can assist campus communities in better-serving students and improving financial literacy, financial wellness, and student success.

The conceptual model presented in Chapter Two illustrated a two-tiered relationship between financial wellness and student success, with the first tier representing a hypothesized linkage in which financial socialization, strain, and optimism fed into financial self-efficacy. The second tier represented the hypothesized relationship between financial self-efficacy and student success. This study affirmed the tier one portion of the hypothesis, indicating that financial socialization, strain, and optimism are all related to financial self-efficacy. Although this study did not confirm the suspected relationship between self-efficacy and student success, this chapter will explore potential reasons for this and discuss additional ways financial wellness can impact student success.

## Summary of Results

The researcher reviewed data from approximately 25,986 students from both two-year and four-year institutions and public and private institutions. Data was obtained from the 2020 iteration of the Ohio State University Survey on Collegiate Financial Wellness (Ohio State University Office of Student Life, n.d.). The overarching goal of this study was to determine what relationship, if any, exists between financial wellness and student success as measured by GPA. Before addressing that question, the researcher sought to understand the relationship among the various financial wellness measures, including financial self-efficacy, financial socialization, financial strain, and financial optimism. Following Bandura's (1977) model of self-efficacy, the researcher proposed that financial socialization, strain, and optimism feed into financial self-efficacy in the same way that mastery experience, vicarious experience, verbal persuasion, and emotional and physiological state influence general self-efficacy. What follows in Bandura's model is that self-efficacy then determines behavior. In the case of this study, the behavior being explored is student performance. GPA is the indicator that is used to measure student behavior.

The research questions for this study were:

1. What is the predictive effect of financial socialization, strain, and optimism on financial self-efficacy?
2. What is the impact of financial self-efficacy on student success as measured by GPA?

3. What are the impacts of financial socialization, strain, and optimism on student success as measured by GPA?

A series of least square regressions were conducted to answer these research questions. As hypothesized in research question one, financial socialization, strain, and optimism all had a statistically significant relationship with financial self-efficacy. Financial socialization and optimism were found to have a positive relationship with financial self-efficacy. Findings indicated an inverse relationship between financial self-efficacy and financial strain. Additionally, financial optimism was the strongest predictor of financial self-efficacy, whereas financial socialization was the weakest predictor of financial self-efficacy.

Research question two addressed the relationship between financial self-efficacy and GPA. It was hypothesized that financial self-efficacy would have a positive relationship with student GPA. The findings of this study did not support this hypothesis, as the model was not statistically significant. Similarly, results pertaining to question three, which addressed the impacts of financial socialization, strain, and optimism on GPA, were not statistically significant.

## Discussion

This study sought to understand the dynamics between various financial wellness measures and the relationships of those measures with student GPA. For this study, financial wellness encompassed four categories: self-efficacy, socialization, strain, and optimism. Research question one addressed the relationships among the various financial wellness measures. Socialization, strain, and optimism were expected to have a significant relationship with financial self-efficacy. Research question two then addressed the impact of financial self-efficacy on student success. Finally, research question three explored the remaining three wellness measures to determine if their combined relationship with student success differed from that with financial self-efficacy.

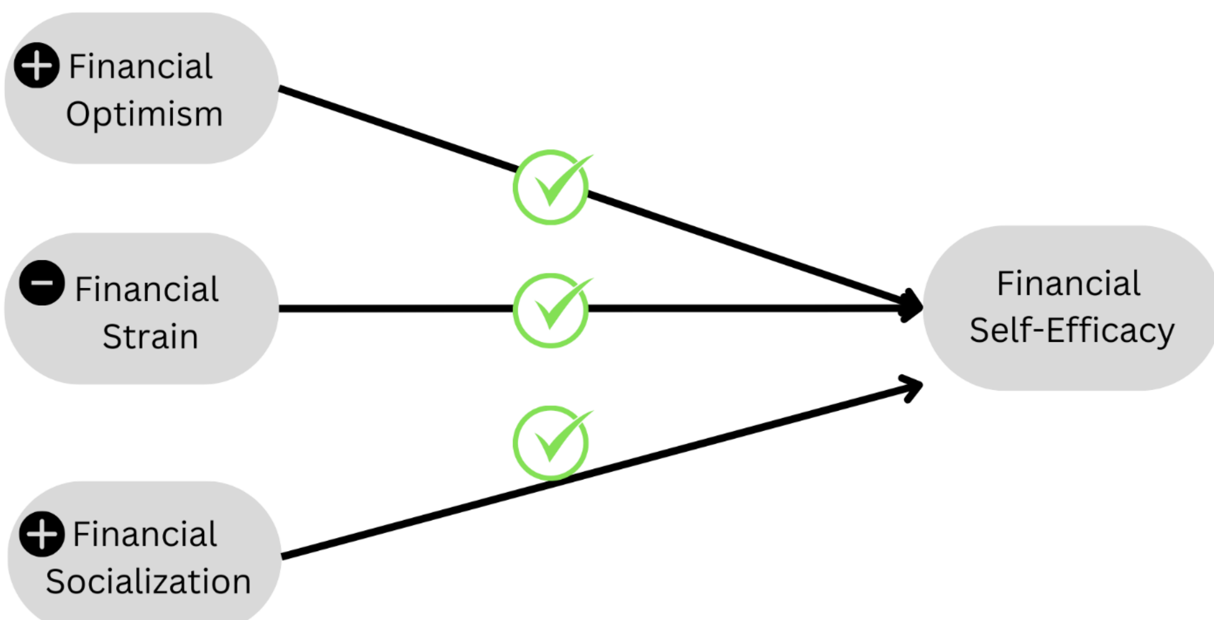
Research Question One

*What is the predictive effect of financial socialization, strain, and optimism on financial self-efficacy?*

Reviewing previous research, financial self-efficacy emerged as a crucial financial wellness measure. Financial self-efficacy is determined by gauging students' financial confidence and preparedness (Ohio State University Office of Student Life, n.d.). Research question one explored the relationships that financial socialization, strain, and optimism each had with financial self-efficacy. Each of the three wellness measures had a significant relationship with financial self-efficacy. Both financial optimism and socialization had a positive relationship with financial self-efficacy, while financial strain had a negative relationship with financial self-efficacy (See Figure 2). Results for each dependent variable will be discussed in further detail below.

Figure 2

*Research Question One Results*



Results indicated that financial optimism was the strongest predictor of financial self-efficacy. The Ohio State University Office of Student Life (n.d.) defines financial optimism as students' attitudes regarding their financial futures, whereas self-efficacy concerns financial confidence and preparedness. Alternatively, Noor et al. (2020) describe financial self-efficacy as an individual's confidence in making sound financial decisions and navigating various financial responsibilities. Based on the definitions provided, the two concepts are similar in that both are concerned with future outlook. The findings indicate that one's attitude regarding one's financial future may indicate one's confidence regarding the subject. While other factors could ultimately affect one's financial self-efficacy, this study showed that a strong level of financial optimism could be a good indicator of financial self-efficacy. However, additional research related to this relationship could not be found. Therefore, more research is needed to understand why it may be the strongest predictor of self-efficacy of the three concepts explored.

Although still significant, the relationship between financial socialization and financial self-efficacy was the weakest of the three explored in research question one. Financial socialization refers to how other individuals, particularly parents, engage students in financial learning opportunities (Ohio State University Office of Student Life, n.d.). It is important to note that although prior research is not plentiful, parental financial communication, both implicit and explicit, has previously been found to positively affect college students' financial self-efficacy (Rudi et al., 2020). Additionally, prior research has connected financial socialization to financial optimism, finding that financial socialization can be used to predict financial optimism levels (White et al., 2021). While that particular study did not explicitly include the concept of self-efficacy, it speaks to the potential interconnectedness among financial wellness measures.

Of the three relationships addressed with research question one, only financial strain had an inverse relationship with financial self-efficacy. Financial strain is described as feelings of worry or stress levels related to finances (Ohio State University Office of Student Life, n.d.). Financial strain is a particularly important concept for college students as they are often stepping into some level of financial responsibility and may face bills for the first time. The inverse relationship between financial strain and financial self-efficacy is intuitive and expected, given the negative nature of the concept of strain. The findings of this study confirmed that the negative nature of strain is counterproductive to financial self-efficacy. Looking further at the interconnectedness of various wellness measures, a limited body of prior research has found that financial strain also has an inverse relationship with financial optimism and can also be used as a predictor of financial optimism (Chhatwani & Mishra, 2021; Rehr & Regan, 2022; Rehr et al., 2022). Chhatwani & Mishra (2021) explored the relationship between financial literacy and financial fragility with financial confidence and found that financially literate individuals who exhibited high financial confidence were less likely to be financially fragile. For the aforementioned study, financial fragility was determined similarly to the way that financial strain was determined in the Ohio State University Survey on Collegiate Financial Wellness (Ohio State University Office of Student Life, n.d.). Additionally, Rehr and Regan (2022) utilized the Ohio State University Survey on Collegiate Financial Wellness to complete a comparative analysis of financial wellness between trans-spectrum students and cisgender students. Both groups of students exhibited an inverse relationship between strain and optimism.

