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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

DOES SOCIOECONOMIC STATUS INFLUENCE
STUDENTS' POSTSECONDARY PLANS?

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

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College of Education and Behavioral Sciences
Department of Leadership, Policy and Development:
Higher Education and P-12 Education

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This Dissertation by: Brian A. Young

Entitled: *Does Socioeconomic Status Influence Students' Postsecondary Plans?*

has been approved as meeting the requirements for the Degree of Doctor of Education in College of Education and Behavioral Sciences in Department of Leadership, Policy and Development: Higher Education and P-12 Education, Program of Educational Leadership

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ABSTRACT

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The purpose of this study was to examine whether or not socioeconomic status (SES) influenced high school students' plans for continuing their learning after high school. This study collected data via an online survey and a sample size of 343 participants from three comprehensive public high schools. A hierarchical logistic regression was conducted and found to be statistically significant. The variables of gender, race, and SES were found not to be significant predictors of having a postsecondary plan, but grade point average (GPA) was a significant predictor. The results failed to reject the null hypothesis, meaning household SES was not a significant predictor of having a postsecondary plan. This study also aimed to identify what factors influenced students in making their postsecondary decisions through a profile analysis using a repeated measures analysis of variance (ANOVA). The results from the repeated measures ANOVA indicate a significant difference in the mean responses for the different barriers and for the different barriers based on SES. The barriers of affordability, the ability to apply, the expectation of success, worry about fitting in, and parental experiences and expectations, all showed significant differences. Responses to four open-ended questions identified financial influences, family influences, and self-interests as influencing the participants' postsecondary decisions. The intent of this study was to help school and school district leaders better understand how to support students, especially those from low-SES households, in planning for postsecondary learning.

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CHAPTER I

INTRODUCTION

One of the many goals of public education is to prepare each and every student for his or her future by providing opportunities for them to achieve their dreams. Most of those dreams include living a life that includes earning a modest living wage and being financially independent (Goodman & Mayer, 2018; Hecht, 2018). One step in achieving the dream of financial independence is to obtain a quality job. As the world keeps changing, so do the job opportunities for our students. Currently in the United States there are becoming fewer and fewer employment opportunities for people who hold only a high school diploma or even less (Carnevale, Smith, & Strohl, 2013). Given students' goals of achieving a good paying job and the current change in the job market to properly prepare our students for their future, we need to prepare them for postsecondary educational programs that include either a trade or vocational learning program, the military, a two-year college program, or a four-year college degree.

Helping all students matriculate to a postsecondary schooling option is not an easy task for schools and school districts to take on because the data are very clear that schools are working with students from various backgrounds whose needs are different, and some demographic groups are at a significant disadvantage (Aud, Fox, & Kewal-Ramani, 2010; Peske & Haycock, 2006). One of the demographic groups that data show are at a disadvantage for attending a postsecondary educational program are students from low-socioeconomic status (SES) households. A significant disparity exists of immediate college enrollment between students from low-SES households and their wealthier peers according to college enrollment data

(Kena et al., 2016). Students from low-SES households are not accessing postsecondary educational programs where students earn a degree or certification from a university, college, trade school, or military, at the same rate as their higher-SES counterparts and, therefore, may be limiting their employment opportunities in the future. The disparity in postsecondary learning attainment for students from different leveled SES households creates a problem of equity between high- versus low-SES groups.

The disparity in postsecondary learning between students from households of differing levels of SES is not just isolated to a single geographic region or type of community. In fact, Rank and Hirschl (2019) reported that only 10% of poor people live in extremely poor urban neighborhoods, and poverty can be found across the American landscape. One area that is changing is the suburban areas of the country, which are those areas outside of dense urban areas that consist of mostly neighborhoods of single family homes (Rank & Hirschl, 2019). The overall socioeconomic makeup of suburban neighborhoods and schools is changing as a result of the increase of students living in low income households (Southern Education Foundation, 2015). The change in demographics for suburban areas creates a challenge for schools in these areas because the literature has identified many struggles for students from low-SES families living in low-SES areas due to lack of resources, lack of positive developmental supports, and fewer positive role models (Atherton, 2014; Backlund, Sorlie, & Johnson, 1999; Coleman, 1966; Rank & Hirschl, 2019; Reardon, 2011; Rothstein, 2004). What is unknown is why students from low-SES families are less likely to matriculate to a postsecondary educational program when they live in middle or high income communities and attend a school with ample resources and support like schools often found in suburban areas of the United States.

One of the characteristics that many high performing schools in suburban areas have is a culture that supports students continuing their learning beyond high school. Grodsky and Rieglecrumb (2010) called the type of school culture that promotes the benefits of postsecondary learning and supports students in preparing and applying for college a college-going culture. Some of the key aspects that make up a college-going culture include, but are not limited to, offering college level courses, staff's expectations that all students can attend college; a strong school vision about students having the ability to attend college; supports throughout the college selection and application process; and partnerships with parents, colleges, and key staff members that help educate students (Corwin & Tierney, 2007). Having a college-going culture has been linked to increasing the number of students attending a postsecondary educational program (Rosa, 2006).

The identified differences in students who attend postsecondary educational programs and students who do not become a potential problem as the future job market changes. The evolving job market will require students to have more than a high school diploma to be competitive for most positions (Carnevale et al., 2013). The challenge for school administrators is how to better support students from low-SES households in enrolling in postsecondary educational programs. One support strategy is to create a college-going culture, but that may not be enough.

Background of the Problem

Currently, a demographic and geographic shift is taking place in the United States in terms of poverty. The Southern Education Foundation (2015) reported that school-aged children in public schools who qualify for free and reduced-price school meals through the National School Lunch Program now outnumber students who do not. What makes the demographic shift

significant is that 90% of the school-aged children in America attend public schools (Snyder & Dillow, 2013). Of the 36 countries in the Organization for Economic Cooperation and Development, poverty rates for children, ages 0 to 17 in the United States rank fourth behind South Africa, Costa Rica, and Israel (Organization for Economic Cooperation and Development, 2019). Kneebone (2017) reported that poverty is becoming more concentrated in the United States with over five million people of low-SES and poverty moving to neighborhoods of high poverty. High concentrations of poverty also correlate with neighborhoods that are disadvantaged in terms of higher rates of crime, lower performing schools, and fewer resources and supports (Brooks-Gunn & Duncan, 2007). Neighborhoods of concentrated poverty are increasing in both urban and suburban areas (Kneebone, 2014).

In addition to changes in SES in the United States, the racial demographics are also changing, especially in suburban areas. More Black and Latinx people are moving to the suburbs because of job availability and more affordable housing. Another change is the increase of Whites living in poverty in suburban areas (Kneebone, 2014). With the increase of poverty in the suburbs, school officials serving suburban areas are looking for strategies to support students of poverty academically (Corey, 2018).

Students living in impoverished conditions often are subjected to systematic inequalities and mistreatment that include disparities in opportunities represented by under-resourced schools, harsher disciplinary punishment, less experienced teachers, and higher teacher turnover rate (Brooks-Gunn & Duncan, 2007; Kneebone, 2014; Rank & Hirschl, 2019; Reardon, Robinson, & Weathers, 2014; Rothstein, 2004). Compounding the school-based obstacles are the difficulties that impoverished students often face outside of school including unhealthy living conditions that can be caused from stress put on families to meet their daily needs which can be

linked to overworked parents and can lead to neglect, lack of sleep, family violence, or poor nutrition (Jensen, 2009; Wightman & Danziger, 2014). Although adolescent students of poverty experience an aggregation of disadvantages, experiences in school could offset the barriers associated with poverty and create significant transformation for improved academic performance and well-being (Jensen, 2009; Peske & Haycock, 2006). However, Wightman and Danziger (2014) would disagree and pointed to the cycle of multi-generational poverty and the data that show many in low-SES families do not access college because of lack of knowledge of how to get enrolled, fear of failure, fear of taking on too much debt, and a lack of understanding of the potential benefits.

Statement of the Problem

According to the Colorado Department of Education, 74% of the jobs available in the state of Colorado require education and training beyond a high school diploma which is 10% higher than the national average (Carnevale et al., 2013; Colorado Department of Education, 2014). This type of competitive job market puts even more pressure on schools to prepare all students to achieve a postsecondary degree or training certificate. A competitive labor market that demands an education beyond high school can perpetuate the generational cycle of poverty, because workers without a postsecondary degree or certificate are more likely to earn below average wages and will have a higher probability of raising families in low-SES households (Wightman & Danziger, 2014). Balfanz, DePaoli, Ingram, Bridgeland, and Fox (2016) also reported on the benefit of increasing postsecondary educational programs for people living in low-SES households as a way of improving the local economy and changing the cycle of poverty by reporting:

The urgency to boost postsecondary attainment is driven by two core tenets that are intertwined—equality of opportunity for all and global competitiveness. Closing opportunity gaps and providing meaningful pathways to employment, regardless of race, ethnicity, income or gender, will require a significant increase in the number of low-income students, students of color, and men who obtain postsecondary degrees or credentials. (p. 5)

This research highlights the importance of increasing higher education opportunities for all of the people living in the United States in order to strengthen the nation's economy and workforce. It also notes that the disparity in postsecondary educational program enrollment for demographic groups that are traditionally underrepresented in postsecondary learning programs, including low SES, must be addressed because it is the right thing to do for the success of the individual and for the success of our nation. However, the task of ensuring more individuals from low-SES families access postsecondary educational programs is not easy.

The literature identifies many factors that may impact learning for students from low-SES families, including poorer health conditions, lower preschool readiness, and parents who have less formal education and who are less available at home because they work more hours in a given week (Kneebone, 2014; Wightman & Danziger, 2014). Additionally, research has shown that students from low-SES families who attend a school with fewer supports and emphasis on the power of continuing their formal schooling beyond high school will not be given the same level of exposure to the various pathways and opportunities as students from schools that do put more supports and emphasis on continuing formal schooling beyond high school (Evans, 2016). Even though there seem to be supports for students from low-SES families in their high schools and community as well as increased financial aid opportunities, the percentage of low-SES

students attending a postsecondary educational program is still lower than high-SES students (Musto, 2017). One belief is that students from low-SES households have a lower self-efficacy and lower expectations for future work plans or future educational opportunities (Ali, McWhirter, & Chronister, 2005; Berzin, 2010; Blustein, 2013). The purpose of the study was to learn more about what students' plans are for themselves for pursuing postsecondary educational programs among students from low-SES families compared to students not from low-SES families, and what factors influenced their decisions.

Rationale for the Study

There has been ample research regarding academic struggles facing students from low-SES households. The academic struggles and educational inequities have been well documented and researched starting with seminal works of Coleman (1966), Kozol (1991), and Rothstein (2004). *Equality of Educational Opportunity* (Coleman, 1966), colloquially known as the Coleman Report, was one of the first major studies to look at the inequalities in the country's education system and was the first identification of an achievement gap between students from different races and socioeconomic backgrounds. Coleman's survey data of students and teachers from over 4,000 school districts nationwide claimed that SES was one of the primary predictors of a student's academic success. Coleman's study also was one of the first to use quantitative methods to run regression models on student achievement linked to demographic factors. However, Coleman's findings had their limitations due to poor computer technology that could not handle advanced statistical analysis of such large data sets, so this study did not include factors that also contribute to students' academic success such as health care, parents' education, number of family members living in the home, the type of neighborhood students lived in, and information on the quality of the school and its teachers.

Twenty-five years after the Coleman Report came out, Jonathon Kozol (1991) published *Savage Inequalities* based on his research around the disparity in school funding across the United States. Kozol brought to light the vast differences in school funding that exacerbated the problem of inequalities between students from wealthier neighborhoods and students living in poorer neighborhoods, again pointing to SES as a primary indicator of student success. One of the limitations of Kozol's work was that it compared schools in densely populated, poor, urban areas to less populated suburban areas with a primary focus on school funding and not on teacher quality, racism, and other school factors. Almost 40 years after the Coleman report, Rothstein (2004) conducted a study designed to analyze the Black–White achievement gap and found that one of the major causal factors in that disparity was the achievement gap between social classes due to the limitations on resources available to students from low-SES households. One of the concerns with Rothstein's findings of schools that outperformed other schools with a similar demographic profile was that in each of those cases there appeared to be other variables that added to their success that would not be found in a more traditional school setting like selective admissions, health care programs, and in some cases success on local assessments that did not translate to success on standardized tests.

Even with a long history of studies, the American Psychological Association (2014) reported “increased research on the correlation between SES and education is essential” (p. 1). The American Psychological Association is not alone in identifying the need for more research on the correlation between SES and education in order to provide information that will help improve school systems and programs to support students from low-SES households in all phases of their learning and development. Other sources have called for more research around supports and postsecondary expectations for students from low-SES households (Athanasos,

Achinstein, Curry, & Ogawa, 2016; Aud et al., 2010; Farmer-Hinton, 2011; Rosa, 2006). The United States government has passed legislation aimed to close achievement and opportunity disparities like No Child Left Behind, Race to the Top, and the Every Student Succeeds Act. Former President of the United States, Barack Obama, called for more to be done to raise the postsecondary educational programs for our nation's low-SES students as an economic imperative and as a reflection of our nation's values (House, 2014). More specifically, Grodsky and Jackson (2009) proposed studying the problem of social stratification in higher education, caused by gaps in student academic performance and opportunity from their kindergarten–12 experiences, by using different samples and different methods to collect information on students' and parents' expectations. The claims made by Grodsky and Jackson (2009) supported the idea of this type of study because it would help identify any differences in postsecondary plans as well as why students have those expectations for themselves.

There is a paucity of research that attempts to explain why impoverished students living in more affluent suburban neighborhoods are still seeing lower college entrance rates than their peers from less impoverished homes in the same schools. This disparity presents a problem for educational leaders seeking to identify ways to support all students in attending a postsecondary educational program (Shiller, 2016). Before school leaders can support low-SES students and their families, we must identify if there is a difference in postsecondary plans between students from low-SES families and students not from low-SES families who attend suburban schools with a strong college-going culture. If there is a difference in the presence of a postsecondary plan, then identifying what and why that difference exists will be important for school and district leaders.

Significance of the Study

One of the systemic issues school leaders must address related to students from low income families is not just high school graduation rates, which are on the rise, but also student acceptance into a postsecondary learning program (Malin & Hackmann, 2017). According to the National Center for Education Statistics (McFarland et al., 2017), only 65% of students living in low income families enrolled in a college in the fall of 2016 compared to 82% of students living in high income families, which represents a difference of 17%. That identified difference in postsecondary enrollment between the two groups of students shows that currently many school and school district leaders are not creating a school culture that supports all students in being prepared for their next educational experience. It is the responsibility of the school and school district leaders to reevaluate their systems so that they may remove barriers and build in processes that encourage all students to continue their learning, including students from low-SES households.

Many researchers have looked at the disparities of matriculation and have identified the gap between different demographic groups with mixed interpretations on why it exists (Ahearn, Rosenbaum, & Rosenbaum, 2016; Hoxby & Turner, 2015; Kena et al., 2016; Nellum & Hartle, 2015; Nyhan, 2015; Rosa, 2006; Zaback, 2018). Some studies have looked at either national trends or specifically in urban areas, but little research has been completed in a suburban context, which is important because suburban areas make up over 52% of the United States landscape and contain the highest number of people living in low-SES households (Ahearn et al., 2016; Bucholtz & Kolko, 2018; Kena et al., 2016; Kneebone, 2017).

Researchers have studied many failed programs and initiatives in an attempt to identify why students from low-SES households are less likely to apply to college (Gurantz et al., 2019;

Hoxby & Turner, 2015; Nyhan, 2015; Rosa, 2006). The goal of this research was twofold. The first goal of this study was to fill in gaps in the literature on what differences exist in student expectations for attending or planning to attend postsecondary learning opportunities for students who live in different leveled SES households and attend schools with college-going cultures. The second goal was to add to the body of knowledge on what factors influence the choices students make around postsecondary educational programs. The results could help guide school leaders, policy makers, and teachers on perceived barriers of high school students from low-SES households in order to potentially narrow disparity in postsecondary educational program attainment.

Research Questions

This study adds to the research around the postsecondary educational program enrollment disparity between students from low-SES families and students not from low-SES families. Data were collected that compare student postsecondary plans between the two identified groups of students based on household SES. Next, any differences in reasons for making the postsecondary decision were identified as well as other influential factors in the postsecondary planning process. Finally, this study shares quantitative data that answers the following research questions:

- Q1 In suburban high schools with a strong college-going culture, is there a difference in students' plans for attending a postsecondary educational program based on household socioeconomic status?
- Q2 Is there a difference between students from different leveled socioeconomic status households in the reasons they give for the selection of their postsecondary educational program?

Overview of the Study

This study was conducted through the epistemological stance of critical realism (Bhaskar, 1978). Critical realism is an appropriate onto-epistemology because it views the world as a stratified reality and the causal mechanisms that may or may not be activated and or observed (Bhaskar, 1978). Data were collected through a survey of current 12th grade students who planned on graduating from high school at the end of the academic year from public high schools in a suburban community with an identified college-going culture. The survey focused on information about the presence of a student's postsecondary plan for continued learning, and a rationale for the postsecondary decisions. The quantitative data were collected and analyzed using statistical methods that included descriptive statistics and a hierarchical logistic regression to compare the responses of the students from different-leveled SES households if they had a postsecondary plan to continue their education or training. A profile analysis in the form of a repeated measures analysis of variance (ANOVA) was run to understand what factors influenced students from different leveled SES households in regard to postsecondary education. Finally, qualitative data from open-ended questions were coded and used to identify themes. Those themes were then used to add to the data from the profile analysis.

Definition of Terms

The following definitions are used throughout this paper to help the reader understand what is meant by the terms below:

College-going culture: Athanases et al. (2016) defined college-going culture as, "the conditions of schools that provide formal and informal socialization of students to expectations for college-going and the supports needed to access college through information on college admission and financial aid" (p. 6). Grodsky and Rieglecrumb (2010) referred to this as

creating a college-going habitus that permeates the thinking and mindset of each student regardless of ability or SES. Schools with a college-going culture offer a wide variety of college-level and Advanced Placement classes, college application support programs, and a unified message from all students and staff around the importance of college (Schneider, 2007). Rosa (2006) wrote that students in schools with a high college-going culture did more to inform other students about financial aid opportunities, and students had higher expectations for attending a four-year college but lower numbers of students attending a two-year college or joining the military. The converse was true for students in schools with traditionally low college-going cultures, in that those students had fewer college preparatory resources, such as concurrent enrollment courses, advisory programs, and staff expectations for attending a four-year college. For this study, a college-going culture is determined based on the five characteristics as defined by Corwin and Tierney (2007). The five characteristics are:

1. Offering college level courses like Advanced Placement and concurrent enrollment.
2. Having expectations that all students can attend college and provide goal setting and support through the school selection and application process.
3. A clear mission statement around students attending postsecondary educational programs.
4. Comprehensive services throughout the college selection and application process.
5. Coordinated partnerships and educational events with parents, colleges, and school staff.

Free or reduced-priced meals: For this study, students who qualify for free or reduced-priced meals as a part of the National School Lunch Program are identified as living in a low-SES household which has been proven as the best proxy for low SES in social educational research (Day et al., 2016). Snyder and Musu-Gillette (2015) supported the aforementioned idea by stating,

free/reduced price lunch data are frequently used by education researchers as a proxy for school poverty since this count is generally available at the school level, while the poverty rate is typically not available. Because the free/reduced price lunch eligibility is derived from the federal poverty level, and therefore highly related to it, the free/reduced price lunch percentage is useful to researchers from an analytic perspective. (para. 5)

Given that enrollment in the National School Lunch Program data are more easily accessible than other poverty measures and because it has been proven to be an acceptable proxy for low SES, that is how low SES is identified in this study.

Free and reduced-price school meals program eligibility: Created by the National School Lunch Program and refers to children from families with income at or below 130% of the poverty level. Families with incomes between 130% and 185% of the poverty level are eligible for reduced-price meals, for which students can be charged no more than \$0.40. Because these percentages are close to the definition of low income, free and reduced-price school meal program eligibility is often used as a proxy for identifying students who live in low-income households.

Low socioeconomic status: Low SES is hard to accurately measure because it is a combination of factors. It is most easily correlated to poverty. Poverty is defined by the U.S. Census

Bureau (2017) as the total household income below a defined threshold, given the number of people living in the home. The defined income threshold is the same across the United States and is adjusted for inflation every year. In 2020 the total household income for a family of four would have to be below \$26,200 to be identified as living in poverty. Low income is defined as earning up to 200% (or two times) that of the identified poverty threshold. Low SES is also defined in many studies as families in the bottom 20% of income earners nationwide; whereas, high income refers to families who are in the top 20% of income earners nationwide. Those families who fall between the bottom 20% of the national earned income level and the top 20% of the national earned income are the middle-income families. Families living in low income/low-SES households experience very similar living experiences and disadvantages as families living in poverty (Day et al., 2016).

Matriculation: This is used to describe when students enroll in a college or university after earning their high school diploma or equivalent. For this study, matriculation is used to describe any enrollment into a postsecondary educational program.

