Patterns in Bachelor’s Degree Completion among First-Generation Students from Urban, Public K-12 School Districts

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Abstract

This quantitative research study investigated the relationship between the characteristics and experiences of first-generation students from urban, public K-12 school districts and whether they remain on track for completion of a bachelor’s degree within six years of high school graduation. The guiding questions for this study were: 1) How much does an urban, first-generation student’s characteristics and experiences relate to their access to and success in college? 2) Are certain characteristics and experiences more likely to make or break an urban, first-generation student’s success in completing a bachelor’s degree? And 3) How can educators more strategically allocate time, staff, and resources to keep urban, first-generation students on track for attaining their college degree?

During the 2016-2017 school year, an online survey was distributed to and shared among individuals who graduated from public school districts in the 100 largest urban areas in the United States between 2005 and 2015. The survey resulted in 177 responses from graduates whose parent(s)/guardian(s) had not attained a bachelor’s degree at the time of their high school graduation. A series of 50 hypotheses based on the characteristics and experiences of the participants were evaluated using a chi-square analysis. Using a 0.05 significance level, a total of 12 characteristics and experiences were found to have a significant relationship with being on track for bachelor’s degree completion.

Living on campus, being a person of color or an immigrant, experiencing the death of an immediate family member prior to high school graduation, or participating in college access and success programming indicated a positive, statistically significant relationship with being on track for bachelor’s degree completion for urban, first-generation students. Using marijuana, having dependents prior to age 22, or experiencing sexual abuse prior to high school graduation were found to have a negative, statistically significant relationship with being on track for bachelor’s degree completion for this student demographic. It is the hope of this researcher that the findings in this study will assist current and future educators in focusing their efforts strategically to better meet the needs of first-generation students from urban areas.
Acknowledgements

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Thank you also to the many first-generation students from urban, public school districts who participated in this study. These graduates took the time to answer deeply personal questions in hopes that their responses would provide insight for educators and other professionals who will impact the next generation. I appreciate their willingness to share authentically.

Most importantly, I would like to thank my partner for his unending encouragement to keep moving forward no matter what obstacles crossed my path. Words cannot express my gratitude for the sacrifices he made alongside me throughout my graduate studies. This accomplishment would not have been possible without his support.
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Chapter I
Introduction

Overview

Increasing the number of degree-holding citizens in a community offers a foundation for regional growth and development. This measurement is used with increasing frequency as a national and international comparison for economic progress. Educating the next generation has become a priority locally and nationally as Americans witness the paling of their nation in comparison to those countries making significant strides in economic, social, and educational progress. According to Jamie P. Merisotis, President and CEO of the Lumina Foundation, in his address to the U.S. Senate Committee on Health, Education, Labor, and Pensions on July 22, 2015, “America is no longer the unquestioned world leader in postsecondary education,” and U.S. degree attainment “must rise to 60 percent by 2025 if the U.S. is to remain globally competitive” (1-2). Merisotis emphasizes, “demographic trends make it clear that many, if not most, of these new credential holders must come from low-income, first-generation, minority, and adult populations” (2). While the number of American students graduating with a bachelor’s degree is said to be increasing, there continues to be a discrepancy in social class for families that have not reached this milestone, shedding light on the first-generation students who are less likely to complete their degree programs.

Problem Statement

Earning a bachelor’s degree is no simple task for first-generation college students, who are more likely to have disadvantages or deficits as they approach college enrollment. If Americans hope to see their nation once again at the top in terms of
educational attainment, the gap in achievement between first-generation students and those whose parents have a four-year college degree needs to be significantly reduced. How can our families, communities, and schools ensure the academic success of first-generation adolescent and young adult students in order to close the achievement gap, end cyclical poverty, and promote economic growth in the nation?

**Purpose of Study**

Identifying and correlating key characteristics of first-generation students who are successful in terms of bachelor’s degree completion can pinpoint areas for more intentional intervention by educators, thus increasing the odds that a first-generation student will achieve their college degree. This research study focused on first-generation students who graduated from public K-12 school districts in the 100 largest urban areas across the United States as estimated by the U.S. Census Bureau (2016). Some support currently exists for these first-generation students in the form of guidance counselors, advisors, and college access and success program staff like those of College Possible™ or Federal TRIO Programs (College Possible, 2016; U.S. Department of Education, 2017). The researcher leading this study has had eight years of experience supporting first-generation students as a college access and success program manager for a non-profit organization and as a professional advisor in a higher education setting. In addition, the researcher herself was the first in her family to attain a college degree. It is the hope of the researcher that the results of this study will fill gaps in research identified in the following chapter and assist other educators in both K-12 and higher education settings as they attempt to allocate time, staff, and resources more effectively when it comes to
preparing and assisting urban, first-generation students in pursuit of their bachelor’s degree.