This research focused on each wellness measure's relationship with financial self-efficacy. However, as evident in the discussion above, the strength of correlations between various wellness measures explored here indicates a strong and potentially symbiotic relationship among them all. A symbiotic relationship would support the idea that, beyond the relationships that socialization, strain, and optimism have with self-efficacy, each of these wellness measures may be dependent on the other wellness measures. These findings open the door to the previously explored idea that each of these wellness measures is possibly dependent on the others (Chhatwani & Mishra, 2021; Rehr & Regan, 2022; Rehr et al., 2022; White et al., 2021). For example, financial literacy had a negative relationship with financial fragility, with those who exhibited high financial literacy being less likely to have difficulty handling emergency expenses or exhibiting lower financial strain (Chhatwani & Mishra, 2021). Additionally, White et al. (2021) found that while financial knowledge and self-efficacy had a positive relationship within a general population sample, this relationship was not significant for African American students. However, financial self-efficacy increased for African American students when financial management was paired with financial knowledge as an independent variable (White et al., 2021). Further research is needed to explore the concept of dependency and possible causation. This will be discussed in more detail in implications for future research.

### Research Question Two

*What is the impact of financial self-efficacy on student success as measured by GPA?*

This study hypothesized that financial socialization, strain, and optimism help mold financial self-efficacy, influencing student behaviors. The particular student behavior here was academic performance as measured by GPA. Research question two aimed to determine if financial self-efficacy could predict GPA. The findings pertaining to research question two indicated that there was not a significant relationship between the independent variable of financial self-efficacy and the dependent variable of GPA (See Figure 3).

Figure 3

*Research Question Two Results*


Prior research is sparse on the relationship between financial self-efficacy and student success. However, financial self-efficacy has been previously linked to other wellness topics. As with the concept of general self-efficacy, it is thought that one's financial self-efficacy has a direct impact on financial behavior (Asebedo & Seay, 2018; Farrell et al., 2016; Festa & Knotts, 2021; Letkiewicz et al., 2014). For instance, Asebedo & Seay (2018) explored and confirmed a link between self-efficacy and retirement planning. Additionally, Farrell et al. (2016) found a positive relationship between financial self-efficacy and savings and investments. In addition to the relationships between financial self-efficacy and financial behaviors, higher financial self-efficacy has been linked to lower stress levels for college students (Heckman et al., 2014; Lim et al., 2014). These relationships indicate the importance of financial wellness on the general well-being of adults and the population in question for this study, college students.

Due to the use of archival data and the desire to limit the scope, this research did not go further into the behavioral aspect of the conceptual framework presented in Chapter Two to look at other behaviors that may be more closely related to financial wellness. Behaviors such as debt incurrence and accumulation of savings and investments have been associated with financial wellness measures, supporting the conceptual framework presented. For instance, the accumulation of savings and investments has been positively associated with self-efficacy, and debt incurrence has been found to have a negative relationship with self-efficacy (Farrell et al., 2016; Festa & Knotts, 2021). Based on Bandura's theory of self-efficacy (1977), behaviors are thought to result from self-efficacy directly. Although the studies mentioned above did not explore self-efficacy directly, the focus on financial behaviors indirectly ties in with the concept of self-efficacy. In the conceptual framework discussed, self-efficacy was thought to impact certain behaviors. Rather than explore the impact of self-efficacy on student success, specifically GPA, the aforementioned studies explored the impact of self-efficacy on various financially focused behaviors.

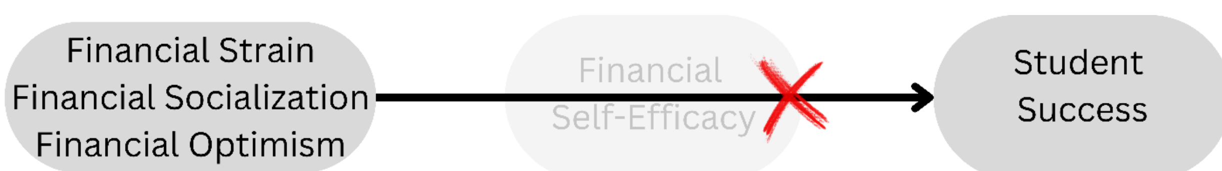
Research Question Three

*What are the impacts of financial socialization, strain, and optimism on student success as measured by GPA?*

Research question three utilized least squares regression with socialization, strain, and optimism as the independent variables. GPA was used as the dependent variable. The findings pertaining to research question three indicated that there was not a significant relationship. The combined model with the three independent variables could be used as predictors of GPA (See Figure 4).

Figure 4

*Research Question Three Results*




This study combined socialization, strain, and optimism into one model and did not explore each individually. Prior research with a similar model could not be located. The discussion below will explore the dynamics of each independent variable separately.

Prior research pertaining to the three financial wellness measures in research question three and student success is limited. No research could be located linking financial optimism to student success in the form of academic achievement, student advancement, or retention. However, what can be said is that financial optimists tend to have more favorable outcomes financially and engage in better financial behaviors than those with a pessimistic financial viewpoint (Gielan, 2019).

Looking specifically at socialization, parents' financial influence has previously been positively associated with students' GPAs (Sabri et al., 2020). No additional research pertaining to this particular relationship could be found. However, socialization has previously been linked to other positive outcomes. Financial parenting has been shown to be important for children's success as they continue to gain independence and adulthood (Serido et al., 2010). Additionally, prior studies have consistently shown a positive relationship between financial socialization and the financial behavior of college students (Angulo-Ruize & Pergelova, 2015; Smith & Barboza, 2014; Webley & Nyhus, 2013). For instance, prior studies have found that young adults who received explicit financial communication from parents were more likely to avoid credit card debt and make regular payments on debt (Smith & Barboza, 2014; Webley & Nyhus, 2013).

Although not plentiful, prior research on financial strain and student success is more prevalent than the other wellness measures in question three. Financial strain has been linked to lower academic performance (Becker et al., 2024; Destin & Svoboda, 2018). Financial strain and stress have also been linked to retention issues in college students (Britt, 2017). Additionally, financial strain can cause students to reduce the number of credit hours, leading to extended timeframes for degree completion (Robb, 2017). Although this study did not find a significant relationship between financial socialization, strain, optimism, and GPA, previous research has found that the likelihood of a significant relationship between financial strain and academic performance increases with the level of financial strain. Those with more moderate levels of financial strain did not necessarily exhibit lower levels of academic performance, while there did appear to be a significant relationship between financial strain and GPA for those with considerably high levels of strain (Baker et al., 2021).

While some examples of prior research utilizing GPA as the success measure have been provided, a few studies have utilized other measures, such as completion and retention, to determine the effect of financial wellness on student success. Although this particular study did not find a significant relationship between financial wellness and GPA, prior research has found significant relationships between financial wellness and other student success measures. These measures include overall student wellness, credit hour enrollment, and persistence (Baker & Montalto, 2019; Britt et al., 2017).

When using GPA to measure student success and a survey only soliciting current students, one must consider what is not captured in these results. Those students who cease enrollment are not considered here. Students with more debt and greater financial constraints are more likely to drop out than students with lower or no debt and fewer financial constraints (Britt et al., 2017; McKinney & Burridge, 2015). Therefore, GPA may not effectively capture the picture of student success as it relates to financial wellness for those students who face enrollment interruptions. Additionally, students who left college for other reasons are not considered here. For this study, the GPA variable utilized self-reported data. This could affect the results as it opens the door to potential inaccuracy of data. Furthermore, the GPA variable was reported as a raw number rather than a categorical variable. Breaking the variable down categorically and completing individual analysis on each category could have shown conditional relationships that this study could not capture. Considering all of the above factors that inhibit the effectiveness of GPA as the dependent variable makes it possible for future studies to consider other student success measures, such as persistence and holistic development measures discussed within the literature review. This will help practitioners capture a more complete picture of the relationship between financial wellness and student success and will be discussed in further detail below

## Implications for Future Research

As discussed in the literature review, the concept of student success encompasses many forms of measurement. There are student success outcomes that are easily quantifiable, such as GPA, completion rates, and class grades. Then there are other measures of success, such as those falling under holistic development, which look at student’s abilities to develop as a whole person, including emotionally, physically, and socially (Cuseo, 2017). This particular study only explored the success of the GPA measure. Falling under the category of academic achievement, GPA is an easily quantifiable and widely used measure of student success. Though based on the individual student, GPA is a more institutionally focused measure as it allows the institution to compare one student's success to another. On the contrary, holistic development measures, such as determination, resilience, thriving, time management, and learning engagement, consider the student’s perception of their own success. Holistic development measures are not easily quantifiable and offer a different perspective for the evaluation of student success.

### Alternative Student Success Measures

Across the board, research exploring the relationship between financial wellness and various student success measures is lacking. Although not plentiful, prior research has examined the relationship between student finances and persistence. Students with loan debt, particularly, are more likely to have persistence issues than students without debt (Letkiewicz, 2014; Robb, 2017; Robb et al., 2012). Further research is needed to explore the relationships that different forms of debt, such as student loans and credit cards, have with various student success measures, such as persistence and completion. By using a qualitative approach, future research can utilize interviews to understand student perceptions regarding the effects of loan debt on their abilities to maintain enrollment or complete their program of study in a timely manner.

There is an even greater gap in literature exploring the relationships between financial wellness and student success from a holistic development viewpoint. Qualitative approaches, such as interviews and focus groups, may best fit a study on the relationship between financial wellness and holistic development because holistic development is not easily quantifiable. The inability to quantify holistic development concepts definitively should not diminish its value to scholars or practitioners. Previous research has suggested holistic development concepts more closely align with students' definitions of success and satisfaction with institutions (Delahunty & O'Shea 2019). Students paying money in return for the service of education should feel as though institutions take their overall well-being and satisfaction seriously. Still, holistic development should bring a different perspective to the conversations surrounding improving student success. A holistic development focus could more closely capture the student's perspective on success and goal attainment.