Postsecondary educational program: This refers to any school or training program after high school that leads to a degree or certification, which includes a four-year university or college, a two-year college, or trade school. Military service sometimes falls into the category of postsecondary learning because service members usually receive certifications and training that qualify them to attain higher paying jobs outside of the military. For the purposes of this study, enlistment in one of the branches of the military is considered a postsecondary educational program. This study will not differentiate

between postsecondary educational programs, but will count all of the above as a postsecondary educational program.

Socioeconomic status: For the purposes of this study, SES is defined using the descriptions according to the American Psychological Association. The American Psychological Association, Task Force on Socioeconomic Status (2007), defined SES as a combination of three variables: education, wealth, and occupation. Education was identified as the most influential factor in determining SES. It is not just years of education, but rather degrees conferred or certifications earned that matter most (Backlund et al., 1999). The task force identified wealth as “a better indicator of socioeconomic position over time [compared to a] single measure of income, because wealth reflects intergenerational transfers as well as a person’s own income and savings; greater wealth may buffer the effects of income fluctuations” (p. 15). Finally, the task force described occupation as not just having a job, but the type of job. For example, high-SES occupations require more cognitive challenge, but allow for more control of work environment and hours compared to low-SES occupations, which tend to be more physically demanding and provide less control over hours and environment (Backlund et al., 1999).

Conclusion

One of the goals of school leaders is to create a culture in which all students are prepared to continue their learning beyond high school. One measure of success would be to increase the number of students who access higher educational opportunities. Unfortunately, students from low-SES families are not accessing postsecondary educational programs at the same rate as their peers who are not from low-SES households. This study adds to the body of knowledge by identifying if there is a disparity in the numbers of students from low-SES households and those

not from low-SES households who do not access a postsecondary educational opportunity immediately after high school, specifically in suburban areas. Other studies have identified barriers such as financial constraints, lack of knowledge of the application process, and lack of support. This study also adds to the body of research around what factors influence students' postsecondary decisions.

CHAPTER II

REVIEW OF LITERATURE

To better understand the problem of the difference in matriculation rates between students from low-socioeconomic (SES) households and students not from low-SES households, it is important to identify what research already exists around current high school students and their plans for postsecondary learning. This review of literature first examines the data that demonstrate the problem, including current matriculation rates of students from various demographic groups, which shows that students from low-SES households are less likely to attend a postsecondary educational program. Other factors are identified that are often associated with SES such as gender, race, and geographic location. Specifically, students who are White and Asian are more likely to attend postsecondary educational programs, as are females, and students living in suburban areas. Then, researched barriers including those associated with growing up in a low-SES household, the rising cost of college, the various financial aid opportunities, and struggles with the college application process are shared. Next, programs and supports are identified that help low-SES students in preparing for postsecondary learning including a college-going culture, partnerships with high schools and colleges, and concurrent enrollment classes. From there, student aspirations and expectations are examined as well as the role of having expectations for learning beyond high school on student postsecondary planning. Finally, the literature review concludes with an identified gap in the research which includes finding little research on students from suburban areas in schools with a high college-going atmosphere, and the need to identify what factors influence their plans.

Graduation Rates and College Enrollment Data

The high school graduation rate in the United States was 85% in 2016 and was the highest it had ever been since it was first recorded in 2011 by the National Center for Educational Research (Kena et al., 2016). In 2014, the adjusted cohort graduation rate, or on-time graduation rate for students who entered high school at the same time, was 84% in the United States, which was up from 83% the year before and up 5% since 2011. Asian/Pacific Islanders had the highest graduation rate at 89%, then in descending order by percentage were Whites (87%), Latinx (79%), Blacks (73%), and Alaskan/Native Americans (70%) (Kena et al., 2016).

The National Center for Education Statistics reported that 69.8% of the 2.9 million high school completers in 2016 enrolled in college by the following fall, which is known as the immediate college enrollment rate (McFarland et al., 2017). It is defined as the percentage of students who complete high school or earn their General Equivalency Diploma and who enroll in two- or four-year colleges in the fall immediately following high school graduation (McFarland et al., 2017). There is an alarming difference in postsecondary enrollment between students from low-income families and students from middle-income and high-income families in that 82.5% of students from high-SES families enrolled in a two- or four-year college, which was much higher than the rate for students from low-SES families where only 65.4% enrolled in a two- or four-year college (McFarland et al., 2017). The disparity between students from families of different income levels who enter post-high school educational programs has increased between 2008 and 2013, when the percentage of students from low-SES families who entered a two- or four-year college dropped by 10% compared to only a 3% drop on average (Nellum & Hartle, 2015).

The difference in postsecondary enrollment for students from households of different leveled SES is also much wider than the postsecondary enrollment disparity between races, where according to the same immediate enrollment data, White enrollment (68%) was only slightly higher than Black (63%) and Latinx (62%) (McFarland et al., 2017). The aforementioned postsecondary enrollment difference of 5% to 6 % between races was not considered significantly different compared to the disparity between students from households with different incomes (Nellum & Hartle, 2015). During the same time period, the postsecondary enrollment difference between students from low-SES and high-SES households increased, while the difference between Black and White students and between Latinx and White students decreased (McFarland et al., 2017).

Although national data are not available, there are some state data on the college-enrollment rates of students of different races and their SES. According to the Colorado Department of Higher Education's report on college-going rates of high school graduates from 2015, 65.4% of White (non-Latinx) students not from low-SES households, as defined as students who were not enrolled in the free and reduced-price school meals program, went to college, compared to 42.3% of White students who went to college and were from low-SES households, as defined in the same study as being enrolled in the free and reduced-price school meal program (Zaback, 2018). The 23.1% difference between college going rates of White students from families of different income levels represented the largest disparity of any race when comparing those factors. In this same study about students in Colorado, Black students had the smallest disparity between college-going groups with 57.5% of students not from low-SES households going to college and 50% of students who were from low-SES households going to college. Zaback (2018) did not report on the disparity of Asian students (4.5% of the graduating

population) and students of two or more races (3.4% of the graduating population) who went to college from low-SES households and not from low-SES households. Latinx students in Colorado had the lowest overall college-going rates with 49.1% of students not from low-SES households going to college and 38.4% of students from low-SES households who enrolled in a college (Reed, 2017). Based on the aforementioned college enrollment data, it seems plausible that in Colorado, there could be a correlation between a student's household SES and college-going rates with Whites having the largest disparity between groups, 22.9%, Blacks with a disparity of 8%, and Latinx students with a disparity of 9.1% (Zaback, 2018).

Factors Impacting Students from Low-Socioeconomic Families

There is ample research and data identifying academic struggles for students from low-SES families (Atherton, 2014; Backlund et al., 1999; Coleman, 1966; Dixon-Román, Everson, & McArdle, 2013; Reardon, 2011; Rothstein, 2004). Levin (2007) reported “socioeconomic status remains the most powerful single influence on students' educational and other life outcomes” (p. 75). That claim does not put the blame on the family because of their socioeconomic status, but rather it is a compilation of many factors associated with low-SES like their neighborhoods and the quality of their schools and teachers. Other researchers argue that SES is not a single mechanism or influence on a student's academic success, but it is correlated with many other variables (Dixon-Román et al., 2013; Palardy, 2013; Reardon, 2011). Additionally, research shows students from low-SES households tend to live in low-income neighborhoods and attend low performing schools (Brooks-Gunn & Duncan, 2007; Morgan, Farkas, Hillemeier, & Maczuga, 2009). Another factor that is added to the stratification of SES is the parents' level of education and how there is a correlation between parents who may have not advanced very far in their formal schooling and how it is harder for them to support their children in school for a

variety of reasons including busy work schedules, lack of understanding of how to best navigate the school system, and less modeling of the importance of school (Brooks-Gunn & Duncan, 2007). Finally, a recent study by McDade et al. (2019) found that SES may have an impact on deoxyribonucleic acid (DNA) that can promote many of the challenges associated with low SES. Their study identified 10% of the DNA that could be altered by poverty, but the impact on education and future health are not fully understood.

Some researchers have found that the SES makeup of the school has more of an influence on a student than the SES of the individual student or their family (Aikens & Barbarin, 2008; Chesters & Daly, 2017; Perry & McConney, 2010; Reardon, Weathers, Fahle, Jang, & Kalogrides, 2019; Sirin, 2005). Sirin (2005) found from a meta-analysis of research that covered over 100,000 student assessments from around the United States in the 1990s that low income students who attended schools with a higher mean SES outperformed peers from schools with a lower mean SES. More recently, Reardon, Weathers, et al. (2019) collected data as a part of a meta-analysis from millions of student assessments in thousands of schools over that last decade that implied higher poverty schools on average provided a lower quality educational opportunity. These data are similar to what Rosa (2006) reported when comparing the college-going rates of students in schools with a low college-going culture compared to students from schools with high college-going culture in that the school environment plays an important role in student success.

Of the many obstacles that impede impoverished students' access to postsecondary education, the mental barrier that creates fears of both the unknown cost of college, along with the trepidation of accruing a disproportionately massive amount of debt, are known to have the greatest impact on subsequent decisions about furthering education beyond high school

(Edwards, 2016; U.S. Department of Education, 2015). The financial anxieties are further exacerbated in light of the trend where the increase in the cost of college severely outpaces the rate of inflation (Hoxby & Turner, 2015; Musto, 2017; Nellum & Hartle, 2015). Despite the apprehension created by valid financial realities, there are financial support programs and resources allocated with the intent to overcome the already identified barriers for students from low-SES families. Between 2008 and 2014, financial aid opportunities increased from \$82 billion to \$123 billion, after adjusting for inflation (Nellum & Hartle, 2015). Musto (2017) reported that even with that financial aid increase of 41 billion dollars, the percentage of low-income college students went from 55.9% to 45.5% in 2013 with no clear answers as to why the percentages dropped, only speculations as colleges try to increase recruiting efforts of students from low-income families (Musto, 2017). What Musto (2017) found is alarming because even with the number of students from low-income homes on the rise and making up a larger percentage of the overall population, the percentage enrolling in college is still dropping.

There are also many programs that help with free financial advice, support completing Free Application for Federal Student Aid applications, and loan repayment plans to make college financing more accessible with a proven increased college attendance rate (Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2012). Programs like the Educational Opportunity Fund have proven to support students from demographic groups that are under-represented at colleges and universities (Clauss-Ehlers & Wibrowski, 2007). Finally, Nyhan (2015) found that programs that aimed to connect with students and provide frequent reminders helped students from all demographics pursue college by completing college applications. There are many other programs available to students to aid them in navigating the process and how to pay for postsecondary learning, but are proving to only make small differences (Musto, 2017).

In addition to financial supports, there are other programs aimed to help students from low-SES families access postsecondary educational programs. Many colleges and universities are reaching out to current high school students to not only support them in applying to school, but also providing supports throughout their time at the college or university (Thomas, 2014). Many high schools are adding concurrent enrollment courses, Advanced Placement, and Early College High School programs as a way to help all students build confidence in taking college-level classes, earn college credit for free or at a reduced rate, and get a head start on their postsecondary degree or certification (An, 2013). Some high schools are using career and college planning programs like Naviance®, College Board®, and Common App® to help students identify potential careers and colleges, and then eventually apply to those programs. Finally, some schools are offering comprehensive college transition programs to support students from marginalized demographics in managing the transition and life changes that go along with college (Cole, Newman, & Hypolite, 2019).

As mentioned above, there are many supports for all students and some specialized programs aimed to encourage more students from low-SES households to apply for college. Even with all of the available financial support and support from local high schools and higher education institutions for students from low-SES households, there is still a significant disparity in postsecondary matriculation between students from households of different SES.

Factors Associated with Socioeconomic Status

The SES is made up of more than just a family's overall income. There are many other factors that are oftentimes connected to SES including, but not limited to, race, gender, and type of community in which students from impoverished homes live (American Psychological Association, Task Force on Socioeconomic Status, 2007). The association of SES with race,

gender, and equal rights is also referred to as intersectionality. Intersectionality was first coined by Crenshaw (1989) in a paper to identify differences in the feminist movement between Black women and White women as a way of highlighting the different experiences and oppressions women faced given their individual social stratifications. Over the years the term has been expanded to highlight the interconnected nature of social stratifications created by race, class, and gender and how those overlapping systems create discrimination and disadvantage (Carastathis, 2016; Intersectionality, 2019). Although the term intersectionality is not used directly in this study, it is important to recognize how demographic factors overlap and play a role in SES which influences a student's life and their decisions.

Race

Racism and poverty are linked in many ways when breaking down achievement gaps (Reardon, Kalogrides, & Shores, 2019; Reeves, Rodrigue, & Kneebone, 2016). According to the American Psychological Association (2014), 39% of Black children and 33% of Latinx children are living in poverty, which is more than double the 14% poverty rate for non-Latinx, White, and Asian children. Given that information, a disproportionate number of minoritized individuals are living in poverty with racism being a direct cause of SES amongst minoritized populations. Williams and Williams-Morris (2000) claimed racism plays a causal role in SES because Blacks have been discriminated against in education, access to occupations, and pay, mostly because of how Whites have viewed them. Williams and Williams-Morris compared how Whites viewed other races, and Blacks were overwhelmingly viewed more negatively than any other racial group. Race-based perceptions create and perpetuate implicit and explicit biases that are likely to lead to decisions that negatively impact opportunities for people who are not White. More recently, Flynn, Warren, Wong, and Holmberg (2017) shared how racial discrimination has

limited the opportunities for Blacks to gain better employment, higher paying jobs, and the benefits that may come from those opportunities. Given the way minoritized individuals have been treated in the past, there is a direct causation between race and SES.

When looking at academic achievement disparities and race, Reardon et al. (2014) cited National Assessment of Educational Progress testing data from 2010 to show that the Black–White achievement gap and the Latinx–White achievement gap have decreased since 1999, but is still present. Even though the racial academic achievement gap has decreased, there is still an overlap between the two factors of SES and race. Fryer and Levitt (2006) reported that socioeconomic factors explain 85% of the Black–White math achievement gap in kindergarten and 100% of the reading disparity at the start of kindergarten. However, those achievement data begin to change because as children get older academic achievement gaps widen, based on data analyzed from the Early Childhood Longitudinal Study. Similar results are true for Latinx–White achievement gaps at the kindergarten level, but again the academic achievement gaps widened as students progress through school. The authors did acknowledge that many of the factors between SES and race are interconnected and that Black and Latinx students from the sample of 20,000 grew up in households with less than favorable conditions for academic success (Fryer & Levitt, 2006). White et al. (2016) studied the impact of race and SES on the achievement gap and found that SES accounted for 52% of the variance in language and 59% of the variance in math test scores. Even though there is a racial achievement gap, the impact of SES is still a critical factor in the achievement gap (Kuhfeld, Gershoff, & Paschall, 2018; Reardon, Weathers, et al., 2019). The National Student Clearinghouse (2014) found that the difference in college-going rates was greater when schools were made up of more students from low-SES households compared to when schools were made up of more minoritized student populations.

Gender

There are many ways that gender interacts with SES. In terms of school, the gender disparity shows mixed results. Females outperform boys on reading tests, graduation rates, school given grades, and postsecondary degree attainment. However, males perform better on standardized tests in the areas of math and science. There is not a clear explanation for why that is the case, with there being some speculation it could be due to stereotypes, gender expectancy models, social factors, and biological factors related to attention and activity (Voyer & Voyer, 2014).

Once out of school and into the workforce, a shift from a female advantage to a male advantage is illustrated in that males make more money on average compared to females in similar roles, and males tend to hold higher level positions (Graf, Brown, & Patten, 2018; Proctor, Semega, & Kollar, 2016). Currently in the United States the female to male earnings ratio is 81.9% (U.S. Department of Labor, Bureau of Labor Statistics, 2017). *The Lancet* reported,

An abundance of evidence shows that women face structural barriers at work. Gender bias and rigid gender norms perpetuate traditional leadership cultures that reinforce obstacles to women's advancement. Women are routinely judged less qualified and competent than men. ("Closing the Gender Pay Gap," 2018, p. 1)

Some of the most common variables that lead to wage disparities are the trend that women tend to work part-time jobs more frequently than men, women tend to take more time off for child care and elderly care, and women tend to choose more family-friendly work environments and increased health benefits which can lead to positions that pay less (CONSAD Research Corporation, 2009). The persistent implicit gender bias in the workforce leads to women earning

a lower income and a greater likelihood of falling into a lower SES (American Psychological Association, Task Force on Socioeconomic Status, 2007; Proctor et al., 2016).

How does postsecondary learning and degree attainment intersect with gender? Wells, Seifert, and Saunders (2010) found that over the last 35 years, children most likely achieve the same level of education as the parents of the same gender. For example, a boy would set postsecondary expectations that matched his father, whereas a girl would set expectations based on her mother. According to Magnuson (2007), student academic success and postsecondary likelihood is more about the mother's level of education. Either way, the setting of expectations based on gender roles could lead to perpetuating the cycle of poverty for women. However, Wells et al. (2010) found there to be a shift in the gender disparity in that women were following through on their expectations for postsecondary learning regardless of race or social class. Turley, Santos, and Ceja (2007) supported that idea by finding more women applied to four-year colleges than men, regardless of social background. Postsecondary enrollment data since the 1970s have shown the college application gender disparity continues, and in 2015 women made up 56% of the total undergraduate enrollment in degree granting postsecondary institutions (National Center for Education Statistics, 2017). Based on the data, it seems research is still mixed on how gender and SES are correlated and there are many mechanisms that are activated when looking at the intersection of gender and SES.

Demographic and Population Changes in Suburban, Urban, and Rural Areas

There is not an official federal definition of a suburban area, but 53% of Americans claim that is where they live, compared to the 27% who identify themselves as living in urban areas and 21% in rural areas (Bucholtz & Kolko, 2018). When looking at how SES intersects with

these three areas, there are some important trends related to students from low-SES households. According to Bishaw and Posey (2016), 16% of the people living in urban areas are living in poverty and 13.3% of people living in rural areas live in poverty. Since the year 2000, suburban areas have seen a 51% increase in people living in poverty, whereas urban and rural communities have only had increases of 31% and 23%, respectively (Parker et al., 2018). It is not just the percentages that have changed nationwide, but the overall number of people living in poverty has increased as well since 2000, with 23 million people living in poverty in suburban areas in 2016, 16 million in urban areas, and 8 million in rural areas in the same timeframe (Parker et al., 2018). Data show that more people are living in poverty in suburban areas than in any other area in the country. We are in the middle of a shift of poverty from urban and rural areas to suburban neighborhoods that began in the 1970s, and it is increasing at a fast rate in the 2000s (Bucholtz & Kolko, 2018; Parker et al., 2018).

Many differences exist between low-SES families in urban, suburban, and rural areas. Kneebone (2017) reported the racial makeup of suburban poverty was predominantly White, in that “70 percent of poor whites in the nation’s largest metro areas live in the suburbs compared to 52 percent of poor Asians, 47 percent of poor [Latinx], and 41 percent of poor [Blacks]” (para. 13). However, there is no good explanation for why those demographic disparities exist. Researchers point to a wide variety of factors that may be geographically specific to a certain metropolitan area (Parker et al., 2018). Another important difference in the three areas is the number of impoverished children. In urban and suburban areas children make up over 33% of the people living in poverty (Kneebone, 2017).

For people living in poverty in the suburbs, there are some unique challenges. According to Kneebone and Berube (2013), every suburb is different in its own way, but most people who

are poor and living in suburban areas have access to better housing, higher achieving schools, safer neighborhoods, and an overall better quality of life compared to the poor living in cities. Despite the advantages, impoverished people living in suburban areas have to manage longer commutes to work with less access to public transportation (Southern Education Foundation, 2015).

When comparing the college-going rates for students in different communities, the National Student Clearinghouse (2017) studied over one million high school graduates in 2016 and found that 67% of students from suburban neighborhoods enrolled in a college, compared to 62% of students from urban areas, and 61% of rural areas. In addition, the National Student Clearinghouse (2014) found that once school level SES was controlled, there was not a significant difference between the college-going rates of schools located in suburban, rural, and urban areas. Even though the college-going numbers seem pretty close, the National Student Clearinghouse (2014, 2017) identified the limits of their study as overrepresenting numbers of students from urban and low-SES schools as well as only representing a sample of the overall national population.

The SES is a broad term that includes many variables. Known factors that make up one's SES is social standing, occupation, level of income, and race. Racism has created many barriers for some groups that have prevented them from pulling out of the cycle of poverty. Gender is another demographic variable that is often correlated with SES, but the research is mixed and the impact of gender on SES is not fully understood. Finally, the type of community a family lives in can also create adverse conditions, with each community posing limitations that are harder to overcome for people living in low-SES households. All of these factors intersect with one

another to create a complex system of mechanisms that when layered on top of one another impact a student's education, goals, and future planning.