**Guiding Questions**

While there are general guiding principles for what is believed to make a student ‘college material’ or likely to graduate from a four-year college or university, there is no clearly identified link between the wide variety of characteristics and experiences that students have and whether they will have a successful experience in higher education. The guiding questions for this study stem from this idea and include:

1) How much does an urban, first-generation student’s characteristics and experiences relate to his or her access to and success in college?

2) Are certain characteristics and experiences more likely to make or break an urban, first-generation student’s success in completing a bachelor’s degree?

3) How can educators more strategically position time, staff, and resources to keep urban, first-generation students on track for attaining their college degree?

**Hypotheses**

In this study, the researcher analyzed 50 sets of null and research hypotheses divided into ten overarching categories as seen below. Definitions for the terminology used in these hypotheses and throughout the study can be found later in this chapter.

1. **Sex, Gender, and Sexual Orientation**

   $H_{01}$: There is not a significant relationship between an urban, first-generation student’s biological sex and whether or not they are on track for completion of a bachelor’s degree.
H1. Patterns in Bachelor’s Degree Completion

H1.1: There is a significant relationship between an urban, first-generation student’s biological sex and whether or not the student is on track for completion of a bachelor’s degree.

H0.2: There is not a significant relationship between an urban, first-generation student’s identity as part of the LGBTQ+ community and whether or not the student is on track for completion of a bachelor’s degree.

H1.2: There is a significant relationship between an urban, first-generation student’s identity as part of the LGBTQ+ community and whether or not the student is on track for completion of a bachelor’s degree.

II. Race, Language, and Immigration Status

H0.3: There is not a significant relationship between an urban, first-generation student’s racial identity and whether or not the student is on track for completion of a bachelor’s degree.

H1.3: There is a significant relationship between an urban, first-generation student’s racial identity and whether or not the student is on track for completion of a bachelor’s degree.

H0.4: There is not a significant relationship between an urban, first-generation student’s identity as a person of color and whether or not the student is on track for completion of a bachelor’s degree.

H1.4: There is a significant relationship between an urban, first-generation student’s identity as a person of color and whether or not the student is on track for completion of a bachelor’s degree.
H₀⁵: There is not a significant relationship between whether an urban, first-generation student is a native English speaker and whether or not the student is on track for completion of a bachelor’s degree.

H₁⁵: There is a significant relationship between whether an urban, first-generation student is a native English speaker and whether or not the student is on track for completion of a bachelor’s degree.

H₀⁶: There is not a significant relationship between whether an urban, first-generation student’s parent(s) or guardian(s) are immigrants to the United States and whether or not the student is on track for completion of a bachelor’s degree.

H₁⁶: There is a significant relationship between whether an urban, first-generation student’s parent(s) or guardian(s) are immigrants to the United States and whether or not the student is on track for completion of a bachelor’s degree.

H₀⁷: There is not a significant relationship between whether an urban, first-generation student’s parent(s) or guardian(s) were previously or are currently undocumented immigrants living in the United States and whether or not the student is on track for completion of a bachelor’s degree.

H₁⁷: There is a significant relationship between whether an urban, first-generation student’s parent(s) or guardian(s) were previously or are currently undocumented immigrants living in the United States and whether or not the student is on track for completion of a bachelor’s degree.

H₀⁸: There is not a significant relationship between whether an urban, first-generation student is an immigrant to the United States and whether or not the student is on track for completion of a bachelor’s degree.
H₁₈: There is a significant relationship between whether an urban, first-generation student is an immigrant to the United States and whether or not the student is on track for completion of a bachelor’s degree.

H₀₉: There is not a significant relationship between whether an urban, first-generation student was previously or is currently an undocumented immigrant living in the United States and whether or not the student is on track for completion of a bachelor’s degree.

H₁₉: There is a significant relationship between whether an urban, first-generation student was previously or is currently an undocumented immigrant living in the United States and whether or not the student is on track for completion of a bachelor’s degree.

III. Employment

H₀₁₀: There is not a significant relationship between the number of hours an urban, first-generation student worked per week prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₁₀: There is a significant relationship between the number of hours an urban, first-generation student worked per week prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀₁₁: There is not a significant relationship between the number of hours an urban, first-generation student worked while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₁₁₁: There is a significant relationship between the number of hours an urban, first-generation student worked while in college and whether or not the student is on track for completion of a bachelor’s degree.
H₀₁₂: There is not a significant relationship between whether an urban, first-generation student served in the United States Armed Forces and whether or not the student is on track for completion of a bachelor’s degree.