While questions two and three of this study utilized various financial wellness measures as independent variables and GPA as the dependent variable, research question one utilized financial wellness concepts as both dependent and independent variables, with financial self-efficacy being the independent variable and socialization, strain, and optimism being the independent variables. The structure of question one can be altered to create a study with similar analysis but different implications. In a study focused on holistic development, financial wellness could be utilized as a holistic student success measure rather than a student success factor. General self-efficacy was identified earlier as a holistic development success measure (Bowden et al., 2021). Financial self-efficacy can be studied through a quantitative approach as a potential outcome or dependent variable, with other financial wellness measures such as strain, optimism, socialization, positive behavior, and negative behavior being the independent variables. While similar to the idea behind research question number one for this study, further research could break down each wellness measure into individual models and analyses, helping to better separate and identify the strengths of each relationship.

Further research should also include mixed methods studies. This approach can be used to capture various success measures, those that are easily quantifiable and those that are not. The idea of a symbiotic relationship among the various wellness measures was introduced within the discussion. A mixed methods study could be utilized to further explore this concept, by utilizing various financial wellness measures. The quantitative aspect could include regressions utilizing GPA, persistence, and thriving as dependent variables. Although thriving is a holistic development concept and not easily quantifiable, the concept can be approached similarly to the wellness measures of this study. With those measures, each one was determined based on a series of questions with responses on a Likert scale. Independent variables would include various financial wellness measures, including those not explored in this study. A mixed methods study utilizing multiple success measures will help practitioners determine if relationships exist among the various success measures. A qualitative study could explore perceptions regarding the relationships between various financial wellness measures and student success. By utilizing focus groups or interviews, one can obtain the opinions of the students related to how various wellness measures and student success measures resonate with them; holistic development measures, such as the concept of thriving, determination, and resilience, can be compared to those falling under academic achievement, student advancement, and persistence.

### Additional Financial Wellness Measures

In addition to the need for studies focused on other student success measures, future studies should also factor in additional aspects of financial wellness not covered in this study. This study only explored a select group of financial wellness categories (i.e., financial self-efficacy, financial socialization, financial strain, and financial optimism) and their relations to GPA. The Ohio State University Study on Collegiate Financial Wellness explored six financial wellness categories: financial self-efficacy, financial socialization, financial strain, financial optimism, positive financial behavior, and negative financial behavior. Two of these, positive financial behavior and negative financial behavior, were not explored in this study. Prior research explored the relationships between financial behavior and other wellness measures, such as socialization and literacy (Khurshid et al., 2024). However, there is a gap in the literature pertaining to the relationship between financial behavior and student success. Future research can include these measures and their relationship with student GPA to determine if there is any significance in those relationships.

In addition to these wellness measures, further research should be completed to explore other aspects of financial wellness, particularly financial literacy. Financial literacy, as described by Federal Student Aid, includes financial education to understand how to earn, manage, and invest money effectively (Federal Student Aid, n.d.). Disparities have been found when comparing self-reported financial literacy levels and measured literacy levels in college students, indicating that students may not be as knowledgeable as they assume they are (Davis et al., 2023). Institutions are required by the United States Department of Education to provide financial literacy opportunities to students. Because of the necessity to provide these opportunities, institutions should understand literacy's impact on student success. Exploration of the additional financial wellness measures provided in the Ohio State University Study on Collegiate Financial Wellness, as well as financial literacy, can provide a more complete picture of financial wellness's impact on student success.

### Demographically Focused Research

In addition to the gaps mentioned above regarding additional financial wellness, more can be done to investigate the relationship between financial wellness and student success. One area for future exploration is population-specific research, which can be used to identify relationships specific to certain groups. This study examined a sample representing the general population of college students in the United States. When looking at the problem of financial wellness from a critical theory perspective, we can begin to identify population-specific issues. As discussed in Chapter Two, students from various marginalized groups, such as those of Hispanic or African American descent, those from lower socioeconomic statuses, and those from rural environments, face particular challenges related to financial strain at a greater rate than their counterparts (Baker et al., 2017; Institute of Education Sciences, 2021; Rhodes, 2022). Future research should look at these and other marginalized groups specifically to determine if certain phenomena within these groups are not significant within other groups of students. A series of analyses breaking students into groups for comparison would achieve this and provide an angle on the relationship between student success and financial wellness that currently is not well represented in research. For a quantitative study with a critical theory focus, multivariate analysis of covariance (MANCOVA) would allow the researcher to determine if there are statistically significant differences between groups of students. A qualitative study could utilize focus groups or one-on-one interviews to better understand student perspectives regarding the influences of financial wellness on student success from a critical lens.

## Implications for Practice

The findings of this study revealed significant relationships between financial self-efficacy and socialization, strain, and optimism. However, it also revealed insignificance in the relationships between financial wellness measures and GPA. Nevertheless, there is still a need for practitioners to be aware of students' financial well-being.

### Overall Student Wellness

A greater focus on student wellness and mental health is needed to improve the problems identified in previous literature regarding the effects of financial strain on student mental health (Adams, 2016; Cadaret & Bennett, 2019; Zhang & Kim, 2018). Due to the inherent financial obligation, the potential for financial-related stress will exist to some extent for students. Mental health campus resources are vital to student success in general. By providing ample campus resources, students will be better prepared to tackle any mental health issues arising from various issues, including financial strain and stress. This creates an opportunity for financial aid practitioners to work with counselors and other relevant personnel on workshops and other efforts to improve student wellness.

The financial strain students face can cause some to turn to student loans. Student loans can help students obtain their educational goals but may come at a cost that may prove challenging later in life. While student loans are typically deferred until after college completion, these loans and the responsibility that comes with them can still add to financial strain, delay major life decisions, and hinder students' financial optimism (Zhang & Kim, 2019). Students who leave college with debt looming over their heads may face challenges with repayment and quality of life after college (Velez et al., 2019). The concept of loan forgiveness, though not new, is currently high on the list of important topics among legislators and their constituents. Loan forgiveness provides an opportunity for debt relief, aiming to improve students' quality of life post-college. This is evident when exploring the many legislative proposals being tracked by the National Association of Financial Aid Administrators (NASFAA), some of which address public service loan forgiveness improvements, student loan relief for Medicare and Social Security recipients, and deferment opportunities for young entrepreneurs (NASFAA, 2024). Some believe that loans should be forgiven. Others believe students should be responsible for the loans they have willingly taken out. What is evident is that the consumer cost of higher education is high. Students are leaving school, some with a degree and some without, but many cannot afford repayment. These loans can affect students' college endeavors and lives post-college. Practitioners at the institutional level must do their due diligence to understand what challenges students face financially and assist students with resources that will provide relief from financial strain in their current and future state. Furthermore, institutions and college systems should go beyond campus walls and work with legislators to identify long-term fixes to the problems of rising student loan debt amounts and college affordability. The hope is that these collaborative efforts will improve students' financial optimism while simultaneously reducing strain.

Although this study explored some of the more indirect aspects of financial wellness, several studies have also explored the very relevant role of students' ability to pay on their abilities to succeed. Students from disadvantaged backgrounds, such as those from rural areas and lower socioeconomic statuses, tend to have a more difficult time paying for college than their counterparts, and this causes their college plans to stall (Baker et al., 2017; Rhodes, 2022).

Students face financial barriers to success from the point that they enroll. Some cease to pursue their educational endeavors before one can even begin to look at the effect of financial wellness on GPA or other success factors that depend on the student's ability to meet the financial requirements of enrollment. For this reason, higher education institutions must focus on student financial wellness and the implications of financial wellness on student success. Institutions can achieve this by providing more opportunities for students to receive financial education and assisting students with securing financial assistance through grants and scholarships or student employment to reduce student loan borrowing and financial strain.

### Retention and Persistence

The necessity of financial literacy efforts in a college setting is directly related to the significance of the financial undertaking of paying for college. During every term at any given institution, this financial undertaking causes students to discontinue their educational endeavors because of their inability to pay. For students, this can change the trajectory of their futures. Students intending to reenroll upon improvements in their financial situations may never reenroll. Other students may eventually re-enroll but at the expense of going further into debt. Institutions should monitor and understand the trends concerning student financial strain, as lack of affordability can majorly impact attrition. An institution focused on retention must understand students' challenges, including financial issues.

### Financial Literacy

Institutions that administer Federal Student Aid are required to engage in financial literacy efforts. These efforts should be intentional and focused on helping students understand how to manage personal finances (U.S. Department of Education, 2019). Financial literacy efforts can be used to improve holistic student development and success. Bandura’s (1977) theory of self-efficacy showed that mastery experience, vicarious experience, verbal persuasion, and emotional and physiological state contribute to self-efficacy, which affects behavior. Practitioners should create a financial literacy curriculum and opportunities that utilize all sources of self-efficacy in some way. The use of financial case studies or worksheets requiring students to use their actual financial information and create budgets would provide a mastery experience. Providing opportunities for students to hear from recent college graduates or other individuals with relevant financial experience could provide vicarious experience. Verbal persuasion includes lectures or modules providing examples of good financial decision-making. Finally, to tie in emotional and physiological states, practitioners can focus on providing opportunities to learn techniques to improve emotional states when faced with financial stressors. The hope is that using all four sources will create a stronger foundation for students and generate positive behaviors amongst students by improving financial self-efficacy.