College-Going Culture

In addition to individual, demographic, socioeconomic, and geographic factors, the culture of the school community is an important element that intersects with a student's experiences and decision making in regard to pursuing a postsecondary educational program. The Great Schools Partnership (2013) defined school culture as, "the beliefs, perceptions, relationships, attitudes, and written and unwritten rules that shape and influence every aspect of how a school functions" and then added that the culture includes, "the degree to which a school embraces and celebrates racial, ethnic, linguistic, or cultural diversity" (para. 1). College-going beliefs are a shared value of the students, staff, and community.

It is one of the roles of the school leaders to help create and promote a positive school culture that supports the success and safety of all learners. Some components of a positive school culture are strong relationships between its members, honoring positive and healthy behaviors, physical and emotional safety, high academic expectations, equitable distribution of resources, collaborative decision making, open communication, and a supportive environment that protects opportunities to learn (Chapman, Fitterer, & Young, 2016; Corwin & Tierney, 2007; Great Schools Partnership, 2013; Grodsky & Rieglecrumb, 2010).

One of the positive cultural expectations for many high schools is for students to attend a postsecondary educational program after graduation (Athanasios et al., 2016; Farmer-Hinton, 2011; Goyette, 2008; Grodsky & Rieglecrumb, 2010; Hill, 2008; Knight, & Duncheon, 2019; National Student Clearinghouse, 2014). Corwin and Tierney (2007) pointed to a college-going culture as one that inspires and supports students to prepare for, apply to, and enroll in college.

There are many resources and activities that school and school district leaders can provide to students to create a college-going culture: guidance counselors, frequent visits from college recruiters, parent information nights, financial aid guidance, student advisory programs, college entrance exam test prep programs, and a schoolwide belief that all students can attend a postsecondary educational program (Athanases et al., 2016; Burbidge, Horton, & Murray, 2018; Chapman et al., 2016; Grodsky & Rieglecrumb, 2010; Mehan, Chang, Jones, & Mussey, 2012). School- and home-based resources and belief systems combine to create a system of supports that promote college-going behaviors and expectations in all students.

Aspirations and Expectations for Postsecondary Learning

Attending a postsecondary learning program like college is an aspiration for most students and their parents (Elliott, 2009). In a 2016 longitudinal study of a representative sample of high school students, 76% of students expected to complete a postsecondary degree of some type (Radford, Fritch, Leu, & Duprey, 2018). Having strong aspirations, and more importantly expectations, is a powerful factor in a student's likelihood to apply to a postsecondary educational program (Cabrera et al., 2006; Elliott, 2009; Kena et al., 2016; Rosa, 2006). Many variables can impact a student's plans to attend a postsecondary educational program (McDonough, 1997). One of the variables that influence a student's postsecondary plans is parents' expectations and aspirations (Brusoski, Golin, Gladis, & Beers, 1992; Gregory & Huang, 2013). Jacob (2010) identified a difference between parental aspirations and expectations. Aspirations were defined as ideal goals, whereas expectations were defined as realistic goals. Additionally, Jacob found that parents' aspirations for their children to attend college were much higher than their actual expectations. The study conducted by Jacob consisted of a survey of 598 parents and students, mostly 9th and 10th grade, from two suburban middle

schools and three suburban high schools in the Midwest. The participants were given the Scale of Educational Aspirations and Expectations of Adolescents. This study did not look at differences in income, or race, but it did include parents' level of education which was strongly correlated with student and parent expectations for postsecondary learning and with college-going planning behaviors. It is also important to note little is known about the makeup of the schools, other than the students were enrolled in a college readiness program. Regardless, the results provide a good understanding of the differences between aspirations and expectations.

Findings show that expectations from important adults in a child's life exert a significant influence on youth academic competence and performance (Benner & Mistry, 2007; Brusoski et al., 1992; Child Trends, 2012; Farmer-Hinton, 2011; Goyette, 2008; Gregory & Huang, 2013; Grodsky & Rieglecrumb, 2010; Jacob, 2010; McDonough, 1997; Wilder, 2014). Specifically, Wilder (2014) found that parental expectations were based on parents' beliefs and attitudes toward school, teachers, subjects, and education in general, and those values were shared with their children. Hamrick and Stage (2004) reported that parents' expectations were the strongest predictor for a student's predisposition for attending college.

The data on parental expectations are mixed, especially when comparing results from various demographic groups. Lippman et al. (2008) found that 91% of parents who took the Parent and Family Involvement in Education Survey expected their child to attend college or continue their learning beyond high school. The same trend appears to be true in families regardless of race or ethnicity (Child Trends, 2012; Wilder, 2014). However, Lippman et al. found a difference between parental expectations for earning a college degree, in that 83% of parents from high income households (earning more than \$75,000) expected their child to complete college, while only 51% of parents from a household with an income of \$25,000 or less

and 56% of parents from a household with an income of \$25,001 to \$50,000 expected their children to earn a college degree. Postsecondary expectations can change over time, especially as students get closer to high school graduation. Bozick, Alexander, Entwisle, Dauber, and Kerr (2010) found that college-going expectations of parents from low-SES households were similar to the expectations from high-SES households in grade four, but those expectations gradually shifted apart by grade 11. The authors went on to find that parents of students from low-SES households tended to shift their expectations based on a student's grades, fear of financial burden, and lack of understanding of the application process (Benner & Mistry, 2007).

In addition to parental expectations, some of the most powerful variables in determining a student's likelihood of attending a postsecondary educational program are the student's own perceptions, beliefs, and expectations for their future and continuing education (Cabrera et al., 2006; Kena et al., 2016; Rosa, 2006). Kena et al. (2016) identified this phenomenon as future orientation and later defined it as, "a set of cognitive, attitudinal and motivational constructs that lead individuals to form expectations for the future, set goals and aspirations, and give personal meaning to future events" (p. 778). Grodsky and Rieglecrumb (2010) supported the notion that expectations play an important role in the postsecondary process by pointing out that almost all students plan to go to college at some point in their academic lives, but not all of them do. Rosa (2006) found 11th grade students had higher aspirations of attending a four-year college than 12th grade students because as they neared graduation and final planning, they tended to adjust their expectations. Cabrera et al. (2006) stated the following: "When students develop college plans during or prior to junior high school, it triggers a series of behaviors that puts students in a better position to secure the academic, social, and economic resources needed for the successful accomplishment of that goal" (p. 81). Cabrera et al. pointed out the importance of student

expectations for attending college because of the mechanisms and behaviors that follow once they know their path. College-going behaviors include taking college preparatory classes, working closely with the school counselor on scholarship applications, having discussions with family about the college plans, and more. In addition to students making decisions and plans, when students are supported and encouraged to attend college by parents, teachers, counselors, peers, and community members, they are more likely to attend. Finally, the authors found that academic achievement level, as in grade point average (GPA), advanced coursework, and class rank, were also very important factors in a student setting an expectation for attending college after high school (Cabrera et al., 2006).

Some research shows a difference in expectations between students from different SES households. Grodsky and Rieglecrumb (2010) wrote, “even though the expectation of college attendance is almost universal, economically advantaged students are more likely to take this belief for granted” (p. 17). They went on to discuss how children from more economically advantaged households tend to have parents who experienced college and are exposed to more conversations about college and the importance of a postsecondary education with less fear of barriers like finances, knowledge of the process, and more (Grodsky & Rieglecrumb, 2010). The opposite seems true for low-SES youth who tend to be less optimistic about their future, have lower educational expectations, and have more barriers to careers compared to their higher income peers (Grodsky & Rieglecrumb, 2010; Johnson & Reynolds, 2013; Kena et al., 2016). Johnson and Reynolds (2013) wrote about the importance of a trajectory of persistence and how students from high SES households start with college-going expectations at a young age and stay on or near that trajectory compared to students from low-SES households who do not have the

same level of persistence. Many students have high aspirations for attending college, but they come to believe college is too expensive and financial aid is too hard to figure out (Rosa, 2006).

Berzin (2010) conducted one of the largest studies around the topic of student expectations for postsecondary learning. The study was conducted by surveying over 11,000 low income students. The instrument used was a 220-item School Success Profile questionnaire. Berzin found that gender, age, and race were all linked to higher aspirations for attending college in females, non-White or Asian students, and younger students. In addition to the demographic links identified above, parents' level of education or current job status was not as important in creating high expectations for postsecondary learning compared to parents' behaviors at home that support college-going behavior like attention to schoolwork and talking about expectations for attending college. Finally, the author identified that students who had early school success and positive feelings about school were more likely to have higher expectations for postsecondary learning. However, the study only looked at students from low-SES households and did not compare their responses to students not from low-SES households. The author also identified one of the limitations of their study was that it only asked about four-year colleges instead of the many other postsecondary educational programs and did not identify the type of communities the participants are from.

Barriers to Applying for Postsecondary Educational Programs

There are already some identified reasons for why students from low-SES households do not apply for college, or if they do apply, choose not to attend. College Atlas (2019) identified the following six reasons why students choose not to go to college: high cost, no one in the family has gone before, uncertainty over what to major in, fear of the academic rigor, not enough time, and fear of not fitting in. One study found parents with lower levels of formal education

and lower income had perceptions that college was too expensive and did not know how to go about accessing financial aid (Deming & Dynarski, 2009). The same parents all wanted their child to attend a four-year college, but were not sure how to support their child in achieving that goal (Jacob, 2010; Rosa, 2006). The process of applying to college is not an intuitive one, especially for first generation college-going students. In regard to the lower number of students from low-SES households applying for postsecondary learning programs, many students get lost in the application stages because the processes can be complicated or they lack adequate support from their high school or from the college admissions office (Hoxby & Avery, 2013).

One of the biggest reasons many students do not pursue a postsecondary educational program is because of the cost (Drotos & Cilesiz, 2016). The average cost for in-state tuition and fees of a public four-year university in the United States is \$21,950 and \$12,720 for a public two-year college (College Board, 2019). It is important to note that the average grant aid and tax benefit per student was \$6,570 in 2018 (College Board, 2019). That aid helps reduce the average costs, but still leaves a substantial bill for students with the average amount owed by 2017 college graduates who earned a bachelor's degree being \$28,500 (Ma, Bentley, & Storey, 2019). Unfortunately, many students are not applying for financial aid. In 2017, 37% of students did not apply for free financial aid and 49% of high school graduates would have qualified for a Pell grant which does not need to be repaid (College Atlas, 2019). In addition to the identified tuition and fees, there are many other costs and living expenses that students have to account for that make college more expensive (Drotos & Cilesiz, 2016). Since many students are working and still struggling to make ends meet in high school, the thought of taking on more debt and covering living expenses is concerning.

Another common reason that students do not apply for postsecondary educational programs is because they do not understand how to go about applying (Hoxby & Avery, 2013; Rosa, 2006). The college application process has become more complex and can be a barrier for some students, especially those from low-SES households (Christian, Lawrence, & Dampman, 2017; Oreopoulos & Ford, 2019). Many schools have online options, and schools are seeing an increase in applications when students use web-based programs like Naviance© and Common App© to help them identify schools and apply (Christian et al., 2017). However, web-based college application programs have limitations in that they require internet access, subscriptions, and knowledge of school staff to help support students throughout the complex process. To support students in the application process many schools are implementing career and college counseling programs, mentors, classes, or centers in their buildings (O'Sullivan, Mulligan, Kuster, Smith, & Hannon, 2017).

Finally, there are many fears that recent high school graduates face, especially for students who come from a family in which no one has gone to a postsecondary educational program (College Atlas, 2019). For some students who may be the first in their family to apply, they have fears over not knowing what college is like, how to apply, or even where to start the process (College Atlas, 2019; Rosa, 2006). Previous academic success has been proven to impact student expectations, and some students are worried they will not be able to handle the academic rigors of higher education (Berzin, 2010). Finally, some students feel like they will not fit in or are scared to make new friend groups (College Atlas, 2019).

Identification of the Gap in the Literature

It is well documented that the number of children living in low-SES households is on the rise, especially in suburban areas (Rank & Hirschl, 2019; Southern Education Foundation, 2015).

The literature clearly identifies the academic struggles that students living in low-SES households tend to face (Atherton, 2014; Backlund et al., 1999; Coleman, 1966; Rank & Hirschl, 2019; Reardon, 2011; Rothstein, 2004). Furthermore, there is a persistent gap between postsecondary matriculation rates based on the student's SES level. These data create a sense of urgency for school leaders to adjust the current educational system to support all students, given the changes in the world economy with more and more jobs requiring students to earn degrees and certifications beyond a high school diploma. Many of the current studies have called for more research around the disparity between groups of students in planning to attend postsecondary educational programs and to add to the sample size from previous studies (Ahearn et al., 2016; Berzin, 2010; Evans, 2016; Grodsky & Rieglecrumb, 2010). Reardon et al. (2014) reported there is still much to learn on how to best address various barriers families in low-SES homes have to face when helping their children pursue a postsecondary educational program. One area that needs more research is around the difference in attending postsecondary educational programs between students from different SES-leveled households in suburban communities as much of the research has been conducted in urban and rural areas or by collecting nationwide data. In addition to the need to learn more about the disparity in attending postsecondary educational programs of students from different SES-leveled households in suburban areas is the need to understand how school culture influences those decisions and why some students from low-SES households who attend schools with high college-going cultures choose not to attend postsecondary educational programs.

Still more information is needed to help solve the problem of the disparity in postsecondary educational program enrollment between students from different leveled SES households (Berzin, 2010; Turley et al., 2007). It is clear that students from low-SES households

in urban areas tend to live in low-SES neighborhoods and attend schools with a high percentage of low-SES students and limited resources (Brooks-Gunn & Duncan, 2007). Given the limited resources, expectations, and other factors, college matriculation rates remain low (Evans, 2016; Sokatch, 2006). Rural areas also have high numbers of low-SES households and lower matriculation rates for other reasons like the lack of colleges within a reasonable commuting distance; expectations for staying home and working in local agriculture and industry; and poorly equipped school, college, and career centers (Ardoin, 2018; Crow, 2010; McCollough, 2011). However, there is little information on students from low-SES families in suburban communities who attend schools with a smaller percentage of students from low-SES households. The National Student Clearinghouse (2014) provided one of the few studies comparing the college-going rates while controlling for SES and geographic location, but they did not include student expectations or other forms of postsecondary educational programs like trade schools or the military. Identifying if there is a difference in expectations for attending a postsecondary educational program between students from low-SES households and students not from low-SES households when they live and attend schools in suburban areas with higher numbers of classmates attending a postsecondary educational program would be useful to researchers and school leaders, especially those in suburban areas.

The second gap in the literature is why students have the postsecondary expectation they do and what factors influenced their plans. Currently the research seems to be conflicting. For example, Rowan-Kenyon, Bell, and Perna (2008) and Ross (2016) found that most parents have the expectation of their children to attend college. However, if the expectation is the same regardless of household SES, then why is the disparity in postsecondary educational program enrollment so large? Diemer and Ali (2009) and Grodsky and Rieglecrumb (2010) found

students from higher SES backgrounds tend to be more successful in developing career aspirations compared to students from lower SES backgrounds. Having positive expectations for postsecondary learning can play an important role by motivating impoverished populations to overcome some of the negative effects of poverty (Gregory & Huang, 2013; Rutter, 1995; Sandefur, Meier, & Campbell, 2006). To date, the current literature has failed to provide reasons for the difference in expectations of accessing postsecondary educational programs given students from households of different SES. One question that needs answering is if there is a gap in the expectations of students from households of different SES, then what are the reasons for the different plans in attending postsecondary educational programs? One study by Berzin (2010) used a cross-sectional analysis through a survey and found that demographics such as SES, parental support of positive school behaviors, positive school experiences, and greater social supports all have an impact on student aspirations for going to college. However, Berzin only looked at students from low-SES households and did not compare their responses to students not from low-SES households. Finally, Berzin identified one of the limitations of the study was that they only looked at college as a postsecondary educational opportunity, not other options like two-year colleges or trade-schools, and recommended a more robust measure of postsecondary aspirations.

The demand for a more highly educated workforce is growing, and public high school programs do not offer the advanced technological certifications and degrees required for the available jobs, which forces more students to attend postsecondary educational programs. The literature points to a growing disparity in postsecondary matriculation for students from low-SES families. Compounding the concern is the increase in low-SES families living in suburban neighborhoods. The change in demographic makeup in suburban communities and schools

presents a problem for school and school district leaders in those areas on how to support students from low-SES households in accessing postsecondary educational programs. The changes in demographics, as mentioned above, have created a need for more research around the postsecondary planning process and expectations for students living in low-SES households who attend a suburban high school with a high college-going culture.

Finally, the literature has not fully identified the interaction of SES and postsecondary educational program attainment in suburban area high schools with a high college-going culture. According to the University of Northern Colorado's library database, in the last five years only .4% of the publications in the field of education have the keyword suburban, compared to 3.5% that contain the keyword urban, and 3.2% with the keyword rural. The overwhelming majority are generalized studies that included all low-SES students nationwide (Berzin, 2010) or that look at traditionally poor urban or rural only areas (Rothstein, 2004). Most of the literature focused on matriculation or academic achievement of students from low-SES households does not appropriately examine the demographic composition of the school or the community. One of the benefits of this study is the focus on the suburbs because more than half of the residents in the United States report living in them (Kolko, 2015).

Chapter Summary

A disparity exists between students who access postsecondary educational programs. Students from low-SES households face many obstacles in terms of their education and how to obtain training and education beyond high school. School personnel have put in many strategies and supports to remove obstacles, including increased college and career planning, improved access to information around available financial aid, and have created a college-going culture. Identifying if there is a difference in postsecondary plans based on SES in schools with similar

demographics and identifying what factors influence a students' postsecondary planning choices will help policy makers, school leaders, and families better meet the needs of all learners.

Chapter III outlines the data collection methods as well as the data analysis procedures used.

CHAPTER III

METHODOLOGY

The purpose of this study was to help add to the body of research around high school student plans for attending a postsecondary educational program when they live in suburban areas and attend a school with a high college-going culture. Past data have shown a difference in college-going for students from different leveled socioeconomic status (SES) households.

Identifying what and why a difference exists is important for school and school district leaders.

This chapter focuses on the type of research to be done to address the research questions:

- Q1 In suburban high schools with a strong college-going culture, is there a difference in students' plans for attending a postsecondary educational program based on household socioeconomic status?
- Q2 Is there a difference between students from different leveled socioeconomic status households in the reasons they give for the selection of their postsecondary educational program?

This includes a justification of the quantitative methodology and then identification of the data collection methods for both of the research questions. Included in that description are the identification of the target population and the sampling procedure. The hierarchical logistic regression and profile analysis data analysis procedures and appropriate tests are explained. Finally, ethical considerations are discussed.

Research Design

The methodology used for this study is non-experimental quantitative methods. Creswell (2015) defined quantitative research as a process of collecting, analyzing, and interpreting measurable and observable data to explain why an event occurs. Somekh and Lewin (2011)

acknowledged the power of quantitative research in social science because “quantitative work is ‘social mapping’ and this counting and estimation of prevalence and change is important too for knowing what is happening in the world” (p. 209). Creswell added that quantitative research helps understand and explain differences. This approach is appropriate for this study as the findings of Somekh and Lewin support the use of quantitative research for a study in social sciences, because quantitative data are collected to help create a picture of the expectations of the target population. Somekh and Lewin continued to support quantitative research in social sciences by calling it rich, knowledgeable, reflective, and useful in social applications as well as its traditional post-positivist environment. To help add to the richness of this study, the data from the responses around why students chose the postsecondary plans that they did and what influenced their decisions were analyzed quantitatively and qualitatively to identify any relationships between the variables.

Overview of Methods

The data collection method used in this study was a cross-sectional survey design in the form of an online questionnaire. Surveys can be used to describe trends around beliefs, attitudes, and behaviors in the social sciences (Punch, 2012). Creswell (2015) defined a questionnaire as “a form used in a survey design that participants in a study complete and return to the researcher. The participant chooses answers to questions and supplies basic personal or demographic information” (p. 385). This method relies on the participants to provide identifying information in a confidential and voluntary way. The reason for using an online questionnaire is to collect larger amounts of data in a short period of time. Data collection and research through surveys has been specifically recommended by De Vaus and De Vaus (2013) to use in educational research.

Participants

The target population for this study was current students who attended public high schools in a suburban area. The sample was recruited from three schools along the Rocky Mountain Front Range in Colorado. The schools chosen are a part of a school district whose profile mirrors the overall state averages. This includes a mean Scholastic Assessment Test scale score close to 1,000. The percentage of students qualifying for free and reduced-priced school meals was in the range of 30% to 40%. Racial demographics were in the following ranges: White (55% – 65%), Latinx (25% – 35%), Black (0% – 5%), Asian (0% – 5%), and Two or More Races (0% – 5%). Finally, each of the three schools were identified as having a high college-going culture. Identifying the college-going culture was based on the five characteristics of a college-going culture as defined by Corwin and Tierney (2007). The five characteristics are:

1. Offering college level courses like Advanced Placement and concurrent enrollment.
2. Having expectations that all students can attend college and provide goal setting and support through the school selection and application process.
3. A clear mission statement around students attending postsecondary educational programs.
4. Comprehensive services throughout the college selection and application process.
5. Systems of support that include parents, colleges, staff, and more.