H₁₁₂: There is a significant relationship between whether an urban, first-generation student served in the United States Armed Forces and whether or not the student is on track for completion of a bachelor’s degree.

IV. Marriage and Children

H₀₁₃: There is not a significant relationship between whether an urban, first-generation student got married at age 22 or below and whether or not the student is on track for completion of a bachelor’s degree.

H₁₁₃: There is a significant relationship between whether an urban, first-generation student got married at age 22 or below and whether or not the student is on track for completion of a bachelor’s degree.

H₀₁₄: There is not a significant relationship between whether an urban, first-generation student became a parent or guardian at age 22 or below and whether or not the student is on track for completion of a bachelor’s degree.

H₁₁₄: There is a significant relationship between whether an urban, first-generation student became a parent or guardian at age 22 or below and whether or not the student is on track for completion of a bachelor’s degree.

V. Alcohol and Other Drug Use

H₀₁₅: There is not a significant relationship between an urban, first-generation student’s use of alcohol prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.
H\textsubscript{15}: There is a significant relationship between an urban, first-generation student’s use of alcohol prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H\textsubscript{016}: There is not a significant relationship between an urban, first-generation student’s use of alcohol while in college and whether or not the student is on track for completion of a bachelor’s degree.

H\textsubscript{116}: There is a significant relationship between an urban, first-generation student’s use of alcohol while in college and whether or not the student is on track for completion of a bachelor’s degree.

H\textsubscript{017}: There is not a significant relationship between an urban, first-generation student’s use of marijuana prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H\textsubscript{117}: There is a significant relationship between an urban, first-generation student’s use of marijuana prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H\textsubscript{018}: There is not a significant relationship between an urban, first-generation student’s use of marijuana while in college and whether or not the student is on track for completion of a bachelor’s degree.

H\textsubscript{118}: There is a significant relationship between an urban, first-generation student’s use of marijuana while in college and whether or not the student is on track for completion of a bachelor’s degree.
H₀₁₉: There is not a significant relationship between an urban, first-generation student’s use of other illegal drugs prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₁₉: There is a significant relationship between an urban, first-generation student’s use of other illegal drugs prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀₂₀: There is not a significant relationship between an urban, first-generation student’s use of other illegal drugs while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₁₂₀: There is a significant relationship between an urban, first-generation student’s use of other illegal drugs while in college and whether or not the student is on track for completion of a bachelor’s degree.

VI. Physical, Mental, and Sexual Abuse

H₀₂₁: There is not a significant relationship between whether an urban, first-generation student experienced physical abuse or neglect prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₂₁: There is a significant relationship between whether an urban, first-generation student experienced physical abuse or neglect prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀₂₂: There is not a significant relationship between whether an urban, first-generation student experienced physical abuse while in college and whether or not the student is on track for completion of a bachelor’s degree.
H₁₂₂: There is a significant relationship between whether an urban, first-generation student experienced physical abuse while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₀₂₃: There is not a significant relationship between whether an urban, first-generation student experienced mental or emotional abuse prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₂₃: There is a significant relationship between whether an urban, first-generation student experienced mental or emotional abuse prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀₂₄: There is not a significant relationship between whether an urban, first-generation student experienced mental or emotional abuse while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₁₂₄: There is a significant relationship between whether an urban, first-generation student experienced mental or emotional abuse while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₀₂₅: There is not a significant relationship between whether an urban, first-generation student experienced sexual abuse, sexual assault, or rape prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₂₅: There is a significant relationship between whether an urban, first-generation student experienced sexual abuse, sexual assault, or rape prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.
H₀₂₆: There is not a significant relationship between whether an urban, first-generation student experienced sexual abuse, sexual assault, or rape while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₁₂₆: There is a significant relationship between whether an urban, first-generation student experienced sexual abuse, sexual assault, or rape while in college and whether or not the student is on track for completion of a bachelor’s degree.