Practitioners need to focus on ways to increase student financial literacy. Though not explored within this study, financial literacy has been connected to other financial wellness categories, including financial optimism and strain (Chhatwani & Mishra, 2021; Zhang & Fan, 2022). Many institutions require an orientation class or an introduction to college class. Financial modules can be utilized as a form of financial socialization to provide more exposure and education on the various types of aid available to students and improve student financial wellness. Financial modules should include learning opportunities for students that fall under each source of self-efficacy, providing opportunities to directly apply personal mastery experiences, vicarious experiences of peers and instructors, financially motivating verbal persuasion, and awareness of emotional and physiological state. Alternative methods of information dissemination can also be used. Examples include financially focused campus events such as financial aid days, email blasts to students, and special student group presentations. The important factor is to ensure that institutions are providing educational opportunities that are mandatory for students. Financial aid practitioners are often so inundated with processing student aid that they do not have many opportunities to provide students with general financial literacy and financial wellness assistance. Financial aid administrators should consider empowering other campus partners, such as academic faculty, student ambassadors, and others, to get vital financial literacy information out to students.

## Summary

Financial wellness is a concept of particular importance for college students who are transitioning to adulthood and for the institutions that they attend. Due to the financial obligations created by attending college, institutions are, by default, tasked with assisting students with some aspects of financial wellness. Institutions administer financial aid and provide scholarships to students to reduce strain and increase students’ ability to pay. Along with offering financial assistance to students, institutions should also provide some level of financial literacy and feel a sense of responsibility to help students in their financial wellness journeys. Findings from research question one demonstrated an interconnectedness among financial wellness measures and can contribute to the body of research on college students' financial wellness. These findings confirmed some of the hypotheses behind the previously presented conceptual framework. This framework aimed to establish the similarity of Bandura’s self-efficacy model to a financial self-efficacy model, with financial socialization, strain, and optimism being utilized as the sources of financial self-efficacy. While this study did not show a relationship between financial wellness and the particular student success measure of GPA, financial wellness should still be explored through further research and considered when looking at overall student wellness and success. This will help practitioners ensure they provide students with the resources needed to fulfill their educational goals and become productive citizens.

# REFERENCES

Adams, D. R., Meyers, S. P., & Beidas, R. S. (2016). The relationship between financial strain, perceived stress, psychological symptoms, and academic and social integration in undergraduate students. *Journal of American College Health*, *64*(5), 362–370. https://doi.org/10.1080/07448481.2016.1154559

Adrián Medrano, L., Flores-Kanter, E., Moretti, L., & Leandro Pereno, G. (2016). Effects of induction of positive and negative emotional states on academic self-efficacy beliefs in college students. *Psicologia Educativa*, *22*(2), 135–141. https://doi.org/10.1016/j.pse.2015.03.003

Allgood, Sam & Walstad, William. (2013). Financial literacy and credit card behaviors: A cross-sectional analysis by age. *Numeracy*. https://doi.org/6. 10.5038/1936-4660.6.2.3.

Amatucci, F. M., & Crawley, D. C. (2011). Financial self-efficacy among women entrepreneurs. *International Journal of Gender and Entrepreneurship*, *3*(1), 23–37. https://doi.org/10.1108/17566261111114962

Angulo-Ruiz, F., & Pergelova, A. (2015). An empowerment model of youth financial behavior. *Journal of Consumer Affairs*, 49, 550 –575. http://dx.doi.org/10.1111/joca.12086

Andrews, B. D. (2021). College costs and credit cards: How student credit card use influences college degree attainment. *Research in Higher Education*, *62*(6), 885–913. https://doi.org/10.1007/s11162-020-09622-8

Anstiss, P. A., Meijen, C., & Marcora, S. M. (2020). The sources of self-efficacy in experienced and competitive endurance athletes. *International Journal of Sport and Exercise Psychology*, *18*(5), 622–638. https://doi.org/10.1080/1612197x.2018.1549584

Arellanes, J. A., Noël-Elkins, A., & Friberg, J. (2022). Is student success an outcome or process?: A student-led definition and description. *College Student Journal*, *56*(4), 411–421.

Asebedo, S. D., & Seay, M. C. (2018). Financial self-efficacy and the saving behavior of older pre-retirees. *Journal of Financial Counseling and Planning*, *29*(2), 357-368. https://doi.org/10.1891/1052-3073.29.2.357

Astin, A. W., & Astin, H. S. H. (2015). Achieving equity in higher education: The unfinished agenda. *Journal of College and Character*, *16*(2), 65-74. https://doi.org/10.1080/2194587X.2015.1024799

Atuahene, F. (2021). Predicting the academic success of minority male students in a public 4-year institution in the USA. *Journal of African American Studies*, *25*(1), 29–51. https://doi.org/10.1007/s12111-020-09512-4\

Auerbach, R. P., Alonso, J., Axinn, W. G., Cuijpers, P., Ebert, D. D., Green, J. G., Hwang, I., Kessler, R. C., Liu, H., Mortier, P., Nock, M. K., Pinder-Amaker, S., Sampson, N. A., Aguilar-Gaxiola, S., Al-Hamzawi, A., Andrade, L. H., Benjet, C., Caldas-de-Almeida, J. M., Demyttenaere, K., Ruffaerts, R. (2016). Mental disorders among college students in the World Health Organization World Mental Health Surveys. *Psychological Medicine*, *46*(14), 2955–2970. https://doi.org/10.1017/S0033291716001665

Baker, A. L., & Montalto, C. P. (2019). Student loan debt and financial stress: Implications for academic performance. *Journal of College Student Development*, *60*(1), 115–120. https://doi.org/10.1353/csd.2019.0008

Baker, A. R., Andrews, B. D., & McDaniel, A. (2017). The impact of student loans on college access, completion, and returns. *Sociology Compass*, *11*(6), 1-11. https://doi.org/10.1111/soc4.12480

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychology Review, 84(2)*, 191-215. https://doi.org/10.1037/0033-295x.84.2.191

Barr, A. (2015). From the battlefield to the schoolyard: The short-term impact of the Post-9/11 GI Bill. *The Journal of Human Resources*, *50*(3), 580–613.

Baumeister, R. F., & Leary, M. R. (2017). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Interpersonal Development*, 57-89. https://doi.org/10.4324/9781351153683-3

Beattie, I. R., & Thiele, M. (2016). Connecting in class? College class size and inequality in academic social capital. *Journal of Higher Education*, *87*(3), 332–362. https://doi.org/10.1353/jhe.2016.0017

Becker, K. L., Safa, R., & Becker, K. M. (2023). High-priced textbooks' impact on community college student success. *Community College Review*, *51*(1), 128–141. https://doi.org/10.1177/00915521221125898

Bowden, J. L.-H., Tickle, L., & Naumann, K. (2021). The four pillars of tertiary student engagement and success: A holistic measurement approach. *Studies in Higher Education*, *46*(6), 1207–1224. https://doi.org/10.1080/03075079.2019.1672647

Brady, S., Miller, J., Balmuth, A., D'Ambrosio, L.,A., & Coughlin, J. F. (2021). Factors contributing to the financial self-efficacy of student loan borrowers. *Journal of Financial Counseling and Planning, 32*(3), 493-506. https://doi.org/10.1891/JFCP-19-00067

Britt, S. L., Ammerman, D., Barrett, S. E., & Jones, S. B. (2017). Student loans, financial stress, and college student retention. *Journal of Student Financial Aid*, *47*(1), 27-37. https://doi.org/10.55504/0884-9153.1605

Cadaret, M. C., & Bennett, S. (2019). College students' reported financial stress and its relationship to psychological distress. *Journal of College Counseling*, *22*(3), 225–239. https://doi.org/10.1002/jocc.12139

Cantekin, Ö. F., Esen, İ., Taşbaş, F. R., & Arpaci, F. (2022). The impact of perceived social support on undergraduate students' level of anxiety during COVID-19 pandemic. *Social Work Review / Revista de Asistenta Sociala, 3*, 91–104. https://doi.org/10.1186/s40359-023-01218-y

Carey, M. P., & Forsyth, A. D. (2009). Self-efficacy teaching tip sheet. *American Psychological Association*. https://www.apa.org/pi/aids/resources/education/self-efficacy

Cataldi, E.F., Siegel, P., Shepherd, B., & Cooney, J. (2014). Baccalaureate and beyond: A first look at the employment experiences and lives of college graduates, 4 Years On (B&B:08/12) (NCES 2014-141). *National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.* http://nces.ed.gov/pubsearch.

Chen, X., Elliott, B.G., Kinney, S.K., Cooney, D., Pretlow, J., Bryan, M., Wu, J., Ramirez, N.A., & Campbell, T. (2019). *Persistence, retention, and attainment of 2011–12 first-time beginning postsecondary students as of spring 2017 (First Look) (NCES 2019-401)*. U.S. Department of Education. National Center for Education Statistics. https://nces.ed.gov/pubsearch.