The above identified characteristics of college-going behaviors have been supported by other researchers and cited as a foundation for a college-going culture (Knight & Duncheon, 2019; McKillip, Godfrey, & Rawls, 2013). The College Board and the Center for Educational Partnerships out of the University of California, Berkeley, also have versions of what

characteristics constitute a college-going culture that are similar to those above, but go into further detail. Current principals of the selected schools identified evidence of the characteristics above along with data from the school websites and Colorado Department of Education.

Only students in the 12th grade and in their last year of high school were surveyed, because their postsecondary plans are clearer compared to earlier in their high school career. The sample was 343 participants of the possible 800 who were sent the survey for a response rate of 42.8%. The sample demographics reported in Table 1 include information for 343 participants even though some data sets were missing responses and could not be used in certain calculations. Of those 343 participants, 41% were male, 57% female, and 2% preferred not to answer. Grade point average (GPA) is a continuous variable but to give an idea of the breakdown, .3% had a GPA of less than a 1.0, 7.6% were in-between a 1.0 and 1.9, 32.4% had between a 2.0 and 2.9, 44.9% of the sample which was the largest group had between a 3.0 and 3.9, and 14.9% scored in the highest range by having a 4.0 or better. The racial breakdown in order of largest to smallest was White (61.9%), Latinx (23.3%), two or more races (4.1%), American Indian or Alaskan Native (3.9%), Asian (3.4%), Pacific Islander (2.1%), and Black (1.2%). These percentages add up to more than 100 because it appears many participants identified themselves as multiple (or more than one) race, but did not select the two or more races option. Finally, 36.7% of the participants had qualified for free or reduced-priced meals during their school careers, while 53.4% had not qualified, and 9.9% were not sure if they had ever qualified.

Table 1

Summary of Demographic Variables

Demographic variable		<i>N</i>	% of sample
Gender	Male	140	40.8
	Female	195	56.8
	Prefer not to answer	8	2.3
Grade point average	4.0 – 4.9	51	14.9
	3.0 – 3.9	154	44.9
	2.0 – 2.9	111	32.4
	1.0 – 1.9	26	7.6
	0.0 – 0.9	1	.3
Race	White	255	61.9
	Black	5	1.2
	Latinx	96	23.3
	Asian	14	3.4
	American Indian or Alaska Native	16	3.9
	Pacific Islander	9	2.1
	Two or more races	17	4.1
Low-socioeconomic status	Yes	126	36.7
	No	183	53.4
	Not sure	34	9.9

Note. $N = 343$.

There are many different models for calculating a minimum sample size for a logistic regression. According to Green (1991), the recommended sample size for a logistic regression using the formula $N > 50 + 8m$, where “m” is the number of predictors in a multiple regression analysis given a power of .80 ($\beta = .2$). In this study, there are four independent variables: SES, gender, GPA, and race. Based on the rule of thumb formula above, a minimum sample size of 82 is suggested. However, Green went on to identify if the weight of the study is considered, which

is a standardized coefficient that measures how the dependent variable is changed when the independent variable is changed by one standard deviation, then a minimum sample size should be $N > 104 + m$, where in this case “m” is the same at four independent variables and the minimum sample size would be 108. Peduzzi, Concato, Kemper, Holford, and Feinstein (1996) recommended using a sample size where $N = 10k/p$, where p is the smallest proportion of negative or positive cases and k is the number of independent variables. In this study there were 176 positive cases and 126 negative cases out of the 296 used in the data calculations which make up 42.6% of the cases. Using this equation $10 * 4 / .42.6 =$ a minimum sample size of 94. If following either rule of thumb, the study exceeds the recommended minimum sample size with a medium effect size of .5. A medium effect size is desired for this study because that is considered acceptable in social science research (Cohen, 1992).

Instrumentation

The survey instrument used in this study contained 30 questions and took approximately five to 10 minutes to complete based on the data provided by Qualtrics©. It included measures of various aspects of students’ attitudes and plans regarding postsecondary plans as follows. The instrument was adapted from one used in a previous study (Young, 2017). Modifications were made based on the feedback from classmates and to align with the research questions. The original instrument was part of a pilot study and contained 25 questions. The number of questions was increased to 30 in order to focus on the specific research questions of this study. Some questions were reworded to better align to the research questions of this study. One of the adjustments was changing the demographic question around gender identification to include the prefer not to answer response per the request of the participating school districts’ research approval committee. Question 26, which asked students to enter their GPA, was modified from

the original instrument to change from a text response to a slider. Making an adjustment to a slider with predetermined values helped correct issues with typographical errors from the participants, which caused an issue with incomplete data sets in the pilot data. Other questions were added to the survey including six questions that asked why students chose the postsecondary path they did. The 4-point Likert-type scale was chosen for the aforementioned group of questions as it eliminated the neutral choice, which was selected 10% to 30% of the time in the original instrument used in Young (2017). This technique of removing the middle response in a Likert-type scale was shown to produce more decisive results according to Dalal, Carter, and Lake (2014). Finally, four open-ended questions were added to provide more depth and richness to the data on Research Question Q2 which asked what factors impact a student's decision to attend a postsecondary educational program.

Reliability Data

Prior to running the data analysis on the research questions, the internal consistency reliability of the survey was estimated. The Cronbach's alpha for scores based on responses to 14 questions focused on postsecondary plans in the instrument was $\alpha = .72$, which is considered acceptable in social research according to Cortina (1993). Items not used in the data analysis were removed prior to calculating the reliability. A copy of the instrument can be found in Appendix A.

Variables

This study contained four independent variables. The independent variable for gender was coded as 0 for male, 1 for female, and 2 for prefer not answer. The independent variable of race was dummy coded into two different variables to account for the seven race categories. The categories for race were coded as over-represented races which included White and Asian, and

under-represented races, which included Black, Latinx, Native American, Pacific Islander, and two or more races. Finally, the independent variable of SES was coded as 1 for free and reduced-price meal eligibility and 0 for those who identify as not qualifying for free and reduced-priced school meals. The GPA was the only independent variable that did not need to be coded as the responses in a continuous format.

The dependent variable responses needed to be coded in this analysis. Responses to the first question set containing seven questions were coded 1 for 4-year college, 2-year college, military, or trade-school as those responses indicate some sort of postsecondary education whereas gap year, enter in the workforce, and no plans were coded as 0 because that indicated no postsecondary education. The same was true for question 8 that asked about the highest degree they plan to earn. Responses that indicated a postsecondary education were coded 1 and those that did not were coded 0. These variables were averaged together for each response. Those averages were added into the regression analysis. Finally, questions in the third section were coded 1 for *strongly disagree*, 2 for *somewhat disagree*, 3, for *somewhat agree*, and 4 for *strongly agree*.

Postsecondary Plans

Postsecondary educational programs were defined for the purposes of the current study as any schooling or training program that a student attends after high school which includes attending a 4-year university, 2-year college, trade school, or military service. These were selected based on the type of certifications the labor market would be looking for in prospective employees (Carnevale et al., 2013; Colorado Department of Education, 2014). Students' postsecondary plans were measured in different ways. First, seven items asked the participants to identify their plans for the fall after high school graduation. The next item asked participants to

identify the highest level of education they plan to achieve. The first question set contained seven questions which asked the participants to identify their plans by asking them to respond on a 4-point Likert-type scale with their expectations for attending one of the following seven options: 4-year college, 2-year college, trade-school, military, gap year, entering the workforces, or no plans after high school. The responses that indicated a postsecondary educational program, such as 4-year college, 2-year college, trade-school, and military, were dummy coded as 1 for having a postsecondary educational plan. Those responses not indicating a postsecondary educational program such as gap year, entering the workforce, and no plans were coded as 0. The next question asked participants to identify their highest predicted degree from a drop down menu. Any response indicating a postsecondary educational program was coded as 1, and the other responses were coded as 0. In addition, six items asked the participants about their postsecondary plans and college-going behaviors on a 4-point Likert-type scale. The yes/no questions focused on school choice, progress in the application process, and initial postsecondary planning. Each item was answered with a yes/no response and those responses were coded 1 for yes and 0 for no. The responses from these 14 questions were combined into one variable because the intent of this study is to look at the presence of a postsecondary educational plan and not to differentiate between which educational plan a student chose.

Factors Influencing Postsecondary Plans

Six items asked the participants to identify their attitudes on the six identified influential factors in making postsecondary plans. Responses were answered on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) to the following statements which were based on the work by College Atlas (2019): I can afford college or have a way to pay for it,

going to college is very important to me, I was able to apply to college, I feel I will be successful with the challenge of college, I am worried I will not fit in, and one of my parents went to college and that influenced me to go. This part of the questionnaire was designed to answer

Research Question Q2:

- Q2 Is there a difference between students from different leveled socioeconomic status households in the reasons they give for the selection of their postsecondary educational program?

These responses were compared using a profile analysis that compared students from different leveled SES households. The profile analysis compared the responses from each group to each individual item response to determine if any differences were statistically significant.

Finally, there were four open-ended questions in this section. The four questions were: Why did you choose or are you likely to choose the post-high school plan that you did? If you do not plan on going to college, trade school, or enlisting in the military after high school, what are your reasons for not doing so? Are there any barriers to you going to college after high school? If so, what are they? and What supports or influences did you have for making your decisions?

These responses were used to provide context to the student responses on why they made their decisions. These responses were coded and used to identify themes of common responses.

Finally, the open-ended question responses added new ideas or reasons for student postsecondary planning decisions.

Demographic Characteristics

The last four questions of the survey asked for participants' demographic data which were used as the independent variables. In this section, the first question asked participants to identify their gender from a list as either male, female, or choose not to answer. Next, participants chose their race from a multiple choice menu that contained a list of federally

identified races which were American Indian/Alaska Native, White, Asian, Black, Latinx, White, Native Hawaiian or Pacific Islander, and Two or more races. Then participants answered a yes/no question on if they had ever qualified or if they currently are receiving free and reduced-price school meals which was used as a proxy to determine participants' level of SES. Finally, students selected their current weighted GPA on a continuous 4.5 scale using a slider to prevent any typographical errors. These demographic data were used as independent variables in all data analysis.

Procedures

The first step was to gain approval from the Institutional Review Board, the participating school district, and the three participating high schools as shown in Appendix B. Following the school district guidelines, the parental consent form was sent out via the school district's online messaging system to all 12th grade students and their parents/guardians in the three participating schools three weeks prior to administering the survey. Parents were given an e-mail address to opt their child out of the survey per district guidelines and practice. The list of opted out students was sent to the participating school principals, or their designee, which was shared with the teachers who administered the survey in their classes. Teachers were notified one week prior to administering the survey of the students whose parents did not give consent to participate. The survey link was sent to each participant via Schoology©, the school's learning management system. Prior to taking the survey the participants read the student assent form and were given the opportunity to not participate in the survey without any penalty. Students who did not take the survey remained in the classroom and quietly worked on other activities as directed by their teacher. There was no incentive for the participants to complete the survey. After reading the student assent form, the participants continued on to complete the survey on their school-issued

iPads during their regularly scheduled advisory class period. Participants who were absent from class on the day the survey was administered had the option to go in on their own and complete the survey for up to one week after the survey was given to them in class and were reminded by e-mail two days prior to the survey window closing.

The survey instrument was administered and the data collected using Qualtrics© software. Once collected, the data were downloaded onto a password-protected computer. The data were then uploaded into a statistical software package, SPSS Version 26.0, cleaned, organized, labeled, and coded as necessary in preparation for the data analysis.

Data Analysis

Once the data were collected, they were organized, labeled, and cleaned. The purpose of this process was to make the data easier to use by clearly labeling responses and removing incomplete data sets. If a participant did not respond to the free and reduced-priced meal enrollment question, item 26, that participant's responses were excluded from any analysis because that question provided information on SES which was necessary to answer both research questions.

Once cleaned, the responses were coded because three of the independent variables were categorical and needed to be converted to dummy variables in order to run the appropriate tests. Items that asked about not having postsecondary plans were recoded as they were worded in the opposite direction relative to the items on rest of the instrument. Those who preferred not to answer were left blank, treated as missing, and were not counted in any gender specific analysis.

After the data were organized and cleaned, descriptive statistics were examined such as means, standard deviations, skew, kurtosis, frequencies, as well as other distributional characteristics. Organizing and cleaning the data helped identify any contradictory responses in

the data in which responses did not align with the rest of that participant's responses. For example, if a respondent selected choices that contradicted previous answers, that student's responses were removed prior to any further analysis. The purpose of merging the data were to align similar variables into one or more interpretable factors with the first being a plan for postsecondary education enrollment and the second factor being no plan for postsecondary education. Then reliability (Cronbach's alpha) was estimated on the data to see if the reliability coefficient exceeded .70 as an acceptable level of consistency of the responses prior to running regression analysis on the identified factors.

The next step of the data analysis was to answer the Research Question Q1 using a two-step hierarchical logistic regression analysis with postsecondary education enrollment as the dependent variable. The first step entered contained race, gender, and student GPA to control for those variables. Then, SES, as identified by student enrollment in free and reduced-priced meal program was added in the second step. A significance level of .05 was used for the hierarchical logistic regression as it is the standard in social research according to Glass and Hopkins (2008) when only one statistical test is conducted. The data were then interpreted from the model summary and analysis of variance (ANOVA) tables in SPSS and the research question was answered based on the R^2 value of Steps 1 and 2 and the amount of explained variation to the dependent variable.

Four assumptions must be met in order to run a hierarchical logistic regression (Stoltzfus, 2011). The first is that all variables in the model are independent of one another and measured without error. The independence of the observations assumption was likely violated because the students were from the same school district and their responses could have been dependent on their shared experiences, which may have led to responses that were more similar than they

would have been with a random sample. This is common in social research in educational settings (Hancock, Mueller, & Stapleton, 2010). The second assumption requires a linear relationship between the log odds of the dependent variable and the independent variables. The third assumption states that the data have a linear relationship. The third assumption is the absence of excessive collinearity. Testing for multicollinearity was important as some of the independent variables in this study were anticipated to be correlated with one another and may have had an adverse effect on the hierarchical logistic regression. To test for multicollinearity, the variance inflation factor for each independent variable was run with a goal of keeping the variance inflation factor below 10 for each variable (Hair, Anderson, Tatham, & Black, 1995). The final assumption is a lack of strongly influential outliers and that the regression equation adequately fits the data. This was checked using the Hosmer Lemeshow test.

In addition to the four assumptions, other requirements are needed to run a hierarchical logistic regression. The first of these requirements was that the dependent variables are measured on a dichotomous scale. In this study the dependent variable of having a postsecondary plan is binary with responses being either yes or no. Another requirement is there needed to be one or more independent variables and those variables must be continuous or categorical. There were four variables in this study: gender, race, GPA, and SES. Finally, a logistic regression requires an adequate sample size. The requirement of an adequate sample size for a logistic regression was calculated according to the Peduzzi et al. (1996) rule of thumb.

To answer Research Question Q2 that looks at factors that influenced a participant's decisions on postsecondary learning, a profile analysis using a repeated measures ANOVA was run. The repeated measures ANOVA compared the responses of the independent variable, free and reduced-priced meal program eligibility, and the responses on questions that asked

participants to rate their attitudes on the provided statements of why they chose not to attend postsecondary educational programs. The purpose of this test was to see how each group of participants, free and reduced-priced meal eligible and those not eligible, responded to the six questions around what factors influenced their decision making. The repeated measures ANOVA was run across all questions with the two demographic groups making up the two levels of the factor comparing the mean responses of each item. The variances between the six identified influential factors for having a postsecondary learning plan were tested. The data were examined visually using histograms of the responses for each item as well as significance data from the ANOVA output in SPSS. This method was chosen because it reduces variability error because the independent variables are treated as a group of subjects and then the variability is calculated between each condition and is considered more user friendly than a multivariate ANOVA or multiple independent ANOVAs (Glass & Hopkins, 2008; O'Brien & Kaiser, 1985). Three assumptions were assessed. The first was that the population scores for each group were normally distributed and tested by creating a histogram and observing the distribution. Skewness and kurtosis were also examined to see if they were in an acceptable range of -1 to 1. The second assumption was that there is homogeneity of variances which was tested using Levene's test for homogeneity. The third assumption was that the observations are independent of one another given the design of the study. This assumption was likely violated as stated before in the logistic regression; however, it does not have a significant impact on the study based on other tests.

Finally, the open-ended responses were analyzed. The data were imported into a spreadsheet with separate pages for each question. The first step in the coding process was to conduct a preliminary exploratory analysis to get a general sense of the data as suggested by Creswell (2015). Then each question was coded independently of the other questions using what

Creswell calls “lean coding.” This process involves going through the data to make an initial set of codes. Then the data were examined a second time to re-code any data and to organize the codes into categories. Lastly, the categories were combined to identify common themes for each questions’ responses. Those themes were used to support or refute the data from the repeated measures ANOVA. The open-ended responses also provided alternative answers or responses that were not given in the predefined questions asked earlier in the questionnaire.

Ethical Considerations

The study required data collection from 17- and 18-year-old high school students. Parents had the ability to opt their child out of the study. However, this study posed little to no risk to the participants. This study went through the Institutional Review Board process at the University of Northern Colorado as well as with the participating school district. Participants remained completely anonymous, and any collected data were kept secure on a password protected computer. No personally identifiable information was asked of the participants. Participation was completely voluntary. Parental notification for consent and student assent followed the school district’s already established practices. The only foreseeable potential risk to the participants could have been the re-appearance of any past memories or traumas related to family support and future planning, and this is considered to be a very slight risk that would only impact any participant with a previous family trauma.

Chapter Summary

Many ways exist to approach a potential research study attempting to find answers regarding if a difference is present in postsecondary planning and expectations for students from low-SES households and students not from low-SES households. In this study, the data were collected using an online questionnaire and the data were analyzed using quantitative methods,

including hierarchical logistic regression analysis. Profile analysis was used to answer Research Question Q2 of why students made the decisions they made about postsecondary learning, and the responses to the open-ended questions were added to provide deeper context and identifying any new information.

CHAPTER IV

RESULTS

In this chapter, the data from the analysis are presented. Data on the required assumptions are shared and results from the hierarchical logistic regression are used to answer Research Question Q1. Then the assumptions and results from the repeated measures analysis of variance (ANOVA) are used to answer Research Question Q2. Finally, the identified themes from the open-ended responses are reported in relation to the profile analysis.

Analysis of Research Questions

This study focused on two research questions. Research Question Q1 asked if there was a significant difference in the postsecondary plans for students from different leveled socioeconomic status households. A hierarchical logistic regression was run on the survey responses indicating a postsecondary plan for continued learning and the demographic variables. Those data were used to provide an answer to Research Question Q1. Research Question Q2 asked if there was a difference in the reasons students gave for their postsecondary plans based on their household socioeconomic status (SES). To answer Research Question Q2, a profile analysis in the form of a repeated measures ANOVA along with the responses to the open-ended questions were used to analyze the data. The results of those tests and the accompanying assumptions are identified.

Research Question Q1

- Q1 In suburban high schools with a strong college-going culture, is there a difference in students' plans for attending a postsecondary educational program based on household socioeconomic status?

Sixteen of the 16 questions asked participants about their plans for postsecondary learning, with 296 participants completing all 16 questions (Items 1–16). Responses from these questions were combined and used to make up the dependent variable of having a plan for postsecondary learning. Of the 296 participants who identified their SES, 46 did not have a clear postsecondary plan, with 25 of those 46 students coming from low-SES households and the other 21 students not from low-SES households as shown in Table 2.

Table 2

Dependent Variable Frequencies

Variable	Low socioeconomic status	<i>N</i>	% of sample
Postsecondary plan	Yes	95	32.1
	No	155	52.4
No postsecondary plan	Yes	25	8.4
	No	21	7.1

Note. *N* = 296.

In addition to those 16 questions, the instrument had four required questions used in the data analysis that were used as independent variables (grade point average [GPA], SES, race, and gender). The details on the questions can be found in the instrument in Appendix A and Chapter III. Prior to running the hierarchical logistic regression, the four required assumptions were tested. Once the assumptions were met or justified, a hierarchical logistic regression was run to answer the research question. Finally, an answer to the research question is presented below.

There were four statistical assumptions that had to be met to run the hierarchical logistic regression (Stoltzfus, 2011). The first assumption needed for a hierarchical logistic regression is that the observations are independent of one another. This assumption was likely violated because the participants all attended one of three schools in the same school district. Even though they took the survey independently and only took it one time, their responses could have been dependent on their similarities based on their shared school environments and communities. This may have led to participants' responses being more similar than they would have been with a random sample. However, it is unknown the extent to which the violation increased the risk of a type 1 error. When applying a more conservative alpha ($\alpha = .001$) the results do not change, indicating that the likelihood of a type-1 error is very low. The second assumption requires a linear relationship between the log odds of the dependent variable and the independent variables. According to the Box Tidwell test, this assumption was satisfied because the interaction terms for the continuous independent variable and its natural log (GPA * lnGPA) was not significant $p > .05$ ($p = .153$). The third assumption of absence of excessive collinearity was satisfied. Tolerance levels were within the recommended values (more than .1) and variance inflation factors values are within the recommended values (less than 10) as seen in Table 3. The final assumption is a lack of strongly influential outliers that was met according to the Hosmer Lemeshow test, which found the logistic regression model to adequately fit the data with $\chi^2(8, N = 296) = 13.80, p = .087$.