Chhatwani, M., & Mishra, S. K. (2021). Financial fragility and financial optimism linkage during COVID-19: Does financial literacy matter? *Journal of Behavioral and Experimental Economics, 94(*2021), 1-5. https://doi.org/10.1016/j.socec.2021.101751

Chiteng Kot, F. (2014). The impact of centralized advising on first-year academic performance and second-year enrollment behavior. *Research in Higher Education*, *55*(6), 527–563. https://doi.org/10.1007/s11162-013-9325-4

Conger, D., & Turner, L. J. (2017). The effect of price shocks on undocumented students' college attainment and completion. *Journal of Public Economics, 148*, 92–114. https://doi.org/10.1016/j.jpubeco.2017.02.006

Cramer, D., & Howitt, D. (2004). The Sage dictionary of statistics: A practical resource for students in the social sciences. In *Sage eBooks*. http://ci.nii.ac.jp/ncid/BA67558499

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications, Inc.

Cuseo, J.,7 (2007, May). *The big picture.* National Resource Center for The First-Year Experience® and Students in Transition, University of South Carolina. https://sc.edu/nrc/system/pub_files/ES_4-5_May07.pdf

Davis, B. J., Richardson, D. P., & Seligman, J. S. (2023). Assessing the relative need and demand for financial education programs: A case study of graduate students. *Financial Services Review, 31*(2/3), 133–150. https://doi.org/10.61190/fsr.v31i2/3.3531

Deenanath, V., Danes, S. M., & Jang, J. (2019). Purposive and unintentional family financial socialization, subjective financial knowledge, and financial behavior of high school students. *Journal of Financial Counseling and Planning, 30*(1), 83–96. https://doi.org/10.1891/1052-3073.30.1.83

Delahunty, J., & O'Shea, S. (2019). "I'm happy, and I'm passing. That's all that matters!": Exploring discourses of university academic success through linguistic analysis. *Language & Education: An International Journal, 33*(4), 302–321. https://doi.org/10.1080/09500782.2018.1562468

Deming, D., & Dynarski, S. (2009). *Into college, out of poverty? Policies to increase the postsecondary attainment of the poor.* National Bureau of Economic Research Working Paper No. 15387. https://www.nber.org/papers/w15387

Denning, J., Marx, B., & Turner, L. (2019). ProPelled: The effects of grants on graduation, earnings, and welfare. *American Economic Journal: Applied Economics, 11*(3), 193–224. https://doi.org/10.1257/app.20180100

De Paola, Maria & Ponzo, Paola & Scoppa, Vincenzo & Ponzo, Michela. (2013). Class size effects on student achievement: heterogeneity across abilities and fields. *Education Economics. 21*(2), 135-153. https://doi.org/10.1080/09645292.2010.511811.

Destin, M., & Svoboda, R. C. (2018). Costs on the mind: The influence of the financial burden of college on academic performance and cognitive functioning. *Research in Higher Education, 59*(3), 302–324. https://doi.org/10.1007/s11162-017-9469-8

Deutschlander, D. (2017). Academic undermatch: How general and specific cultural capital structure inequality. *Sociological Forum, 32*, 162–185. https://doi.org/10.1111/socf.12322

De Paola, M., Ponzo, M., & Scoppa, V. (2013). Class size effects on student achievement: Heterogeneity across abilities and fields. *Education Economics, 21*(2), 135–153. https://doi.org/10.1080/09645292.2010.511811

De Villiers B., & Werner A. (2016). The relationship between student engagement and academic success. *Journal for New Generation Sciences*, *14*(1), 36–50. https://doi.org/10.10520/EJC-6ce55e9d0

Diette, T. M., & Raghav, M. (2015). Class size matters: Heterogeneous effects of larger classes on college student learning. *Eastern Economic Journal*, *41*(2), 273–283. https://doi.org/10.1057/eej.2014.31

Dorrance Hall, E., McNallie, J., Custers, K., Timmermans, E., Wilson, S. R., & Van den Bulck, J. (2017). A cross-cultural examination of the mediating role of family support and parental advice quality on the relationship between family communication patterns and first-year college student adjustment in the United States and Belgium. *Communication Research*, *44*(5), 638–667. https://doi.org/10.1177/0093650216657755

Dortch, D. (2016). The strength from within: A phenomenological study examining the academic self-efficacy of African American women in doctoral studies. *The Journal of Negro Education*, *85*(3), 350-364.

D'lima, G. M., Winslet, A., & Kitsantas, A. (2014). Ethnic and gender differences in first-year college students' goal orientation, self-efficacy, and extrinsic and intrinsic motivation. *The Journal of Educational Research*, *107*(5), 341–356 https://doi.org/10.1080/00220671.2013.823366

Edwards, P. (2011). *The personal and institutional dimensions of success for low-income students: Implications for collaboration between academic affairs and student affairs*. (Order No. 3472240) [Doctoral dissertation, Mercer University]. ProQuest Dissertations & Theses Global.

Eng, A., & Matsudaira, J. (2021). Pell grants and student success: Evidence from the universe of federal aid recipients. *Journal of Labor Economics*, *39*, S413–S454. https://doi.org/10.1086/712556

Farrell, L., Fry, T. R. L., & Risse, L. (2016). The significance of financial self-efficacy in explaining women's personal finance behaviour. *Journal of Economic Psychology*, *54*, 85–99. https://doi.org/10.1016/j.joep.2015.07.001

Federal Student Aid (n.d.). Retrieved October 24, 2020, from https://studentaid.gov/understand-aid/eligibility/requirements

Federal Student Aid (n.d.). Retrieved May 6, 2024 from https://fsapartners.ed.gov/knowledge-center/library/functional-area/Financial%20Literacy

Festa, M. M., & Knotts, K. G. (2021). Self-leadership, financial Self-efficacy, and student loan debt. *Journal of Financial Counseling and Planning*, 32 (2), 242-251. https://doi.org/10.1891/jfcp-18-00054

Forgeard, M., Jayawickreme, E., Kern, M. & Seligman, M. (2011). Doing the right thing: Measuring wellbeing for public policy. *International Journal of Wellbeing*, *1*(1), 79-106. doi:10.5502/ijw.v1i1.15

Friedline, Terri & West, Stacia. (2016). Financial education is not enough: Millennials may need financial capability to demonstrate healthier financial behaviors. *Journal of Family and Economic Issues, 37*(4), 649-671. https://doi.org/10.1007/s10834-015-9475-y.

Gamst-Klaussen, T., Steel, P., & Svartdal, F. (2019). Procrastination and personal finances: Exploring the roles of planning and financial self-efficacy. *Frontiers in Psychology*, *10,* 1-11. https://doi.org/10.3389/fpsyg.2019.00775

Gielan, M. (2019). *The financial upside of being an optimist*. Harvard Business Review Digital Articles. https://hbr.org/2019/03/the-financial-upside-of-being-an-optimist

Goldrick-Rab, S., Kelchen, R., Harris, D. N., & Benson, J. (2016). Reducing income inequality in educational attainment: Experimental evidence on the impact of financial aid on college completion. *American Journal of Sociology*, *121*(6), 1762–1817. https://doi.org/10.1086/685442

Grant, C., & Osanloo, A. (2014). Understanding, selecting, and integrating a theoretical framework in dissertation research: creating the blueprint for your “house”. *Administrative Issues Journal: Education, Practice & Research*, *4*(2), 12–26. https://doi.org/10.5929/2014.4.2.9

Great Schools Partnership. (2013). *Grade point average definition*. The Glossary of Education Reform. https://www.edglossary.org/grade-point-average/

Gudmunson, C. G., & Danes, S. M. (2011). Family financial socialization: Theory and critical review. *Journal of Family and Economic Issues*, *32*(4), 644-667. http://dx.doi.org/10.1007/s10834-011-9275-y

Han, B., Rideout, C. (2022). Factors Associated with university students’ development and success: Insights from senior undergraduates. *Canadian Journal for the Scholarship of Teaching and Learning*, *13*(1), 1–19. https://doi.org/10.5206/cjsotlrcacea.2022.1.10801

Hawthorne, M. J., Zhang, A., & Cooper, A. (2022). Advising undergraduate students: An exploration of how academic advising impacts student success. *Research in Higher Education Journal*, *41*, 1-10. https://files.eric.ed.gov/fulltext/EJ1347870.pdf

Heckman, S. J., & Grable, J. E. (2011). Testing the role of parental debt attitudes, student income, dependency status, and financial knowledge have in shaping financial self-efficacy among college students. *College Student Journal*, *45*(1), 51-64. https://doi.org/https://www.projectinnovation.biz/csj_2006.html

Heckman, S., Lim, H., & Montalto, C. (2014). Factors related to financial stress among college students. *Journal of Financial Therapy*, *5*, 19–39. https://doi.org/10.4148/1944-9771.1063

Hen, M., & Goroshit M. (2014). Academic procrastination, emotional intelligence, academic self-efficacy, and GPA: A comparison between students with and without learning disabilities. *Journal of Learning Disabilities*, *47*(2), 116–124. https://doi.org/10.1177/0022219412439325

Hepworth, D., Littlepage, B., & Hancock, K. (2018). Factors influencing university student academic success. *Educational Research Quarterly*, *42*(1), 45–61. https://www.proquest.com/scholarly-journals/factors-influencing-university-student-academic/docview/2099412124/se-2

Herzog, S. (2018). Financial aid and college persistence: Do student loans help or hurt? *Research in Higher Education*, *59*(3), 273–301. https://doi.org/10.1007/s11162-017-9471-1

Hu, X., & Yeo, G. B. (2020). Emotional exhaustion and reduced self-efficacy: The mediating role of deep and surface learning strategies. *Motivation & Emotion*, *44*(5), 785–795. https://doi.org/10.1007/s11031-020-09846-2