Table 3

Collinearity Diagnostics of Independent Variables

Variable	Tolerance	Variance inflation factors
Race	.82	1.22
Gender	.92	1.09
Socioeconomic status	.80	1.25
Grade point average	.82	1.27

In addition to the four assumptions, other requirements are needed to run a hierarchical logistic regression. The first of these requirements is that the dependent variables are measured on a dichotomous scale. This requirement was satisfied in that the dependent variable was binary using a dichotomous scale with having a plan for postsecondary learning either being yes or no. Another requirement is there must be one or more independent variables and those variables must be continuous or categorical. This assumption was met in that there were four independent variables, GPA (continuous), gender (binary category: male = 0, female = 1), race (binary category: White/Asian = 0, traditionally underrepresented races = 1), and qualifying for free or reduced lunch (binary category: do not qualify = 0, do qualify = 1). Finally, a logistic regression requires an adequate sample size. The requirement of an adequate sample size for a logistic regression was met, because there were 296 complete responses and the minimum needed with four independent variables would have been 94 using the Peduzzi et al. (1996) sample size formula, where $N = 10k/p$ with k representing the number of independent variables (4) and p

represents the proportion of negative responses in the sample ($126/296 = .425$) as reported in Chapter III. All assumptions were met and accounted for in order to run the hierarchical logistic regression.

To answer Research Question Q1, a hierarchical logistic regression analysis was conducted to assess whether SES was related to students' postsecondary plans. Step 1 included the entry of three of the independent variables of gender, race, and GPA. Gender and race were found to not be statistically significant explanatory variables with $p = .297$ and $p = .337$, respectively. The GPA was found to be a statistically significant explanatory variable with $p < .001$. The overall model at Step 1 was significant, $\chi^2(3, N = 296) = 21.84, p < .001$ and accounted for 12.6% of the variance.

Step 2 involved the entry of SES, which was not statistically significant $\chi^2(1, N = 296) = 1.52, p = .218$. The hierarchical logistic regression model with all four explanatory variables was statistically significant, $\chi^2(4, N = 296) = 23.361, p < .001$. The model correctly classified 85.1% of cases and accounted for .9% of the variance, with 246 participants having a plan for postsecondary learning and 50 students who did not. The only statistically significant explanatory variable found in the model was GPA (odds ratio = 2.36, $p < .001$). This can be interpreted as, for each one whole point increase in GPA, or for each letter grade increase, the participant had 2.36 times greater odds of having a postsecondary plan. Given that SES, which was measured by identifying who qualified for free or reduced lunch ($p = .218$), was not a significant predictor of having a postsecondary learning plan, the research failed to support the first research hypothesis, which asked if there was a difference in postsecondary plans for students from different leveled SES households. Table 4 identifies the odds ratios and significance values for all variables in the logistic regression for both steps.

Table 4

Hierarchical Logistic Regression Results for Model Explaining Gender, Race, Grade Point Average (GPA), Socioeconomic Status (SES), and Postsecondary Plans

Variable	Nagelkerke R^2	B	$SE B$	p -value	Exp(B)
Step 1	.126				
Gender		-.371	.355	.297	.690
Race		-.376	.382	.337	.693
GPA		.926	.229	<.001 ^a	2.524
Constant		-.483	.686	.481	.617
Step 2	.135				
Gender		-.376	.356	.291	1.457
Race		-.506	.398	.204	.603
GPA		.857	.235	<.001 ^a	2.357
SES		.465	.377	.218	1.592
Constant		-.436	.692	.529	.647

Note: $N = 296$.

^aindicates a statistically significant result.

* $p < .05$.

Using the statistical model when all explanatory variables were included, the following equation (1) could be used to explain the presence of a postsecondary plan in high school seniors.

$$Y = .857(\text{GPA}) + .465(\text{SES}) - .376(\text{Gender}) - .506(\text{Race}) \quad (1)$$

In this equation GPA was a positive indicator of a postsecondary plan. In response to Research Question Q1, household SES was not a significant predictor of having a plan to attend a postsecondary educational program for 12th grade students who currently attend a high school with a strong college-going culture when controlling for race, GPA, and gender.

Research Question 2

- Q2 Is there a difference between students from different leveled socioeconomic status households in the reasons they give for the selection of their postsecondary educational program?

Prior to running the analysis, the data were cleaned, and descriptive statistics and frequencies were run as shown in Table 5. Participants shared their attitudes on six factors that may have influenced their plans for postsecondary learning. There were 296 participants who completed all items on the factors of affordability, importance of college, ability to apply, expectation of success, worry about fitting in, and parental expectations and experiences that were included in the data analysis. The details on the questions can be found in the instrument in Appendix A and Chapter III. The descriptive statistics in Table 5 identify the mean responses for both levels of SES households on each of the six items. Prior to running the profile analysis, using a repeated measures ANOVA, the three required assumptions were tested. Once the assumptions were met or justified, a repeated measures ANOVA was run to answer the research question. Finally, an answer to the research question is presented in Table 5.

Table 5

Descriptive Statistics for Profile Analysis

Variable	Free/reduced lunch (low socioeconomic status)	<i>M</i>	<i>SD</i>	<i>N</i>
^a Affordability	No	3.45	1.19	176
	Yes	2.76	1.28	120
	Total	3.17	1.27	296
^a Importance of college	No	4.34	1.09	176
	Yes	4.18	1.16	120
	Total	4.27	1.12	296
^a Ability to apply	No	4.40	1.13	176
	Yes	4.07	1.21	120
	Total	4.27	1.17	296
^a Expectation of success	No	4.10	1.05	176
	Yes	3.79	1.20	120
	Total	3.98	1.12	296
^a Worry about fitting in	No	2.65	1.21	176
	Yes	2.98	1.23	120
	Total	2.78	1.23	296
^a Parental expectations and experiences	No	2.82	1.43	176
	Yes	1.77	1.06	120
	Total	2.40	1.39	296

^aDenotes statistical significance using Bonferroni correction.

Three assumptions were tested prior to running the repeated measures ANOVA. The first assumption was that the population scores for each group are normally distributed, which was assessed by creating the histograms (see Appendix C, Figures 2, 3, 4, 5, 6, and 7) for the two SES groups and observing the distribution. Skewness and kurtosis were examined to determine if

each distribution was in the acceptable range of -1 to 1 (Glass & Hopkins, 2008). As shown in Table 6, the variables for affordability had a skew within the acceptable range for not low SES (-.468), affordability for low SES (.170), expectation of success for low SES (-.949), worry about fitting in for not low SES (.099), worry about fitting in for low SES (-.244), and parental experiences and expectations for not low SES (.078). In terms of kurtosis, the following variables were within the acceptable range or just outside of the range, affordability for not low SES (-.674), affordability for low SES (-.987), ability to apply for low SES (.279), expectation of success for low SES (.161), worry about fitting in for not low SES (-1.078), and worry about fitting in for low SES (-.913). The variables of importance of college and ability to apply were less normally distributed than what was recommended. These data should not affect the type 1 or 2 error rates because ANOVA is not very sensitive to moderate deviations from normality (Glass, Peckham, & Sanders, 1972). Given the large sample size of this study, it is safe to assume that the assumption of normality has not been violated, decreasing the likelihood of excessive type 1 or type 2 error because the central limit theorem states that as sample size increases, the distribution of the sample means approximates a normal distribution (Anderson, 2010).

Table 6

Skewness and Kurtosis

Variable	Low socioeconomic status	Skewness	Kurtosis
Affordability	No	-.468	-.674
	Yes	.170	-.987
Importance of college	No	-1.750	2.397
	Yes	-1.453	1.362
Ability to apply	No	-1.848	2.424
	Yes	-1.120	.279
Expectation of success	No	-1.262	1.228
	Yes	-.949	.161
Worry about fitting in	No	.099	-1.078
	Yes	-.244	-.913
Parental expectations and experiences	No	.078	-1.351
	Yes	1.345	1.184

The second assumption, homogeneity of variances, was met according to Levene's test as reported in Table 7 for the dependent variables on affordability ($p = .408$), importance of postsecondary learning ($p = .406$), ability to apply ($p = .166$), expectation of success ($p = .068$), and worry about fitting in at a postsecondary institution ($p = .319$), but was not met for the variable around parental experiences and influences ($p < .001$). Given that all variables except for one met the homogeneity of variance assumption, and that all of the results would have been the same if a more conservative alpha ($\alpha = .001$) were applied, the likelihood of excessive type 1 or type 2 error is low.

Table 7

Levene's Test of Homogeneity of Variances

Variable	Levene's statistic	<i>p</i> -value
Affordability	.686	.408
Importance of college	.693	.406
Ability to apply	1.925	.166
Expectation of success	3.359	.068
Worry about fitting in	.994	.319
Parental expectations and experiences	24.971	< .001

Note. Degrees of freedom between-groups = 1, degrees of freedom within-groups = 294.

The third assumption is that the observations are independent of one another given the design of the study. This assumption was likely violated because the participants in the study all came from within the same school district and schools with similar demographics, programs, and a college-going culture which could lead to similar responses even though the participants took this survey individually. However, the extent to which the observations were dependent is unknown. To account for this, a more conservative alpha ($\alpha = .001$) was applied to the results but did not change the results, indicating that the likelihood of an increased type 1 error was very low.

The profile analysis was then completed using a repeated measures ANOVA to compare the mean responses from the two SES groups. The multivariate tests showed a statistically significant difference in scores between those who indicated they qualified for free and reduced-

price meals (low-SES) and those who did not $F(5,290) = 122.58, p < .001$; Wilk's $\Lambda = .321$, with a strong effect size of partial $\eta^2 = .68$ for the within-subject interaction of the different factors. In other words, students from the same leveled SES households had significantly different mean responses to the six identified factors. The within-subject linear interaction between the two SES groups across the six identified factors showed a significant difference in the mean responses, $F(5,290) = 8.88, p < .001$; Wilk's $\Lambda = .867$, and moderate effect size where partial $\eta^2 = .13$. These results indicate a significant difference in the mean responses on the identified factors for attending postsecondary learning depending on a student's household SES. However, it does not identify the direction or which group had a higher or lower level of agreement to the individual factors.

The post hoc tests of mean differences in responses based on SES to each of the six factors to attending a postsecondary learning opportunity are listed in Table 8. The post tests were conducted as tests of simple main effects to follow-up on the statistically significant interaction between SES and the identified factors. Items focused on affordability ($p < .001$), the ability to apply ($p = .018$), the expectation of success in postsecondary learning ($p = .015$), worry about fitting in ($p = .015$), and parental experiences and expectations ($p < .001$), all showed significant differences between the two groups. Only the item which asked if the students felt that going to college was important to them ($p = .189$) did not have a significant difference with $p > .05$. Given that both demographic groups had high levels of agreement to this statement and that the means were not significantly different indicates that students generally feel that postsecondary learning is important regardless of household SES. A pairwise comparison between the six factors was done and all had a significant difference between one another when

using a Bonferroni correction ($\alpha = .008$) except for the comparison between affordability and worry about fitting in where $p = .143$.

Table 8

Independent Samples t-test

Variable	<u>Levene's test</u>		<i>df</i>	<i>t</i>	<i>p</i> -value	<u>95% confidence interval</u>	
	<i>F</i>	<i>p</i> -value				Lower	Upper
Q - 17. I can afford college or have a way to pay for it	.277	.60	299	4.521	< .001	.37	.94
Q - 18. Going to college is important to me	.711	.40	299	1.316	.189	-.09	.43
Q - 19. I was able to apply to a college	1.989	.16	297	2.379	.018	.06	.59
Q - 20. I feel I will be successful with the challenge of college	3.766	.05	299	2.441	.015	.06	.58
Q - 21. I am worried I will not fit in at college	1.023	.31	297	- 2.445	.015	-.63	-.07
Q - 22. My parents went to college and that influenced me to go	21.534	.00	296	6.858	< .001	.70	1.31

Figure 1 illustrates the means of the responses for each SES group that also can be found in Table 5. Low-SES participants' means were below, or less agreeable, on all questions compared to those not from low-SES households except for the question that asks if students are worried about fitting into college. However, it should be noted the statement that asks about a student's worry of fitting in was worded negatively. If the question had been worded in the same, positively-framed format, it is safe to assume the results would have been reversed, with students from low-SES households having had a lower level of agreement and the results would have matched the rest of the data. These results indicate that students from low-SES households were more likely than students not from low-SES households to rate the variables of affordability, ability to apply, expectation of success, and being worried about fitting in as influential factors to attending a postsecondary learning program.

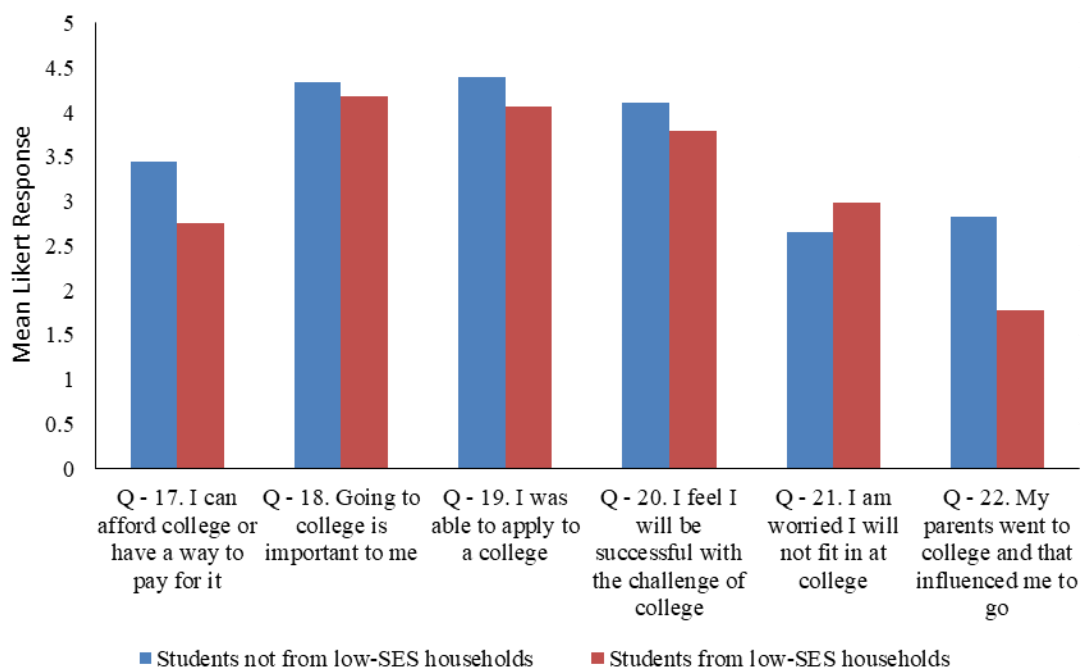


Figure 1. Mean responses to factors influencing postsecondary plans.

Open-Ended Questions

This survey instrument also collected data from four open response questions. These responses were coded and put into categories. The results are identified below with some specific examples and themes for each question. The results are also illustrated in the tables below. It is important to note, the number of usable responses was higher than the number of usable responses from the logistic regression and profile analysis of this study, but all were reported because the responses provided some potential reasons for the choices the participants made. The total number of responses may be higher for some questions than the total number of participants because some participants provided one or two different reasons per question. Finally, an overview of the open-ended questions is provided at the end of this section.

Responses by item. Question 27 asked participants to describe why they made the postsecondary decision that they did. Of the 343 participants, 318 responded to this question by identifying 351 different reasons as shown in Table 9. The breakdown of responses by SES can be seen in Table 9.

The most common response centered around participants who made a postsecondary choice because they already had a clear plan of what they wanted to do for a career and their plans put them on a path to prepare for that career. Some of the responses that fit into this category were, “Going to college for my bachelor’s degree will allow me to do what I am planning to do for a living,” “I chose college because I need to attend college to become a speech pathologist,” “Because I want to become a teacher, so I am going to college,” and “My career path does not require further education.” All other responses in this category were similar because the participant had identified a specific career path.

Table 9

Open-Ended Question Response Frequencies: Q.27: Reasons for Postsecondary Choices

Theme	<u>Low socioeconomic status</u>		<u>Not low socioeconomic status</u>	
	Total	%	Total	%
Specific career interests	24	19.0	52	24.0
Personal interests	20	15.8	44	20.3
No specific reason given	31	24.6	33	15.2
Financial	15	11.9	22	10.1
To pursue a better life	17	13.5	15	6.9
Continue learning	3	2.4	31	9.7
Family influences	8	6.3	8	3.7
Unsure	7	5.5	9	4.1
Sports	0	0	7	3.2
Do not like school	3	2.4	2	0.9
Total responses	128		223	

Note. $N(\text{low socioeconomic status}) = 126$, $N(\text{not low socioeconomic status}) = 217$.

The second most frequent theme identified was centered around decisions based on self-interests or desires with less specificity as to what or why they made that decision other than that is what they wanted to do. For example, “I chose the Marines because it was the best fit for my desires,” “Thought it would be the best fit for me,” “Because it’s interesting to me,” and “It fit my interests.” All other responses in this category mentioned how their plans fit with their interests.

The third most common response was no response or a one- or two-word answer with no context that answered the question. Some participants restated their postsecondary plan or seemed to have misread the question. Because of the lack of detail or usable information, these responses were coded into the same category.

Financial reasons represented another common response with responses like, “I chose going to a community college first then I’m going to transfer to a four-year college because it’s cheaper,” “It’s the least expensive option to get where I’m wanting to go,” “I chose this post high school plan to get the best education for the least amount of money,” or because they were being supported financially with responses like, “I got a scholarship offer,” and “Work pays for college.” Some students claimed they wanted a better life by stating, “Because my parents pushed me to have a better future and I wanted to learn more,” “To secure a better, more wealthy future for myself, my friends, and my family,” “I want to achieve the American dream,” and “It provides the best route to being successful in my plans for life.” Some students focused on wanting to continue their learning and growth, “Because I want to keep learning and working towards a degree that will help me get a job,” “I want to further my education so I can become qualified for a good, stable career,” and “It has always been my goal to go to university to further my education.”

Family influences were also important for some who answered by stating, “To make my parents proud and help them in the future,” “I watched my sister go through college and I want to now,” and “I researched the best options for me and my family, and the plan I chose was the most beneficial for us.” Finally, the last three categories of going to college to play sports, not sure of their postsecondary plans, and did not like school so they did not want to continue in school, did not have many responses but they were important to note as they provided some different ideas.

Question 28 asked why a participant was not pursuing their education in a university, college, trade school, or military. Fifty of the 343 participants gave 57 responses to this question with specific reasons which can be found in Table 10. The data show money and financial concerns were a prominent concern, because both SES groups had the highest percentages of responses compared to any other reason for students who are not planning on attending a postsecondary learning program with 26.9% of students from low-SES households and 45.8% of students not from low-SES households. The responses were very simply “money,” “not enough money,” “college is too expensive” and “debt.” One of the largest discrepancies in the responses between SES groups was for those who did not see a need or the value in those programs with 41.6% of students not from low-SES households responding in this way compared to 15.4% of students from low-SES households. Students gave responses like, “I already have the certification I need,” “doesn’t apply to me,” “I don’t see a need for it” and “I want to make money and hopefully move out by next spring.” Some participants reported not liking school and did not want to continue by stating, “no motivation to continue schooling,” “I want to start making money and quit wasting my time,” while others were very direct by saying “I don’t like school.” Some respondents were not sure of their plans and responded with, “I don’t know what I

want to do” or “unsure if I want to [keep going to school]” and “not sure what to do.” Some participants pointed to stress by commenting, “high anxiety and stress,” or “because it will give me stress.” Because many of the participants in this study had a postsecondary plan, there were fewer responses to this question than any other question and many participants responded with “not applicable” or left it blank.

Table 10

Open-Ended Question Response Frequencies: Q.28: Reasons for No Postsecondary Learning

Theme	Low <u>socioeconomic status</u>		Not low <u>socioeconomic status</u>	
	Total	%	Total	%
Money/financial concerns	7	26.9	11	45.8
Do not see a need to continue formal education	4	15.4	10	41.6
Do not like school / little academic success	7	26.9	2	8.3
Unsure of plan	5	19.2	3	12.5
Stress	5	19.2	3	12.5
Total responses	28		29	

Note. $N(\text{low socioeconomic status with no postsecondary plan}) = 26$, $N(\text{not low socioeconomic status with no postsecondary plan}) = 24$.