Hoffmann, A. O. I., & Plotkina, D. (2021). Let your past define your future? How recalling successful financial experiences can increase beliefs of self-efficacy in financial planning. *Journal of Consumer Affairs*, *55*(3), 847-871. https://doi.org/10.1111/joca.12378

Hogan, E. A., Bryant, S. K., & Overymyer-Day, L. E. (2013). Relationships between college students' credit card debt, undesirable academic behaviors and cognitions, and academic performance. *College Student Journal*, *47*(1), 102–112. https://doi.org/https://www.projectinnovation.biz/csj_2006.html

Hu, S., Cai, D., Zhang, X. C., & Margraf, J. (2022). Relationship between social support and positive mental health: A three-wave longitudinal study on college students. *Current Psychology*, *41*(10), 6712–6721. https://doi.org/10.1007/s12144-020-01175-4

Hu, S., & McCormick, A. C. (2012). An engagement-based student typology and its relationship to college outcomes. *Research in Higher Education*, *53*(7), 738–754. https://doi.org/10.1007/s11162-012-9254-7

Hurtado, S., & Deangelo L. (2012, March 22). Linking diversity and civic-minded practices with student outcomes: New evidence from national surveys. *Liberal Education*, *98*(2), 14-23. https://doi.org/https://www.aacu.org/liberaleducation/le-sp12/index.cfm

Huston, S. J. (2010). Measuring financial literacy. *Journal of Consumer Affairs*, *44*(2), 296-316. https://doi.org/10.1111/j.1745-6606.2010.01170.x

Institute of Education Sciences. (2021). *One year later: Relationship between 2015-2016 bachelor's degree recipient enrollment in further education and Pell grant receipt.* https://nces.ed.gov/pubs2021/2021411.pdf

Jappelli, T., Padula, M. (2013). Investment in financial literacy and saving decisions. *Journal of Banking and Finance*, *37*(8), 2779-2792. https://doi.org/10.1016/j.jbankfin.2013.03.019

Jessop, D. C., Reid, M., & Solomon, L. (2020). Financial concern predicts deteriorations in mental and physical health among university students. *Psychology & Health*, *35*(2), 196–209. https://doi.org/10.1080/08870446.2019.1626393

Jiang, X., Wang, J., Lu, Y., Jiang, H., & Li, M. (2019). Self-efficacy-focused education in persons with diabetes: a systematic review and meta-analysis. *Psychology Research and Behavior Management*, *12*, 67-79. https://doi.org/10.2147/PRBM.S192571

Johnson, S. R., & Stage, F. K. (2018). Academic engagement and student success: Do high-impact practices mean higher graduation rates? *Journal of Higher Education*, *89*(5), 753–781. https://doi.org/10.1080/00221546.2018.1441107

Joo, S. (2008). Personal financial wellness. In J. J. Xiao (ed) *Handbook of Consumer Finance Research*, pp. 21-32 Springer. https://doi.org/10.1007/978-0-387-75734-6_2

Kanadlı, S. (2017). Prospective teachers' professional self-efficacy beliefs in terms of their perceived autonomy support and attitudes towards the teaching profession: A mixed methods study. *Educational Sciences: Theory and Practice*, *17*(5), 1847-1871. https://doi.org/10.12738/estp.2017.5.0597

Katharine, K. (2015). *College counseling center treatment outcomes: Examining the relationship between clinical improvement and academic function* (dissertation). Proquest LLC, Ann Arbor, MI. https://www.proquest.com/dissertations-theses/college-counseling-center-treatment-outcomes/docview/1648390227/se-2

Khurshid, M., Zahid, R. M. A., & Nisa, M. U. (2024). Factors affecting financial decisions of university students: evidence from Pakistan. *Managerial Finance*, *50*(2), 297–312. https://doi.org/10.1108/MF-05-2021-0207

Kim, J. H., & Torquati, J. (2019). Financial socialization of college students: Domain-general and domain-specific perspectives. *Journal of Family & Economic Issues*, *40*(2), 226–236. https://doi.org/10.1007/s10834-018-9590-7

Kiyama, J. M., & Harper, C. E. (2018). Beyond hovering: A conceptual argument for an inclusive model of family engagement in higher education. *The Review of Higher Education*, *41*, 365–385. https://doi.org/10.1353/rhe.2018.0012

Kivlighan, D. M., III, Schreier, B. A., Gates, C., Hong, J. E., Corkery, J. M., Anderson, C. L., & Keeton, P. M. (2021). The role of mental health counseling in college students' academic success: An interrupted time series analysis. *Journal of Counseling Psychology*, *68*(5), 562–570. https://doi.org/10.1037/cou0000534

Kivunja, C. (2018). Distinguishing between theory, theoretical framework, and conceptual framework: A systematic review of lessons from the field. *International Journal of Higher Education*, *7*(6), 44–53. https://doi.org/ 10.5430/ijhe.v7n6p44

Kim, M. M., & Kutscher, E. L. (2021). College students with disabilities: Factors influencing growth in academic ability and confidence. *Research in Higher Education, 62*(3), 309–331. https://doi.org/10.1007/s11162-020-09595-8

Kot, F. C. (2014). The impact of centralized advising on first-year academic performance and second-year enrollment behavior. *Research in Higher Education*, *55*(6), 527–563. https://doi.org/10.1007/s11162-013-9325-4

Kovacs, T. (2022). Assessing barriers to graduate school admission for applicants from underrepresented populations in a master's level speech-language pathology program. *American Journal of Speech-Language Pathology*, *31*(2), 819–837. https://doi.org/10.1044/2021_AJSLP-21-00124

Lancaster, J. R., & Lundberg, C. A. (2019). The influence of classroom engagement on community college student learning: A quantitative analysis of effective faculty practices. *Community College Review*, *47*(2), 136–158. https://doi.org/10.1177/0091552119835922

Larson, J., Johnson, A., Aiken-Wisniewski, S. A., & Barkemeyer, J. (2018). What is academic advising? An application of analytic induction. *NACADA Journal*, *38*(2), 81–93. https://doi.org/10.12930/0271-9517-38.2.81

LeBaron, A. B., & Kelley, H. H. (2021). Financial socialization: A decade in review. *Journal of Family & Economic Issues*, *42,* 195–206. https://doi.org/10.1007/s10834-020-09736-2

National Association of Financial Aid Administrators (2024, March 26) *Legislative tracker: Loan repayment*. https://www.nasfaa.org/legislative_tracker_loans_repayment

Letkiewicz, J., Lim, H., Heckman, S., Bartholomae, S., Fox, J. J., & Montalto, C. P. (2014). The path to graduation: Factors predicting on-time graduation rates. *Journal of College Student Retention: Research, Theory & Practice, 16(*3), 351–371. https://doi.org/10.2190/CS.16.3.c

Lent, R. W., Ireland, G. W., Penn, L. T., Morris, T. R., & Sappington, R. (2017). Sources of self-efficacy and outcome expectations for career exploration and decision-making: A test of the social cognitive model of career self-management. *Journal of Vocational Behavior*, *99*, 107–117. https://doi.org/10.1016/j.jvb.2017.01.002

Lewis-Beck, M. S., Bryman, A., & Futing Liao, T. (2004). Ordinary Least Squares (OLS). In *Sage Encyclopedia of Social Science Research Methods. (*pp. 776-777). Sage Publications. https://doi.org/10.4135/9781412950589

Lim, H., Heckman, S., Montalto, C. P., & Letkiewicz, J. (2014). Financial stress, self-efficacy, and financial help-seeking behavior of college students. *Journal of Financial Counseling and Planning, 25*, 148–160. https://doi.org/10.35794/jmbi.v9i1.40983

Liu, K.-L., Chuang, C.-K., Pang, S.-T., Wu, C.-T., Yu, K.-J., Tsai, S.-C., & Chien, C.-H. (2022). Emotional state and cancer-related self-efficacy as affecting resilience and quality of life in kidney cancer patients: a cross-sectional study. *Supportive Care in Cancer*, *30*(3), 2263–2271. https://doi.org/10.1007/s00520-021-06644-5

Lord, V. B., Bjerregaard, B., & Hartman, J. (2013). Evaluating the graduation Gap: Interventions designed to enhance upper-level student success and commitment. *Journal of Criminal Justice Education*, *24*(2), 153–174. https://doi.org/10.1080/10511253.2012.679362

Ma, J., Pender, M., & Welch, M. (2019) Education pays 2019: The benefits of higher education for individuals and society. College Board. *Trends in Higher Education Series.* https://research.collegeboard.org/pdf/education-pays-2019-full-report.pdf

Martini, M., & Fabbris, L. (2017). Beyond employment rate: A multidimensional indicator of higher education effectiveness. *Social Indicators Research*, *130*(1), 351–370. https://doi.org/10.1007/s11205-015-1179-z

McKinney, L., & Burridge, A. B. (2015). Helping or hindering? The effects of loans on community college student persistence. *Research in Higher Education*, *56*(4), 299–324. https://doi.org/10.1007/s11162-014-9349-4

McKinney, L., & Burridge, A. (2015). Helping or hindering? The effects of loans on community college student persistence. *Research in Higher Education*, *56*(4), 299–324. https://doi.org/10.1007/s11162-014-9349-4

Millea, M., Willis, R., Elder, A., & Molina, D. (2018). What matters in college student success? Determinants of college retention and graduation rates. *Education*, *138*(4), 309-322.