Question 29 focused on the potential barriers that students may have. There were 261 responses to this item as reported in Table 11. Money continued to be a common barrier given the frequency it came up with 46.8% of students for low-SES households, and 39.6% of students not from low-SES households reporting the different reasons money was identified as a barrier. One participant wrote “The cost, and I don’t want to be a financial burden on my family,” while another participant wrote, “Money for now and I don’t want to be in debt without a way to pay for them.” Some students reported no barriers by simply stating “no,” “none,” or providing details like “There are no barriers, I have mostly everything setup.” Many students claimed fear as a barrier with responses like, “Meeting new people will be harder,” “I am concerned about whether I will be successful or not,” and “financial and wondering if I am smart enough to graduate.” Grades or academic struggles were a barrier for some who wrote “not the best test scores or GPA,” “Not getting accepted,” or pointing to the amount of homework that would be required. This aligns with the data from the first research question that identified GPA as a predictor in having a postsecondary education plan; however, it is interesting that GPA did not come up more often in the open-ended questions given the significance GPA had in the logistic regression. Family played an important role for some who wrote “not living with my family makes me scared” or having “strict crazy parents” left them with few options. Finally, a few participants pointed to themselves as a barrier by stating “there are no barriers but myself.”

Table 11

Open-Ended Question Response Frequencies: Q.29: Barriers for Postsecondary Learning

Theme	Low <u>socioeconomic status</u>		Not low <u>socioeconomic status</u>	
	Total	%	Total	%
Cost	59	46.8	86	39.6
None	36	28.6	46	21.2
Fear	2	1.6	10	5.1
Grades/academic performance	6	4.7	8	3.7
Family	4	3.2	2	0.9
Self	0	0	2	0.9
Total responses	107		154	

Note. $N(\text{low socioeconomic status}) = 126$, $N(\text{not low socioeconomic status}) = 217$.

Finally, Question 30 asked participants about what supports or influences they had in the decision-making process. This question had the largest response with 332 participants providing 414 supports and influences, which is why some frequencies may add up to a number higher than the identified sample size as shown in Table 12. The most common theme was family supports with some responses like, “My parents support me,” “My mom inspired me to join [the military] and supports me 100%,” “My parents never went to college and it’s something they wanted to see me accomplish,” and “I had my parents and extended family members to help me make my decisions.” School supports were identified with responses like, “My teachers, counselors, and

coaches,” while some cited specific classes or programs like “Band,” “The biomedical science program at my school,” “My GT [gifted and talented] class,” or a specific adult in the building such as “My advisor” or “My welding teacher.” Some participants felt they were their own influences with responses like, “Myself, I want to be successful and stable later on in life, and I think this is the path for me to take,” “I want to be better than my mom,” and “My parents’ encouragement was part of the decision but mostly it was an intrinsic passion for knowledge.” Other participants did not identify any supports by commenting “None,” “Not applicable,” or “No idea.” Peer influences also appeared as a support or influence with comments like “Friends,” “Teammates,” “Significant other,” and “My best friend.” As in previous questions, money was another influential factor in response to this question with some responses limiting options like, “Finances,” “Money and not knowing what I want to do,” and “Money and location,” while some cited monies received as a positive opportunity, “The financial aid I am receiving has been a big factor in being able to attend college.”

Table 12

Open-Ended Question Response Frequencies: Q.30: School Supports and Influences

Theme	Low <u>socioeconomic status</u>		Not low <u>socioeconomic status</u>	
	Total	%	Total	%
Family	77	61.1	163	75.1
School supports	28	22.2	57	26.2
Self	19	15.1	26	12.0
No supports	11	8.7	14	6.4
Peers	4	3.1	7	3.4
Money	3	2.4	5	2.3
Total responses	142		272	

Note. $N(\text{low socioeconomic status}) = 126$, $N(\text{not low socioeconomic status}) = 217$.

Overview of open-ended questions. The open-ended questions provided some context and detail into the participants' decisions regarding their postsecondary plans. Three salient factors appeared from the open-ended questions. When it comes to supporting students in making postsecondary plans, family and school level supports were identified as being very influential in the postsecondary planning process according to the participants and were found in 262 of the total responses. Those school level influences could be a part of the college-going culture that was present in each of the school communities as identified in the sampling procedures in Chapter III. Money and financial concerns were common factors that were present

in all four open-ended responses as well as being a previously identified barrier that was significant in the profile analysis. Money appeared as a response 209 times throughout the four open-ended questions. Student interests, desires, and goals also emerged as a salient theme when the variables of do not see the need to continue learning, personal interests, specific career interests are combined for 154 responses. This data are reported in Table 13.

Table 13

Dominant Themes from the Open-Ended Question Responses

Theme	Low socioeconomic status responses	Not low socioeconomic status responses	Total responses
Family	89	173	262
Money	85	124	209
Student interests	48	106	154

Many of the responses align with the results from the profile analysis. Based on the open-ended responses, participants showed a desire to continue their learning beyond high school regardless of household SES. The results from the open-ended responses align with the profile analysis for the variable of college importance which showed high levels of agreement from both demographic groups. The results from the profile analysis was not very clear for the variable of parental expectations and experiences, however the data from the open-ended responses adds more to this by identifying family influences and supports as a frequent theme. Given the frequency and some of the specific statements about family in the open-ended responses, it

seems clearer that family provides a strong influence on the postsecondary planning process for students. Money and other financial considerations were identified as influential factors in the open-ended responses. The data from the profile analysis found that the variable of affordability had a significant difference in the levels of agreement for the two demographic groups and the open-ended responses for Item 29 showed a similar pattern as an identified reason for not attending a postsecondary educational program. Finally, the results from the profile analysis indicated the ability to apply to college had high levels of agreement from both groups of students and the open-ended responses confirm that same result by the absence of any responses indicating struggles with the application process. Given that there was no mention of the application process being a barrier it could be implied that applying to a postsecondary education program was not a barrier for students regardless of household SES.

Some other themes emerged from the open-ended data that were not identified previously in the study. Student interest and desires was a salient theme and seemed to be a more predominant influence into the postsecondary planning and decision-making process than was originally thought. The factor of not pursuing postsecondary learning, because the participant did not see the need or benefit of going was not identified in the quantitative analysis but was mentioned by 28% of the students who did not have a postsecondary plan. Another interesting theme that emerged from the open-ended responses was around participants who did not like school and that was their reasoning for not continuing; however, it was not clear why they did not like school especially when the data from the profile analysis showed high levels of agreement to the variable of academic success.

Chapter Summary

This chapter focused on the results from the data analysis to the two research questions. After the data were cleaned and descriptive statistics were run, the assumptions were then tested and were met in most cases. A hierarchical logistic regression was used to test the first hypothesis as to whether SES was related to the postsecondary plans of current 12th grade students. The model was found to be statistically significant. The results of Research Question Q1 indicated the independent variables of gender, race, and SES were not significant predictors of having a postsecondary plan. The independent variable of GPA was a significant predictor of having a postsecondary plan, where students with a higher GPA were more likely to have a postsecondary plan. In response to Research Question Q1, the research failed to find a statistically significant difference in the postsecondary plans based on a student's household SES.

To answer Research Question Q2, a profile analysis using repeated measures ANOVA was used to determine if there was a difference in perceived factors for postsecondary learning between students of different leveled SES households. The assumptions were met in most cases. The mean responses from the two groups differed and were significantly different on five of six items, with the item that asked if going to college was important to them being the one that was not statistically significant. The data show that students from low-SES households had a lower mean response on all items except for the item which asked if they thought they would not fit in at postsecondary learning program, which was worded in the opposite direction. This can be interpreted as students from low-SES households perceived the identified factors of affordability, ability to apply, expectation of success, worry about fitting in, and parental expectations and experiences as influential factors more so than students not from low-SES households.

Finally, the open-ended questions were coded and their frequencies were identified. The open-ended responses add to the previous quantitative data analysis by providing more details into other factors that contributed to the decision-making process as well as confirming the most frequent reasons students gave for their postsecondary plans. The first open-ended question found that student self-interests and specific career goals were the most frequent reasons students gave for their postsecondary plan as reported in Table 9. For students who identified as not planning to attend a postsecondary learning program, money and financial concerns were shared by students from low-SES households (26.9%) and not from low-SES households (45.8%) as the reason for not attending which can be seen in Table in 10. Cost was identified by 46.8% of students from low-SES households and 39.6% of students not from low-SES households as a barrier to attending a postsecondary learning program as reported in Table 11. The emergence of cost and financial considerations as a theme in the open-ended responses also supports the findings of the profile analysis. Question 30 asked where students received support from in making a postsecondary plan. Family was the most frequently given response as reported in Table 12 with 61.1% of students from low-SES households and 75.1% of students not from low-SES households identifying that support. This data helped clear up some uncertainties from the profile analysis around parental influences. School supports were the second most frequently reported reason. As noted in Table 13, the three salient themes that emerged from the open-ended questions were family support and influences, financial considerations, and self-interests.

CHAPTER V

DISCUSSION

Summary of the Research

One of the many roles of public high schools is to prepare all students for their future and becoming independent citizens and workers. Given the current job market, there are fewer and fewer employment opportunities for people who do not have some sort of postsecondary training certificate or degree (Carnevale et al., 2013). This shift in the job market puts more pressure on schools to prepare students for postsecondary educational programs that include either a trade or vocational learning program, the military, a two-year college program, or a four-year college degree. However, this is not an easy task, as some students from different demographic groups such as those from underrepresented races, males, and those from low-socioeconomic (SES) households are less likely to attend postsecondary learning opportunities (Kena et al., 2016; McFarland et al., 2017; Zaback, 2018). One of the largest disparities in college enrollment is between students from low-SES households and their wealthier peers (Kena et al., 2016). There are many documented struggles for students from low-SES families in attending a postsecondary learning opportunity such as lack of financial resources, lack of academic supports, lack of parental education and postsecondary experience, less academic success, and they usually attend schools with little presence of a college-going culture which can limit postsecondary opportunities (Atherton, 2014; Coleman, 1966; Rank & Hirschl, 2019). This problem is not just isolated to high poverty urban areas, as suburban areas are seeing an increase in the number of residents living in low-income households (Southern Education Foundation, 2015). Schools

around the nation are working to create high college-going cultures that promote postsecondary learning for all students, regardless of their demographics (Burbidge et al., 2018; Corwin & Tierney, 2007; Grodsky & Rieglecrumb, 2010).

The purpose of this study was to determine if students from different leveled SES households had a difference in the presence of a postsecondary learning plan and if there were any differences in the factors that influenced their decisions.

This chapter will interpret the results of the study and the two research questions:

- Q1 In suburban high schools with a strong college-going culture, is there a difference in students' plans for attending a postsecondary educational program based on household socioeconomic status?
- Q2 Is there a difference between students from different leveled socioeconomic status households in the reasons they give for the selection of their postsecondary educational program?

After the discussion of the results, theoretical and practical implications are shared. Next, the limitations of this study are identified. Finally, recommendations for next steps and further research are shared.

Summary of the Findings

Research Question Q1 was tested using a hierarchical logistic regression to determine if SES was a significant predictor in having a postsecondary plan with the independent variables of race, gender, and grade point average (GPA) being used in Step 1 and SES being added in Step 2. The model was statistically significant $X^2(4) = 23.361, p < .001$ and correctly classified 85.1% of the cases and accounted for 13.5% of the variance. However, SES only accounted for .9% of the variance and was not found to be statistically significant with $p = .218$. Gender ($p = .356$) and race ($p = .204$) were also not statistically significant in predicting whether a student would have a postsecondary plan or not. This data failed to reject the null hypothesis, meaning household SES

was not a statistically significant predictor in students' likelihood of having a postsecondary plan. This is contrary to what Berzin (2010) and Zaback (2018) found, which showed larger disparities between students from low-SES households and those not from low-SES households. However, a student's GPA ($p < .001$) was found to be the only significant predictor for having a postsecondary plan. This aligns with the research from Allensworth, Correa, and Ponisciak (2008) and Cabrera et al. (2006) that suggests GPA is a strong predictor of college enrollment. The GPA had an odds ratio of 2.36, $p < .001$, which is interpreted as for each one whole point increase in GPA, or for each letter grade increase, the participant had 2.36 times greater odds of having a postsecondary plan..

Research Question Q2 focused on what factors influenced a student's postsecondary plan or decision. The variables were constructed from the previous findings of College Atlas (2019) around why students do not pursue postsecondary learning opportunities. There were 296 responses to the items that asked participants to rate their level of agreement on the six identified influential factors. Of those who responded to all items, 41% of the participants were from a low-SES household and 59% were not from a low-SES household. The results showed a significant difference between the mean responses for those from low-SES households and those not from low-SES households on the following variables: affordability ($p < .001$), ability to apply ($p = .018$), expectation for success ($p = .015$), worry about fitting in ($p = .015$), and parental experiences and expectations ($p < .001$). Only the item that asked if the students felt that going to college was important to them ($p = .189$) did not have a significant difference with $p > .05$. Significance levels can be found in Table 8, and the visual representations of the responses are shown in Figure 1.

The first item in the profile analysis asked if the affordability of college was an influential factor in the postsecondary decision making process. Students who were not from low-SES households had a mean response of 3.45 that showed agreement to the statement around college affordability. Students from low-SES households had a mean response of 2.76 that indicates a less amount of agreement with the statement. The differences in the mean responses were statistically significantly ($p < .001$). The mean responses to this question had the second largest difference between the two groups. This response aligns with research indicating that students from low-SES homes have fewer resources available to them to pay for things like school (Drotos & Cilesiz, 2016; Hoxby & Turner, 2015; Musto, 2017; Nellum & Hartle, 2015). The responses to the open-ended questions support this same concern as seen with financial factors being identified as the top barrier to students in making a postsecondary plan, with 42% of the respondents mentioning money as a concern.

Item 18 asked students if the importance of going to college was influential in their decision making process. The mean responses to this item for students not from low-SES households and those who were from low-SES households were 4.18 and 4.43, respectively. These responses were the closest with a difference of .16 between the two means, and the difference was not statistically significant ($p = .189$). Both groups agreed that going to college or some form of postsecondary education was important to them regardless of their family's SES as noted by the total mean response being one of the highest levels of agreement. Radford et al. (2018) and Elliott (2009) supported the claim that most students have strong aspirations for attending some sort of postsecondary learning program. In addition to students believing that going to a postsecondary learning program is important, familial influences and support of their students' plans for continuing their education beyond high school was also frequently found in

the open-ended response data with 61.1% of students from low-SES households and 75.1% of students not from low-SES households listing family as a supporting and influential factor in their postsecondary decision making process similar to what Wilder (2014) reported.

The next item looked at the college application process, which Hoxby and Avery (2013) and Rosa (2006) identified as a place where many students from low-SES households struggle with when pursuing postsecondary learning opportunities. Item 19 asked if the ability to apply to a college was an influential factor in the postsecondary decision-making process. The responses were statistically significant ($p = .018$) with students not from low-SES households having a mean of 4.40 compared to students from low-SES households whose mean was 4.07. Even though there was a difference of .20, both groups reported high levels of agreement, which could show that the schools selected for this study had supports in place to support students in the college application process. The participating schools were chosen for their presence of a college-going culture as defined by Corwin and Tierney (2007), and the high rates of agreement could show that the presence of the school level supports removed some of the barriers to the application process. The participants also acknowledged the importance of schools supports, as 25% of them mentioned the school helped and influenced their postsecondary planning decisions.

Item 20 also had similar results to the previous item when it asked students if their expectations of success with the challenge of college were an influential factor in the postsecondary decision making process. Those students not from low-SES households had a mean response of 4.10, and those from low-SES households had a mean response of 3.79. Again, both groups showed mean responses in the agreement range of the scale, which could mean that the schools had adequately prepared the students for postsecondary learning. Mean responses to

this item showed a statistically significant difference based on household SES ($p = .015$). This difference in expectations of academic success aligns with what Berzin (2010) reported.

The next item, 21, asked students if concerns about fitting in at college were an influential factor in making postsecondary plans. In both groups, not low-SES (2.65) and low-SES (2.98), mean responses were on the neutral to disagree end of the scale. The difference in the means were statistically significant ($p = .015$) which aligns with Grodsky and Rieglecrumb (2010). With the means being so close to the neutral choice, it could make a case for not having the neutral choice in the future so that respondents are required to pick a response that either showed agreement or disagreement. A mean response that is close to neutral could also be attributed to a balance in the respondents who agree compared to those who disagree. When looking at postsecondary readiness, it could be seen as a positive that neither group had a mean response that showed agreement with the statement and that both groups felt they would fit in at the college level. This is the one item in which the students from low-SES households had a higher mean response than those not from low-SES homes as illustrated in Figure 1, but it should be noted that the wording of this item was opposite of the other questions with the item being worded negatively.

Finally, Item 22 asked if parents' experiences or expectations for postsecondary learning influenced their postsecondary decisions. The mean responses to this item had the lowest level of agreement compared to the rest of the items in this section. Students not from low-SES households had a mean response of 2.82 which was on the disagreement end of the scale, and students from low-SES households had a mean response of 1.77 which was well on the disagreement side of the scale. These responses represented a difference in 1.05, which was the largest difference in means of any question in this section and the results were significant ($p <$

.001). Unfortunately, the wording of this question may have been confusing as it is a double-barreled question with two questions being asked with, “my parents went to college” and “that influenced me to go.” This data, although statistically significant, may not accurately represent what the item was intended to ask as participants might have been disagreeing with the first part, the second part, or the combination of both. Assuming the participants were agreeing with both parts of the question, it did not seem to be an influential factor in the students’ postsecondary planning process based on the near absence of these reasons being given in the open-ended responses. It is known that being a first generation college student can lead to other barriers around postsecondary attainment (Garriott, Hudyma, Keene, & Santiago, 2015). One of those is fear of navigating the unknown and doing something that no one in your family has done before. The idea of fear did appear in the open-ended responses, but was not listed very frequently with only 1.6% of students not from low-SES households and 5.1% of students from low-SES households reporting it.

The responses to the open-ended questions provided additional insight into the factors that influenced their postsecondary decisions. The first question asked students why they made the postsecondary decision they did. Two of the most frequent reasons given were their personal interests or because students made a decision based on their specific career interests as reported in Table 9. Other themes that emerged from this question were financial-based reasons or students looking for a better life. When asking the students who decided not to pursue a postsecondary learning opportunity why they were not continuing their formal education or training, money and financial concerns were the most frequently reported reasons as shown in Table 10. Other reasons given for not continuing their education or training were because they did not see a need to continue formal education or because they did not like school. Much like in

the question before, cost and financial considerations were the most frequently given barriers to attending postsecondary learning in question 29 as reported in Table 11. The last open-ended question asked students to identify what supports and influences they had in the decision making process. Family was the most frequently reported response by the students. Supports from school staff and school based programs were the second most identified support as reported in Table 12.

In summary, the factors that appeared to have the most significant influence on a students' postsecondary plans from the logistic regression, profile analysis, and open-ended questions were GPA, financial considerations, self-interest, and family influences. The GPA, which is often used as a measure of academic success, was identified as a significant variable in the logistic regression (odds ratio = 2.36, $p < .001$) but did not appear as a salient theme that emerged in the open-ended responses. As a measure of academic success, GPA has been used as a statistically significant predictor for students continuing on to a postsecondary learning opportunity (Burnes, Martin, Terry, McConnell, & Hennessey, 2018; Easton, Johnson, & Sartain, 2017; Hodara & Lewis, 2017). Cost and financial considerations emerged as a salient theme in the open-ended responses as well as being significant in the profile analysis. Financial considerations being an influential factor in the postsecondary planning process aligns with the findings in previous research (Hoxby & Turner, 2015; Musto, 2017; Nellum & Hartle, 2015). Family influences were significant in the profile analysis and was the theme with the highest number of responses in the open-ended questions with 262. The importance of family influence on the postsecondary planning process has been previously identified by many researchers (Benner & Mistry, 2007; Brusoski et al., 1992; Child Trends, 2012; Farmer-Hinton, 2011; Goyette, 2008; Gregory & Huang, 2013; Grodsky & Rieglecrumb, 2010; Jacob, 2010; McDonough, 1997; Wilder, 2014). Finally, student interests emerged as a salient theme from the

open-ended questions with 154 responses. Unlike the other salient themes from the open-ended that could be linked to variables in the profile analysis, there was not a question in the profile analysis focused specifically on students' interests. However, students' interests could be linked to Item 18 which asked about the importance of going to college. Students from both levels of SES households showed strong levels of agreement to the statement that going to college was important to them. Item 18 had the highest mean, or level of agreement, for both groups compared to any of the other items in the profile analysis. Student self-interest and personal expectations for their future was a very powerful variable in the postsecondary planning process (Cabrera et al., 2006; Kena et al., 2016; Rosa, 2006).

Theoretical Implications

The purpose of this study was to help understand why students make the postsecondary planning decisions that they do. One theory that may be used to understand the results of this study is human capital theory, which originated from the work of the economist Gary Becker during the 1960s. Human capital theory will be explained in this chapter as well as the implications the theory has on the results of this study.

Human capital theory explains an individual's decisions to invest in their own education and training with the goal of increasing their economic advantage (Becker, 1993). The idea behind this theory is that as a person decides to invest in their future by continuing their education and training, they are more likely to have stronger skills and knowledge, which will yield more successful employment opportunities. Tan (2014) further described human capital theory by stating "education increases the productivity and earnings of individuals; therefore, education is an investment" (p. 41). The investment and the associated risks enter the human capital theory equation because of the time and money that it usually takes to gain the education

and training. The risk of investment can feel elevated when compared to the potential loss of wages that would have come from immediate opportunities to enter the workforce even though at a lower level of education and training. However, these investments are designed to forego lower wages in the present to yield greater returns in the future (Blaug, 1992). It is important to note that there is a limit with human capital theory in that people will only invest in education to the point when their individual benefits from education are equal to the cost and economic benefit (Tan, 2014). This means individuals will continue to invest in education and training as long as they can see an economic benefit and return on their investment.

The purpose of this study was to determine if there was a difference in postsecondary plans for students from different leveled SES households. When looking at the results of this study through the lens of human capital theory, this study asked if students from different socioeconomic groups were likely to invest in themselves by continuing their education and training in order to make themselves more productive. There were 250 students, or 84.5% of the participants, who had plans to invest in themselves by continuing their education beyond high school. It might be inferred that these students had a belief that the investment in postsecondary learning would produce greater returns compared to not going to a postsecondary learning program. This idea of increasing human capital was supported by the results of this study when the mean level of agreement to Item 17, which asked if the importance of going to college had the highest level of agreement compared to all items for both SES groups of students. The high levels of agreement to that item show that the students from this study see the importance of investing in their education and training. Human capital theory could also be used to understand some of the open-ended responses on why students made the postsecondary decision that they did with identified themes to pursue a better life, continue learning, and pursue their career

interests. It could be due to the fact that the schools in this study had a college-going culture and that culture helped educate the students on the return of investment they would receive by investing in continued education and training.

However, this study does have some cases that seem to push back against human capital theory. As mentioned earlier, there is a limit in terms of how much a person will invest in their education and training when the potential benefit of the education would not be worth the cost. Postsecondary education and credentials are important to be competitive in the current United States job market, but the cost of postsecondary education has never been more expensive. In fact, over the last three decades, the cost of college has more than doubled, after adjusting for inflation, at a four-year university (Ma, Baum, Pender, & Libassi, 2019). Even though many programs are available to help with financial aid, especially for those from low-SES households, the average amount owed by 2017 college graduates who earned a bachelor's degree was \$28,500 (Ma, Bentley, et al., 2019). The rising up-front costs of postsecondary learning may cause some to question the value of postsecondary education and the worth of the investment (Seltzer, 2017). In this study, the cost of college was identified in the open-ended responses as a salient barrier for attending a postsecondary learning opportunity. The profile analysis also indicated a difference between the mean responses of those from different leveled SES households on postsecondary affordability with students from low-SES households, indicating lower levels of agreement in regard to the affordability of postsecondary learning.

In conclusion, human capital theory describes the investment a person is willing to make in their own education and training in return for increased productivity and economic success. This study identifies where students made the decision to increase their human capital by attending postsecondary learning. It also shows where students were not willing to make the

same type of investment in their own education when the cost of investment is not accessible or the return on investment may not be as visible to some. Even though the costs of going to college continue to outpace aid opportunities, higher education is still a worthy investment in today's job market (Ma, Pender, & Welch, 2016).

Practical Implications

Many implications for school leaders, school district leaders, counselors, families, students, and policy makers can be drawn from the analysis of the collected data. The first implication is that all students have dreams of bettering themselves, and most students plan on continuing their learning in hopes of better opportunities. The notion that all students aspire to go to college is supported by Berzin (2010), Grodsky and Rieglecrumb (2010), and Rosa (2006). As reported in the open-ended survey results, most students are making future plans that align with their goals, aspirations, and interests. This is important for school staff to know because as they work with students they should be spending time getting to know what students are interested in and helping them find pathways that allow students to follow those passions and use their strengths. An example of this would be a schoolwide implementation of Individual Career and Academic Plans, which contain a series of activities and experiences designed to help guide students in finding potential careers, identifying the type of education and training needed, and then taking the right educational path to achieve that goal (Choi, Kim, & Kim, 2015). Another implication from this data is that school staff should assume that all students and families aspire to postsecondary learning opportunities, because each student wants to succeed and will try to take the necessary steps to achieve success (Berzin, 2010; Grodsky & Rieglecrumb, 2010; Rosa, 2006). To accomplish this belief system, school staff can practice what Hoy, Hoy, and Kurz (2008) referred to as academic optimism which are the perceptions and beliefs that teachers have

about their students' academic success and the positive impact it can have on teachers' and students' collective self-efficacy. Dweck (2006) referred to this positive belief in students as a growth mindset. The presence of a growth mindset can help build a students' self-efficacy which could lead to greater academic success (Dweck, 2006).

Another implication lies within the influential power the teachers, counselors, administrators, and other school staff have on student decision-making. It is important for school staff to create and perpetuate a college-going culture. The term college may be a misnomer, but helping students build plans for learning beyond high school and supporting them along the way does provide a boost (Corwin & Tierney, 2007; Knight & Duncheon, 2019). Second to family influences, which was the most common influential factor mentioned in the open-ended responses, schools provide a very important level of support and guidance to students through the postsecondary planning process (Athanases et al., 2016; Knight, & Duncheon, 2019). This can be accomplished through a variety of ways, including career and academic counseling centers in schools, schoolwide advisory classes focused on postsecondary planning, setting up visits to postsecondary programs or institutions, support with college and scholarship applications, and consistent follow through with students throughout the process (An, 2013; Cole et al., 2019; Thomas, 2014). As mentioned previously, family plays an important role, and schools should work on educating and partnering with parents throughout this process (Hamrick & Stage, 2004; Wilder, 2014). This comes in the form of parent and student information events so they can explore the various postsecondary options, helping guide families through the application and financial aid process, and individual family meetings with highly trained school staff (Morgan, 2019).

As the data revealed in this study and in others, success in school in the form a good GPA is a strong predictive indicator of having a postsecondary plan. There are many practices that school staff can put in place to support students' efforts to maintain a strong GPA. One practice would be to put in data collection systems focused on college readiness indicators and early detection systems (Allensworth, Nagaoka, & Johnson, 2018; Attewell & Domina, 2008; Corwin & Tierney, 2007). These systems focus on student failure rates, attendance rates, student participation in extracurricular activities, behavioral data, and course selection. Using the school's student data management system, key personnel such as counselors, administrators, and teachers can quickly and frequently monitor students whose attendance is falling below the recommended rate or whose grades may be starting to drop. Schools should utilize multi-tiered systems of support models to track student progress and quickly implement interventions to support the student.

Participation in extracurricular activities also supports the development of a student's cognitive and non-cognitive skills (Covay & Carbonaro, 2010). Schools should be monitoring student participation in extracurricular activities and providing opportunities for students to participate based on their interests and passions. To help create equity for students from low-SES households, schools should work on providing transportation, reducing or waiving required fees, and working with families to provide students opportunities to participate.

In terms of course selection, offering a robust selection of college level courses like Advanced Placement, International Baccalaureate, concurrent enrollment, and honors courses can help students increase their weighted GPA and gain confidence in college level classes (Burbidge et al., 2018; Knight & Duncheon, 2019; McKillip et al., 2013). These class offerings can also help students earn college credits which can reduce the price of college (An, 2013).

Offering career and technical education coursework that provide avenues for industry certifications and apprenticeship programs in vocational fields can also encourage students to continue their learning and training beyond high school.

Money and financial need also influence the decisions students make for their path after high school (Drotos & Cilesiz, 2016). Money was found as a barrier for those who could not afford certain programs or made choices to attend smaller and more affordable institutions of learning or for those who decided to immediately enter the workforce to start earning for their life expenses. It was also a support for those students who earned scholarships or a positive influence for those who wanted to seek better opportunities. There are many ways for schools to help support students and families in reducing the financial stress of paying for postsecondary learning (Athanases et al., 2016). As mentioned before, many programs are available to help students get a head start on postsecondary classes such as concurrent enrollment courses, early college high school programs, career and technical education certification programs, and more which allow students to earn postsecondary credit for free or a reduced cost (Chapman et al., 2016; Corwin & Tierney, 2007). Having a robust academic and career counseling center or staff who are well trained in the many options available to students can help with meeting students' financial needs (Athanases et al., 2016; Chapman et al., 2016; Grodsky & Rieglecrumb, 2010; Mehan et al., 2012; O'Sullivan et al., 2017). For example, hosting events and trainings for students and families on how to navigate the Free Application for Federal Student Aid, saving money for school and financing options, scholarship application process and support, and college information events that showcase the many different types of programs and their associated costs can help dispel myths and help students and families make the most cost effective decision (Chapman et al., 2016).

There are also implications for policy makers at the state and national level. As identified in the theoretical analysis, there are increasing financial aid opportunities, especially for those from low-SES households; however, the increasing cost of college education is outgrowing the aid available (Musto, 2017; Nellum & Hartle, 2015). One consideration for policy makers would be to look at higher education funding. Policies can be put in place to adjust funding formulas for higher education or to build more financial support programs to help reduce tuition costs for all students, especially for those from low-SES households (Mitchell, Leachman, & Saenz, 2019). Other processes should be examined because of systemic bias including the difficult to navigate Free Application for Federal Student Aid financial aid process which puts undocumented families, those living in low-SES households, those of underrepresented races, and others at a disadvantage (Christian, et al., 2017; Oreopoulos & Ford, 2019). States could also provide incentive programs for higher education institutions that promote outreach to underserved groups of students. Other processes that should be examined are scholarship applications and the difficult to navigate college application process through Common App to name a few (Oreopoulos & Ford, 2019). A greater investment by state and federal governments to help reduce the barriers of cost could help individual students and the national economy increase productivity which is a key tenant of human capital theory (Becker, 1993; Blaug, 1992; Tan, 2014).

Limitations

As with many other studies, this study is subject to a few limitations. One of the limitations of this study was the potential impact that the Corona Virus Disease 2019 global pandemic had on response rates and the actual responses themselves. This survey was administered as some schools were shifting to remote learning through online instruction, which

required some participants to complete this survey at home instead of in class. By asking some students to take the survey at home, this reduced the sample size and was most likely only completed by compliant students who typically show strong academic behaviors and would have been more likely to complete an optional survey outside of class time. Because most of the students who likely completed the survey exhibited strong academic behaviors, they were also more likely to be students with academic behaviors that align closer with those who plan on attending a postsecondary learning opportunity. This could have skewed the data and excluded responses from students who may have a different plan after high school. The pandemic may have also led students to respond in a different way given it was a time of fear and uncertainty. As some family members were potentially being laid off due to businesses being shut down, the fears of financial uncertainty for some families may have changed the immediate options for some students.

This study was administered to only 12th grade students from schools with a college-going culture in suburban settings. When generalizing the results from this study, caution should be used as the results may not accurately represent all 12th graders. The geographic location of the schools and the presence of a college-going culture provide other factors that can influence the results. The schools in this study were also from the same school district and had access to similar resources. Therefore, researchers and practitioners should be aware of the resources that are available and the current practices before applying these results to other schools. In addition to the location and makeup of the schools in this study, the sample size was also a limitation. Even though the sample size was adequate for running the statistical analysis, the sample size of this study was relatively small compared to the overall population of the schools.

This study had limitations due to the design of the instrument. The instrument had a few areas where the wording of the items or the directions could have been interpreted in different ways by the participants. If the wording of items and the directions were clearer in some sections, the results might have better aligned with the intent of the questions which would have provided more accurate and generalizable data. The recommended changes are identified in the following section.

Finally, this study was limited through the use of quantitative methods and the data being collected in the form of a questionnaire. Using a questionnaire with a limited number of responses like multiple choice or items that are measured on a predefined scale can lead to data analysis that yields an oversimplified view of social reality (Hall, 1978). Even though this study did include open-ended questions to support the findings in the profile analysis, the answers were limited to the four questions and did not necessarily provide an in-depth understanding that could have come from other forms of qualitative research.

Recommendations for Further Research

This study helps add to the larger body of research, but also helps identify some recommendations for future research. One of those recommendations would be to re-administer this instrument when school is in session and not closed due to the pandemic to see if a larger sample size could be obtained as well as to see if the responses would be different.

A second recommendation would be to continue this research on a larger scale. Instead of studying students from three schools in the same school district, it is recommended that further research expand this study to include schools from many different school districts across the state and even the nation. Increasing the representative sample size could provide more information as well as increase the generalizability of the results. Another benefit of increasing the number of

school districts involved would be to see how different college-going practices influence the decisions students make.

Another recommendation would be to adapt the instrument in a few ways. First would be to exclude negatively worded responses as they did not correlate well with the rest of the instrument. The second recommendation for adjusting the instrument would be to reframe the directions to Items 17 through 22. The general instructions for these six items read as follows: “Identify your attitudes on the following statements about how they influenced your postsecondary decisions.” Participants then rated their agreement with a series of statements that included factors that have been known to influence high school students’ decisions with respect to postsecondary education. For example, the first item asked, “I can afford college or have a way to pay for it.” It is possible that a student would rate their level of agreement to that exact statement which asked if students had a way to pay for college. What would have been more accurate would be to have had participants rate their agreement as to whether or not the six identified variables were influential factors in their postsecondary planning process. In the example given above, it would have been better to ask if postsecondary affordability was an influential factor in their decision making process. It is also recommended that the wording for Item 22 change, which asked about parental experiences and expectations. The responses to that item indicated mixed results as it was a double-barreled question asking about parental experiences and parental expectations. It was hard to determine if the participants were focusing on one of the two sub-questions or both. This item should be divided up into two different items in the future.

This study also identified financial considerations and family influences as salient themes and influential factors in the postsecondary decision making process. A recommendation for

further research would be to get a better understanding of the different financial considerations and family influences which impact a student's postsecondary decisions. In regard to financial considerations, knowing at what point postsecondary learning becomes too expensive or understanding a student's knowledge of available financial aid resources could prove very useful for school leaders. The same could be true with understanding a family's influence. For example, what is the knowledge level of key family members in regards to postsecondary options and financial aid? Future research could identify the different levels of understanding that families have in regards to postsecondary options in order to potentially uncover ways that schools and school districts could educate families with the hope of filling in any knowledge gaps around postsecondary options.

Finally, this study examined student postsecondary options through quantitative methods, but the open-ended question responses gave a more in-depth understanding of why students made the postsecondary decisions they did and what factors influenced their decisions. This could provide a basis for examining the decision making process through a qualitative study, potentially in the form of an ethnographic case study. A qualitative design in the form of a case study could provide information on the postsecondary decision making process that would not likely show up from the structured format and limited options available through quantitative methods. A case study could expand on the results found in this study about student interests, career paths, financial considerations, and how students make decisions around investing in themselves.

Conclusion

The results of this study show that SES was not a significant predictor of having a postsecondary plan according to the logistic regression, but there were significant differences in

the reasons students gave for making their decisions according to the profile analysis. The salient themes identified by the open-ended responses supported the findings from the profile analysis. Human capital theory was used to help understand the results of the study and how students made decisions to invest in their future or not. The results of this study have practical implications for current school leaders and school district leaders in helping support all students in planning for learning beyond high school. It also provides implications for policy makers to look at higher education funding and processes that make postsecondary learning more equitable for all students. This study has limitations associated with the unknown impact of the global pandemic that occurred during the distribution of the survey. Finally, there are recommendations for future research that will add to the body of researching including: increasing the sample size and scope by administering the survey to students in other suburban school districts, making some recommended adjustments to the instrument that will make the questions seem clearer, limiting the use of GPA as an independent variable, exploring in greater detail the financial and familial influences, and possibly using qualitative analysis in the form of a case study to get a deeper understanding of the influential factors.

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APPENDIX A
SURVEY INSTRUMENT

Survey of HS students' expectations for postsecondary education - 2020

ASSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH

Project Title: Does Socioeconomic Status Influence Postsecondary Expectations

Researcher: Brian Young, Graduate Student, School of Educational Leadership and Policy Studies

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The purpose of this study is to identify the expectations of current high school students around their postsecondary education plans. Participants will be asked to complete the 27 items.

No personal information will be collected during this survey. All participants will remain anonymous and the data collected will remain confidential as best as possible. Data from this study will be saved on a password-protected computer and through the researcher's password protected online Qualtrics account. All measures will be taken to ensure confidentiality. Given that this survey will be collected electronically, confidentiality cannot be guaranteed. There are no foreseeable risks associated with this survey. There is no cost or direct benefit to the participants of this survey.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in any loss of benefits to which you are otherwise entitled. Please take your time to read and thoroughly review this document and decide whether you would like to participate in this research study. If you decide to participate, your completion of the research procedures indicates your consent. Please keep or print this form for your records. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, Office of Research, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.

By answering the questions below, you give your assent to participate in this survey.

Q1 Please identify your plans in the fall after you graduate High School

	Very Unlikely (1)	Unlikely (2)	Likely (3)	Very Likely (4)
1. Attend a 4-year college or university (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Attend a 2-year community college (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Enlist in the military (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Go to a trade school (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Take a year off of school (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Enter the workforce (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. No plans (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8 The highest degree I plan to earn is:

- High School Diploma (1)
- Military training (2)
- Trade School certification (3)
- Associates (2-year degree) (4)
- Bachelors (4-year degree) (5)
- Masters (Graduate Degree) (6)
- Doctorate (PhD.), Medical Degree, Law Degree (Graduate Degree) (7)

Q9 - 14 Answer Yes or No to the following statements

	Strongly Disagree (1)	Somewhat Disagree (2)	Somewhat Agree (3)	Strongly Agree (4)
9. I have already taken a college level course at my high school like: AP, CU Succeed, Front Range, etc... (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I have already applied to college (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I have already been accepted to college (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I will go to a university, college, trade school, or enlist in the military right after I graduate High School. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I plan on working for a year and then applying to college or taking a gap-year. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I plan on entering the workforce and not attending any school or postsecondary learning program. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I have been talking with someone at my school or home about what postsecondary learning program is right for me. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. My school encourages students to get a postsecondary education like, going to college, trade school, or the military. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q16 - 21 Identify your attitudes on the following statements about how they influenced your postsecondary decisions.

	Strongly Disagree (1)	Somewhat Disagree (2)	Neutral (3)	Somewhat Agree (4)	Strongly Agree (5)
17. I can afford college or have a way to pay for it (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Going to college is important to me (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. I was able to apply to a college (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I feel I will be successful with the challenge of college (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. I am worried I will not fit in at college (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. My parents went to college and that influenced me to go (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q23 Gender you identify as

Male (1)

Female (2)

Prefer not to answer (3)

Q24 Race (select all that apply)

- American Indian or Alaska Native (01) (1)
- Asian (02) (2)
- Black or African American (03) (3)
- Hispanic or Latino (04) (4)
- White (05) (5)
- Native Hawaiian or Other Pacific Islander (06) (6)
- Two or More Races (07) (7)
-

Q25 Do you qualify or have you ever qualified for Free or Reduced Lunches at school?

- Yes (1)
- No (2)
- Not sure (3)

Q26 Move the slider to show your cumulative GPA? (If you don't know exactly, use your best guess)

1 1.5 2 2.5 3 3.5 4 4.5

Grade Point Average ()	
------------------------	--

Q27 Why did you choose or are you likely to choose the post-high school plan that you did?

Q28 If you do not plan on going to college, trade school, or enlisting in the military after high school, what are your reasons for not doing so?

Q29 Are there any barriers to you going to college after high school? If so, what are they?

Q30 What supports or influences did you have for making your decisions?