Montalto, C. P., Phillips, E. L., McDaniel, A., & Baker, A. R. (2019). College student financial wellness: Student loans and beyond. *Journal of Family & Economic Issues*, *40*(1), 3–21. https://doi.org/10.1007/s10834-018-9593-4

Mu, L., & Fosnacht, K. (2019). Effective advising: How academic advising influences student learning outcomes in different institutional contexts. *Review of Higher Education*, *42*(4), 1283–1307. https://doi.org/10.1353/rhe.2019.0066

Murray, C., Lombardi, A., Bender, F., & Gerdes, H. (2013). Social support: main and moderating effects on the relation between financial stress and adjustment among college students with disabilities. *Social Psychology of Education*, *16*(2), 277–295. https://doi.org/10.1007/s11218-012-9204-4

Niu, S., & Tienda, M. (2013). Delayed enrollment and college plans: Is there a postponement penalty? *Journal of Higher Education*, *84*(1), 1–27. https://doi.org/10.1080/00221546.2013.11777276

National Center for Education Statistics. (2022). *First-time, full-time degree/certificate-seeking undergraduate students enrolled in degree-granting postsecondary institutions, by participation and average amount awarded in financial aid programs, and control and level of institution: 2000-01 through 2020-21*. Digest of Education Statistics. https://nces.ed.gov/programs/digest/d22/tables/dt22_331.20.asp

National Financial Educators Council. (2023). *Financial Wellness Definition.* https://www.financialeducatorscouncil.org/financial-wellness-definition/#:~:text=%E2%80%9CFinancial%20wellness%20is%20defined%20as,(Consumer%20Financial%20Protection%20Bureau).

Noor, N., Batool, I., & Muhammad Arshad, H. (2020). Financial literacy, financial self-efficacy and financial account ownership behavior in Pakistan. *Cogent Economics & Finance*, *8*(1), 1-20. https://doi.org/10.1080/23322039.2020.1806479

Nurwendah, W., & Suyanto, S. (2019). Relationship among self-motivation, self-efficacy and achievement of high school student in biology. *Journal of Physics: Conference Series*, *1233*(1), 012009. https://doi.org/10.1088/1742-6596/1233/1/012009

Ohio State University Office of Student Life. (n.d.). *National descriptive report*. https://cssl.osu.edu/posts/632320bc-704d-4eef-8bcb-87c83019f2e9/documents/01-national-descriptive-report-accessible.pdf

Ohio State University Center for the Study of Student Life. (n.d.). *Study of Collegiate Financial Wellness.* https://cssl.osu.edu/research-projects/study-on-collegiate-financial-wellness

Pardee, C. (n.d.). *Organizational models for advising*. NACADA. https://nacada.ksu.edu.

Peltz, J. S., Bodenlos, J. S., Kingery, J. N., & Rogge, R. D. (2021). The role of financial strain in college students' work hours, sleep, and mental health. *Journal of American College Health*, *69*(6), 577–584. https://doi.org/10.1080/07448481.2019.1705306

National Student Clearinghouse. (2021). *Persistence and retention snapshot report*. National Student Clearinghouse Research Center. https://nscresearchcenter.org/wp-content/uploads/PersistenceRetention2021.pdf

Rehr, T. I., & Regan, E. P. (2022). An exploratory analysis of financial wellness of trans-spectrum college students. *Journal of LGBT Youth*, *19*(1), 76–91. https://doi.org/10.1080/19361653.2020.1762147

Rehr, T. I., Regan, E. P., Abukar, Z., & Meshelemiah, J. C. A. (2022). Financial wellness of first-generation college students. *College Student Affairs Journal*, *40*(1), 90–105.

Rhodes, A. P. (2022). Student debt and geographic disadvantage: Disparities by rural, suburban, and urban background. *Rural Sociology*, *87*(1), 231–263. https://doi.org/10.1111/ruso.12403

Robb, C. A., Moody, B., & Abdel-Ghany, M. (2011). College student persistence to degree: The burden of debt. *Journal of College Student Retention: Research, Theory and Practice, 13*(4), 431–456. https://doi.org/10.2190/CS.13.4.b

Robb, C. A. (2017). College student financial stress: Are the kids alright? *Journal of Family and Economic Issues*, *38*(4), 514-527. https://doi.org/10.1007/s10834-017-9527-6

Roksa, J., & Deutschlander, D. (2018). Applying to college: The role of family resources in academic undermatch. *Teachers College Record, 120*(6), 1-30. https://doi.org/10.1177/016146811812000601

Roksa, J., & Kinsley, P. (2019). The role of family support in facilitating academic success of low-income students. *Research in Higher Education*, *60*(4), 415–437. https://doi.org/10.2307/45180388

Roksa, J., & Velez, M. (2012). A late start: Delayed entry, Life course transitions and bachelor's degree completion. *Social Forces*, *90*(3), 769–794. https://doi.org/10.1093/sf/sor018

Rudi, J. H., Serido, J., & Shim, S. (2020). Unidirectional and bidirectional relationships between financial parenting and financial self-efficacy: Does student loan status matter? *Journal of Family Psychology*, *34*(8), 949–959. https://doi.org/10.1037/fam0000658.supp

Sabaner, C., & Arnold, K. D. (2021). Mental health in the transition to college: Experiences of six low-income, high-achieving students. *Journal of College Counseling*, *24*(1), 18–35. https://doi.org/10.1002/jocc.12174

Sabri, M.F., Rahim, H.A., Wijekoon, R., Zakaria, N.F., Magli, A.S., & Reza, T.S. (2020). The mediating effect of money attitude on association between financial literacy, financial behaviour, and financial vulnerability. *The International Journal of Academic Research in Business and Social Sciences, 10*, 340-358. https://doi.org/10.6007/IJARBSS/v10-i15/8254

Sachitra, V., Wijesinghe, D., & Gunasena, W. (2019). Exploring undergraduates' money-management life: insight from an emerging economy. *Young Consumers, 20*(3), 167-189. https://doi.org/10.1108/YC-07-2018-00828

Salas-Velasco, M. (2022). Causal effects of financial education intervention aimed at university students on financial knowledge and financial self-efficacy. *Journal of Risk and Financial Management, 15*(7), 284. https://doi.org/10.3390/jrfm15070284

Samson, A. (2014). Sources of self-efficacy during marathon training: A qualitative, longitudinal investigation. *Sport Psychologist, 28*(2), 164–175. https://doi.org/10.1123/tsp.2013-0027

Saunders-Scott, D., Braley, M. B., & Stennes-Spidahl, N. (2018). Traditional and psychological factors associated with academic success: Investigating best predictors of college retention. *Motivation & Emotion, 42*(4), 459–465. https://doi.org/10.1007/s11031-017-9660-4

Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, *7*(2), 147–177. https://doi.org/10.1037/1082-989X.7.2.147

Schreiner, L. A. (2013). Thriving in college. *New Directions for Student Services*, *2013*(143), 41–52. https://doi.org/10.1002/ss.20059

Schunk, D. H., & Hanson, A. R. (1985). Peer models: Influence on children's self-efficacy and achievement. *Journal of Educational Psychology*, *77*(3), 313-322. https://doi.org/10.1037/0022-0663.77.3.313

Serido, J., Shim, S., Mishra, A., & Tang, C. (2010). Financial parenting, financial coping behaviors, and wellbeing of emerging adults. *Family Relations*, 59(4), 453– 464. https://doi.org/10.1111/j.1741-3729.2010.00615.x

Shirley Ye Sheng, Wei Feng, & Spohn, D. (2022). Family matters: Examine the role of family financial socialization to improve consumer financial well-being. *Journal of Applied Business & Economics*, *24*(3), 129–139. https://doi.org/10.33423/jabe.v24i3.5193

Sheu, H.-B., Lent, R. W., Miller, M. J., Penn, L. T., Cusick, M. E., & Truong, N. N. (2018). Sources of self-efficacy and outcome expectations in science, technology, engineering, and mathematics domains: A meta-analysis. *Journal of Vocational Behavior*, *109*, 118–136. https://doi.org/10.1016/j.jvb.2018.10.003

Sheposh, R. (2023). Cronbach’s alpha. *Salem Press Encyclopedia of Science*.