APPENDIX B
INSTITUTIONAL REVIEW BOARD APPROVAL



DATE: March 5, 2020

TO: Brian Young
FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [1488114-1] Socioeconomic Status and Postsecondary Expectations
SUBMISSION TYPE: New Project

ACTION: APPROVED - WITH CONDITIONS
APPROVAL DATE: March 5, 2020
EXPIRATION DATE: *see note in bold below*
REVIEW TYPE: Expedited Review

Thank you for your submission of New Project materials for this project. The University of Northern Colorado (UNCO) IRB has APPROVED your submission WITH CONDITIONS. The conditions must be met prior to proceeding and all research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on applicable federal regulations.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

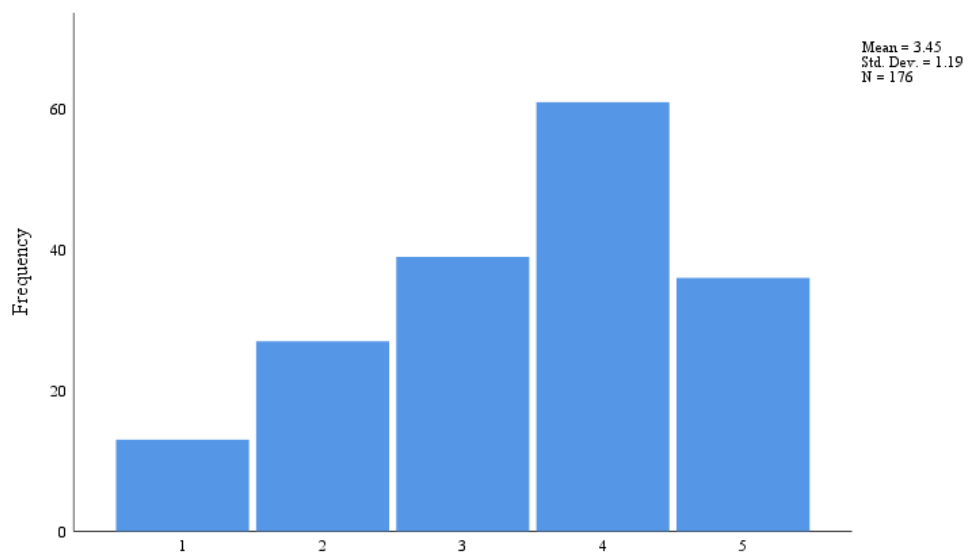
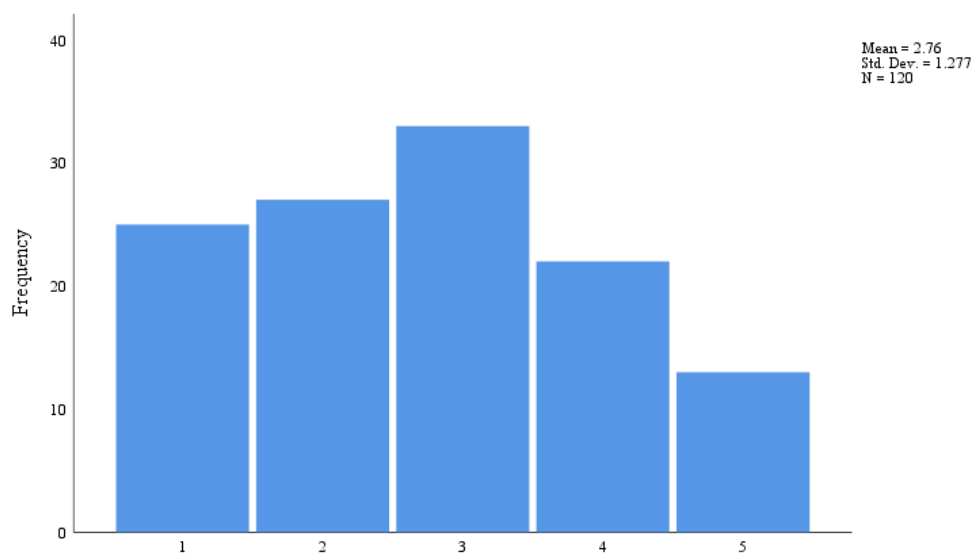
All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

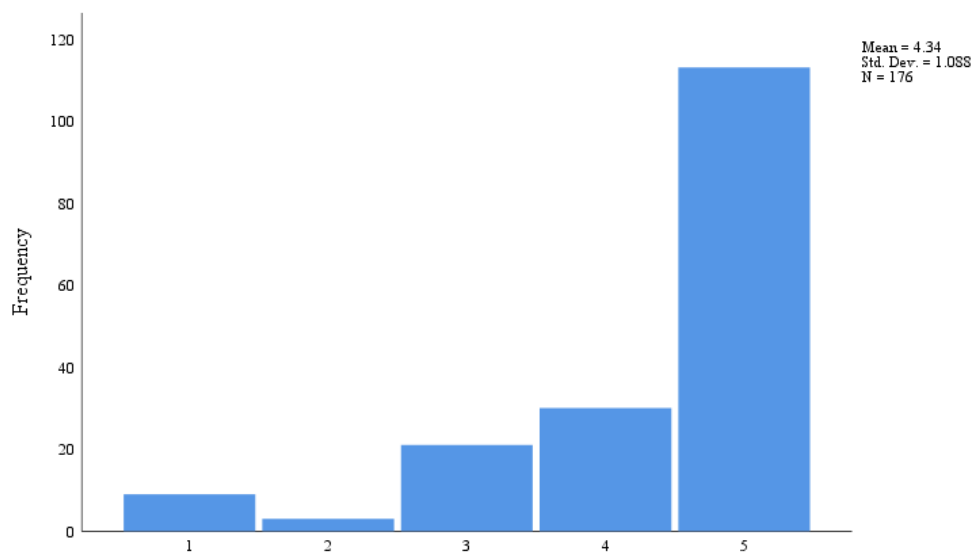
Under the recently revised Common Rule, this project will not require annual continuing review by the committee. Your project has been assigned a "Next Report Due" date of March 5, 2023. Just prior to that date, the IRB will check in with you to get a current status of your project. This will help us determine if your project needs to be extended or if your study is ready to be closed. If you have completed your project prior to that date, please contact the Office of Research & Sponsored Programs to complete a closing report.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

APPENDIX C
HISTOGRAMS FOR ITEMS 17–22

Not Low-SES Responses to Q. 17 - Affordability*Low-SES Responses to Q. 17 - Affordability**Figure 2. Responses to Question 17: Affordability.*

Not Low-SES Responses to Q. 18 - College Importance



Low-SES Responses to Q. 18 - College Importance

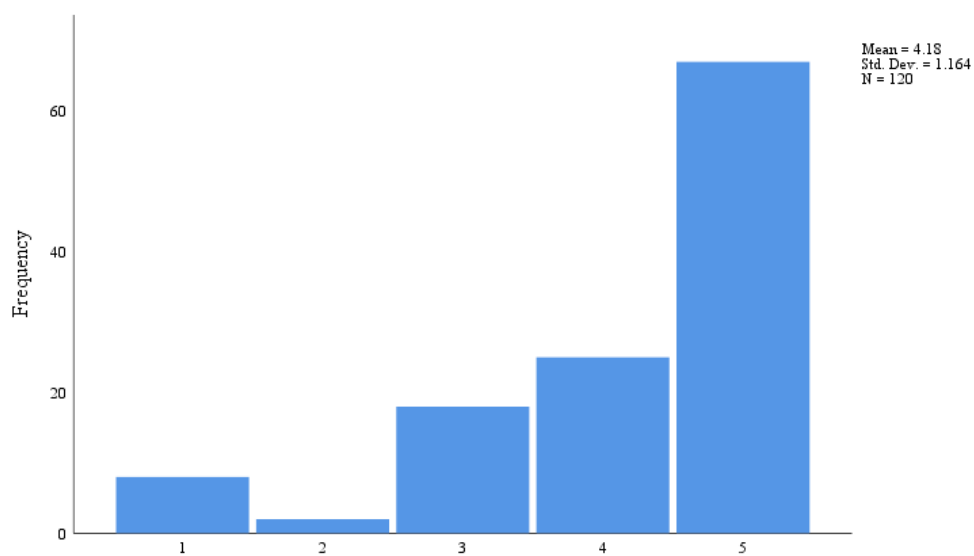
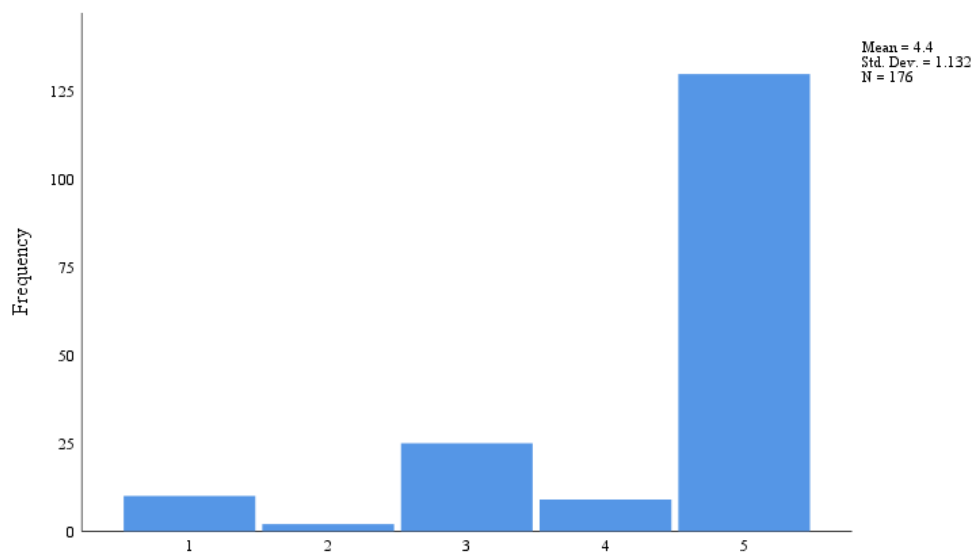
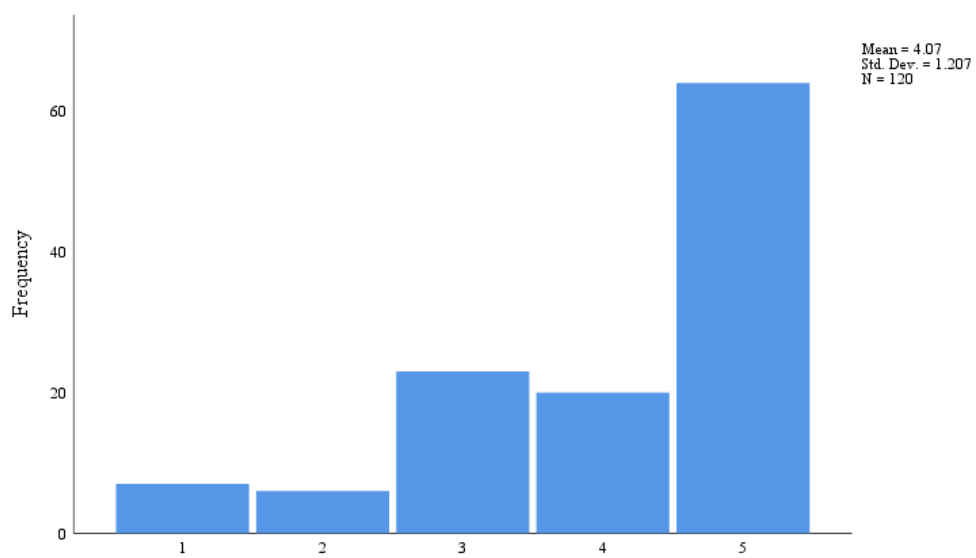
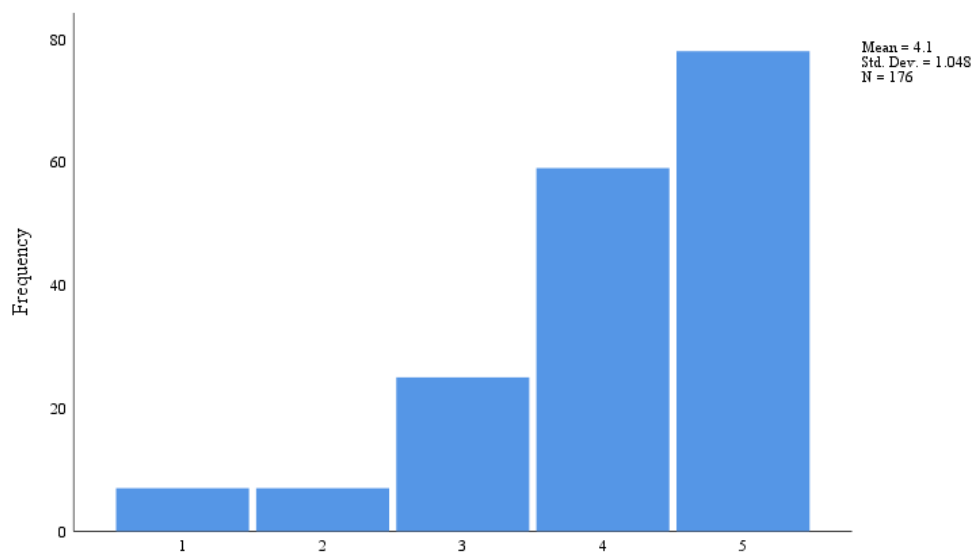
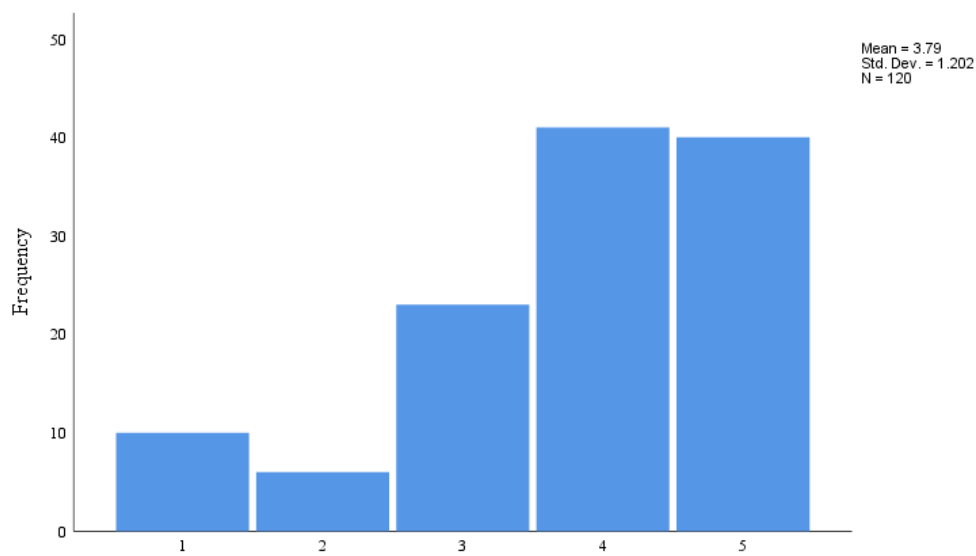
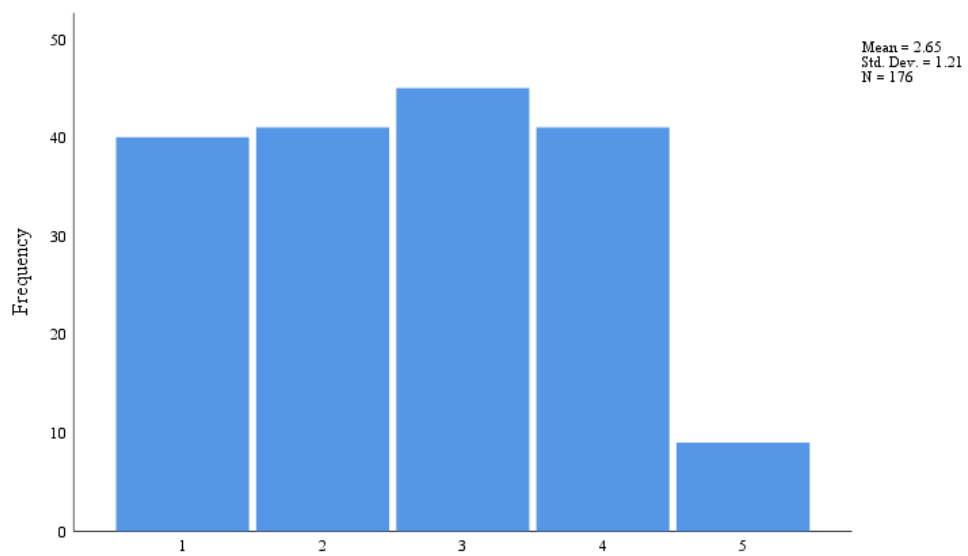
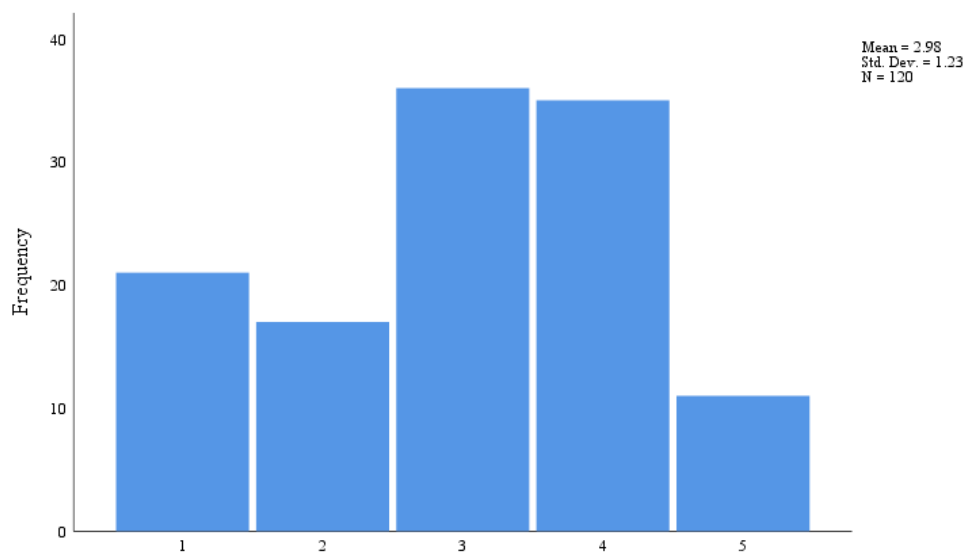


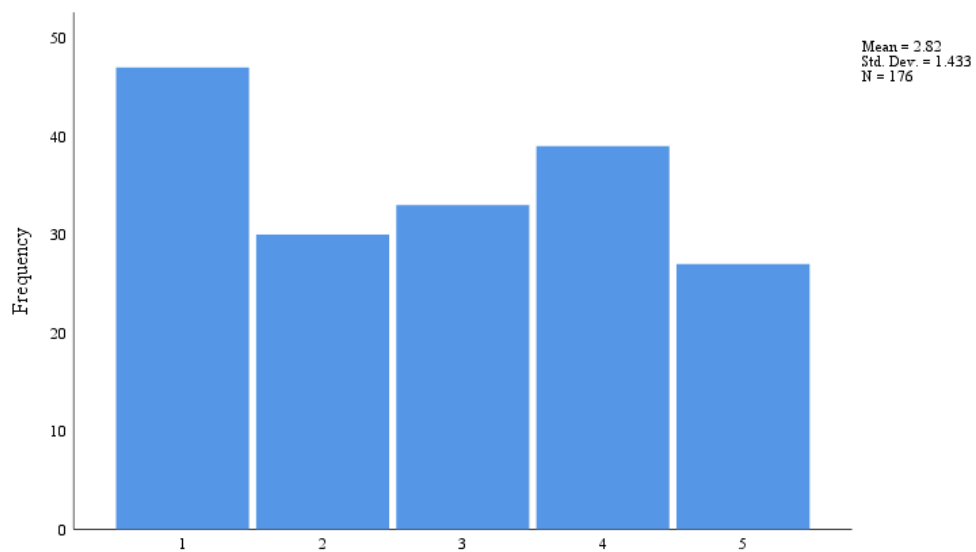
Figure 3. Responses to Question 18: College importance.

Not Low-SES Responses to Q. 19 - College Application Process*Low-SES Responses to Q. 19 - College Application Process**Figure 4. Responses to Question 19: College application process.*

Not Low-SES Responses to Q. 20 - Academic Challenge*Low-SES Responses to Q. 20 - Academic Challenge**Figure 5. Responses to Question 20: Academic challenge.*

Not Low-SES Responses to Q. 21 - Fitting In*Low-SES Responses to Q. 21 - Fitting In**Figure 6. Responses to Question 21: Fitting in.*

Not Low-SES Responses to Q. 22 - Parental Experiences and Expectations



Low-SES Responses to Q. 22 - Parental Experiences and Expectations

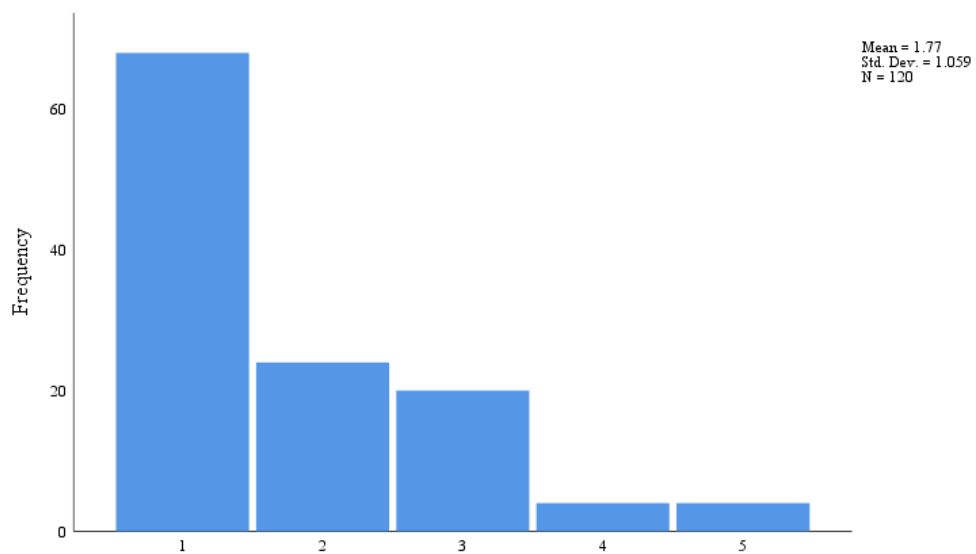


Figure 7. Responses to Question 22: Parental experiences and expectations.