Shim, S. (1996). Adolescent consumer decision-making styles: The consumer socialization perspective. *Psychology & Marketing (1986-1998)*, *13*(6), 547-569. https://doi.org/10.1002/(sici)1520-6793(199609)13:6

Shipherd, A. M., Samson, A., Renner, K. B., & Duncan, C. K. (2021). An Examination of the sources of self-efficacy in runners throughout training: A mixed methods study. *Journal of Sport Behavior*, *44*(1), 141-164. https://doi.org/10.1123/jcsp.2022-0067

- Shoulders, C., Simmons, L. M., & Johnson, D. M. (2020). Pre-entry attributes and freshman satisfaction, grades, and engagement as predictors of six-year college graduation. *College Student Journal*, *54*(3), 327–338. https://doi.org/10.1080/26906015.2023.2275312

Silva, P. T. de F. e, & Sampaio, L. M. B. (2023). Does student aid make a degree more likely? Evidence of the permanence scholarship program from survival models. *International Journal of Educational Development*, *9*6(C), 1-12. https://doi.org/10.1016/j.ijedudev.2022.102697

Singh, D., Barreda, A., Kageyama, Y., Singh, N. (2019). The mediating effect of financial self-efficacy on the financial literacy-behavior relationship: A case of generation Y professionals. *Economics and Finance Letters*, *6*(2). 120-133. https://doi.org/10.18488/journal.29.2019.62.120.133

Sinnewe, E., & Nicholson, G. (2023). Healthy financial habits in young adults: An exploratory study of the relationship between subjective financial literacy, engagement with finances, and financial decision-making. *Journal of Consumer Affairs*, *57*(1), 564–592. https://doi.org/10.1111/joca.12512

Smith, D. (2020). Underrepresented populations in the US. In M. David & M. Armey, *The Sage Encyclopedia of Higher Education* (4th ed., pp. 1597). https://doi.org/10.4135/9781529714395

Smith, C., & Barboza, G. A. (2014). The role of trans-generational financial knowledge and self-reported financial literacy on borrowing practices and debt accumulation of college students. *Journal of Personal Finance, 13*, 28 –50. http://dx.doi.org/10.2139/ssrn.2342168

Resnick, B (2018). Theory of self-efficacy: In Smith, M. J., & Liehr, P. R. (Eds.), *Middle Range Theory for Nursing* (4th ed., pp. 215-241). Springer Publishing Company LLC. https://doi.org/ 10.1891/9780826159922

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, *2*, 53–55. https://doi.org/10.5116/ijme.4dfb.8dfd

Trombitas, K. (2012). *Financial stress: An everyday reality for college students*. Inceptia. https://www.inceptia.org/PDF/Inceptia_FinancialStress_ whitepaper.pdf

U.S Department of Education. (2019). *Financial Literacy Guidance from Federal Student Aid.* https://financialaidtoolkit.ed.gov/resources/fin-lit-guidance.pdf

Valiante, G., & Morris, D. B. (2013). The sources and maintenance of professional golfers' self-efficacy beliefs. *Sport Psychologist*, *27*(2), 130–142. https://doi.org/10.1123/tsp.27.2.130

Velez, E., Cominole, M., & Bentz, A. (2019). Debt burden after college: the effect of student loan debt on graduates' employment, additional schooling, family formation, and home ownership. *Education Economics*, *27*(2), 186–206. https://doi.org/10.1080/09645292.2018.1541167

Vianden, J., & Barlow, P. J. (2015). Strengthen the bond: Relationships between academic advising quality and undergraduate student loyalty. *NACADA Journal*, *35*(2), 15–27. https://doi.org/10.12930/nacada-15-026

Weatherton, M., & Schussler, E. E. (2021). Success for all? A call to re-examine how student success is defined in higher education. *CBE - Life Sciences Education*, *20*(1) 1-13. https://doi.org/10.1187/cbe.20-09-0223

Webley, P., & Nyhus, E. K. (2013). Economic socialization, saving and assets in European young adults. *Economics of Education Review*, *33*, 19 –30. http://dx.doi.org/10.1016/j.econedurev.2012.09.001

Wen, M., & Lin, D. (2012). Child development in rural China: Children left behind by their migrant parents and children of nonimmigrant families. *Child Development*, *83*(1), 120–136. https://doi.org/10.1111/j.1467-8624.2011.01698.x

Westrick, P. A., Le, H., Robbins, S. B., Radunzel, J. M. R., & Schmidt, F. L. (2015). College performance and retention: A meta-analysis of the predictive validities of ACT scores, high school grades, and SES. *Educational Assessment*, *20*(1), 23–45. https://doi.org/10.1080/10627197.2015.997614

White, K., Park, N., Watkins, K., McCoy, M., & Morris, J. (2021). The relationship between objective financial knowledge, financial management, and financial self-efficacy among African American students. *Financial Services Review*, *29*(3), 169–185. https://dx.doi.org/10.2139/ssrn.3468751

White, K. E., Watkins, K., McCoy, M., Muruthi, B. A., & Byram, J. L. (2021). How financial socialization messages relate to financial management, optimism and stress: Variations by race. *Journal of Family and Economic Issues*, *42*(2), 237–250. https://doi.org/10.1007/s10834-020-09704-w

Yang, X., Zhu, J., & Hu, P. (2023). Perceived social support and procrastination in college students: A sequential mediation model of self-compassion and negative emotions. *Current Psychology, 42*(7), 5521–5529. https://doi.org/10.1007/s12144-021-01920-3

Yang, H., Pimparkar, A. D., Graterol, C., Kased, R. A., & Love, M. B. (2021). Analyzing college students' advising records to improve retention and graduation outcome. 2021 *IEEE Frontiers in Education Conference.* (pp.1–8). https://doi.org/10.1109/FIE49875.2021.9637129

Yang, L., & Venezia, S. (2020). The impact of financial aid on associate degree attainment for rural community college students: A comparison of rural, urban, and suburban patterns. *Community College Review*, *48*(4), 423–454. https://doi.org/10.1177/0091552120935975

York, T., Gibson, C., & Rankin, S. (2015). Defining and measuring academic success. *Practical Assessment, Research, and Evaluation*, *20*(5), 1-20. https://doi.org/10.7275/hz5x-tx03

Yu, X., Xiong, F., Zhang, H., Ren, Z., Liu, L., Zhang, L., & Zhou, Z. (2023). The effect of social support on depression among economically disadvantaged college students: The mediating role of psychological resilience and the moderating role of geography. *International Journal of Environmental Research and Public Health*, *20*(4) 1-11. https://doi.org/10.3390/ijerph20043053

Zhang, Q., & Kim, H. (2019). American young adults' debt and psychological distress. *Journal of Family and Economic Issues*, *40*(1), 22–35. https://doi.org/10.1007/s10834-018-9605-4

Zhang, Y., & Fan, L. (2022). Financial capability, financial education, and student loan debt: Expected and unexpected results. *Journal of Financial Counseling and Planning*, *33*(3), 324–343. https://doi.org/10.1891/JFCP-2021-0039

Zhu, A. (2019). Credit card use of college students: A broad review. *Journal of Personal Finance*, *18*(1), 55-63.

# APPENDIX A

## MEAN SCORE SURVEY QUESTIONS

Financial Self-efficacy

I am confident I can manage my finances.

Strongly disagree
Disagree
Agree
Strongly disagree

I feel in control of my finances.

Strongly disagree
Disagree
Agree
Strongly disagree

I am confident in my ability to plan for my financial future.

Strongly disagree
Disagree
Agree
Strongly disagree

When faced with a financial challenge, I can figure out a solution.

Strongly disagree
Disagree
Agree
Strongly disagree

Financial Socialization

Prior to and/or during colleges, did your parents and/or guardians:

Provide financial advice?
Strongly disagree
Disagree
Agree
Strongly disagree

Have conversations about money with you?
Strongly disagree
Disagree
Agree
Strongly disagree

Tell you what you needed to know about money management?
Strongly disagree
Disagree

Agree
Strongly disagree

Model Sound financial management?
Strongly disagree
Disagree
Agree
Strongly disagree

Financial Strain

I have enough money to participate in most of the same activities as my peers.
Strongly disagree
Disagree
Agree
Strongly disagree

I feel stressed about my personal finances in general.
Strongly disagree
Disagree
Agree
Strongly disagree

I worry about being able to pay my current monthly expense.
Strongly disagree
Disagree
Agree
Strongly disagree

I worry about having enough money to pay for school.
Strongly disagree
Disagree
Agree
Strongly disagree

Financial Optimism

When I think about my financial situation, I am optimistic about my future.
Strongly disagree
Disagree
Agree
Strongly disagree

After graduation, I will be able to support myself financially.
Strongly disagree
Disagree
Agree
Strongly disagree

I think that the cost of college is a good investment for my financial future.

Strongly disagree
Disagree
Agree
Strongly disagree

# APPENDIX B

## IRB APPROVAL

GEORGIA SOUTHERN UNIVERSITY
RESEARCH INTEGRITY

Institutional Review Board (IRB)
PO Box 8005 • STATESBORO, GA 30460
Phone: 912-478-5465
Fax: 912-478-0719
IRB@GeorgiaSouthern.edu

| | |
|---|---|
| To: | Hamilton, Holly<br>Cain, Elise |
| From: | Georgia Southern Institutional Review Board |
| Approval Date: | January 25, 2024 |
| Subject: | Institutional Review Board Exemption Determination - Limited Review |

---

The following protocol involves activities that do not require full approval by the Institutional Review Board (IRB) according to federal guidelines.

Protocol #: H24150 Title: The Impact of Financial Wellness on Student Success

As authorized in the Federal Policy for the Protection of Human Subjects, your research protocol is determined to be exempt from full review under the following exemption category(s):

| | |
|---|---|
| Review Type: | Exemption 4: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met: The identifiable private information or identifiable biospecimens are publicly available; Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects.<br><br>Any data use agreement or agreement change required by the data owner must be supplied to the IRB prior to execution for review. This approval is contingent upon researcher compliance with the conditions of the data use agreement (where required) and current institutional data security policy. |

Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that the Institutional Review Board has approved your proposed research with the understanding that you will abide by the following conditions:

| | |
|---|---|
| Incentives: | No monetary incentives are approved for this protocol. |

Special Conditions: None

No COVID Safety Plan No in person procedures were included in this protocol.

*Any alteration in the terms or conditions of your involvement may alter this approval. Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that your research, as submitted, is exempt from IRB Review. No further action or IRB oversight is required, as long as the project remains the same. If you alter the project, it is your responsibility to notify the IRB and acquire a new determination of exemption. Because this project was determined to be exempt from further IRB oversight, this project does not require an expiration date.*