VII. Additional Personal Challenges

H₀₂₇: There is not a significant relationship between whether an urban, first-generation student experienced extreme hunger prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₂₇: There is a significant relationship between whether an urban, first-generation student experienced extreme hunger prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀₂₈: There is not a significant relationship between whether an urban, first-generation student experienced extreme hunger while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₁₂₈: There is a significant relationship between whether an urban, first-generation student experienced extreme hunger while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₀₂₉: There is not a significant relationship between whether an urban, first-generation student experienced homelessness prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.
H₁29: There is a significant relationship between whether an urban, first-generation student experienced homelessness prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀30: There is not a significant relationship between whether an urban, first-generation student experienced homelessness while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₁30: There is a significant relationship between whether an urban, first-generation student experienced homelessness while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₀31: There is not a significant relationship between whether an urban, first-generation student experienced the death of an immediate family member prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁31: There is a significant relationship between whether an urban, first-generation student experienced the death of an immediate family member prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀32: There is not a significant relationship between whether an urban, first-generation student experienced the death of an immediate family member while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₁32: There is a significant relationship between whether an urban, first-generation student experienced the death of an immediate family member while in college and whether or not the student is on track for completion of a bachelor’s degree.
H₀₃₃: There is not a significant relationship between whether an urban, first-generation student experienced a serious illness or injury prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₃₃: There is a significant relationship between whether an urban, first-generation student experienced a serious illness or injury prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀₃₄: There is not a significant relationship between whether an urban, first-generation student experienced a serious illness or injury in college and whether or not the student is on track for completion of a bachelor’s degree.

H₁₃₄: There is a significant relationship between whether an urban, first-generation student experienced a serious illness or injury in college and whether or not the student is on track for completion of a bachelor’s degree.

VIII. Relationships with Adults

H₀₃₅: There is not a significant relationship between the number of times an urban, first-generation student was discouraged from attending college by an adult prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₃₅: There is a significant relationship between the number of times an urban, first-generation student was discouraged from attending college by an adult prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.
H₀36: There is not a significant relationship between whether an urban, first-generation student’s parent(s) or guardian(s) encouraged them to pursue a college education and whether or not the student is on track for completion of a bachelor’s degree.

H₁36: There is a significant relationship between whether an urban, first-generation student’s parent(s) or guardian(s) encouraged them to pursue a college education and whether or not the student is on track for completion of a bachelor’s degree.

H₀37: There is not a significant relationship between the number of meaningful relationships an urban, first-generation student had with a degree-holding adult prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁37: There is a significant relationship between the number of meaningful relationships an urban, first-generation student had with a degree-holding adult prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀38: There is not a significant relationship between whether an urban, first-generation student experience parental incarceration prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁38: There is a significant relationship between whether an urban, first-generation student experience parental incarceration prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀39: There is not a significant relationship between whether an urban, first-generation student experienced parental incarceration while in college and whether or not the student is on track for completion of a bachelor’s degree.
H₁₃₉: There is a significant relationship between whether an urban, first-generation student experienced parental incarceration while in college and whether or not the student is on track for completion of a bachelor’s degree.

H₀₄₀: There is not a significant relationship between whether an urban, first-generation student believed their parent(s) or guardian(s) had the majority of knowledge needed to assist them with the college-going process and whether or not the student is on track for completion of a bachelor’s degree.

H₁₄₀: There is a significant relationship between whether an urban, first-generation student believed their parent(s) or guardian(s) had the majority of knowledge needed to assist them with the college-going process and whether or not the student is on track for completion of a bachelor’s degree.

**IX. College Access and Success Programming**

H₀₄₁: There is not a significant relationship between an urban, first-generation student’s participation in college access and success programming prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₄₁: There is a significant relationship between an urban, first-generation student’s participation in college access and success programming prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₀₄₂: There is not a significant relationship between the number of years an urban, first-generation student participated in college access and success programming prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H₁₄₂: There is a significant relationship between the number of years an urban, first-generation student participated in college access and success programming prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.
H$_{142}$: There is a significant relationship between the number of years an urban, first-generation student participated in college access and success programming prior to high school graduation and whether or not the student is on track for completion of a bachelor’s degree.

H$_{043}$: There is not a significant relationship between whether an urban, first-generation student participated in college access and success programming, including bridge programming, while in college and whether or not the student is on track for completion of a bachelor’s degree.

H$_{143}$: There is a significant relationship between whether an urban, first-generation student participated in college access and success programming, including bridge programming, while in college and whether or not the student is on track for completion of a bachelor’s degree.

H$_{044}$: There is not a significant relationship between whether an urban, first-generation student participated in college access and success programming both prior to high school graduation and while in college and whether or not the student is on track for completion of a bachelor’s degree.

H$_{144}$: There is a significant relationship between whether an urban, first-generation student participated in college access and success programming both prior to high school graduation and while in college and whether or not the student is on track for completion of a bachelor’s degree.
X. Classifications and Logistics in Higher Education Settings

H₀45: There is not a significant relationship between whether an urban, first-generation student began college with full-time or part-time enrollment status and whether or not the student is on track for completion of a bachelor’s degree.

H₁45: There is a significant relationship between whether an urban, first-generation student began college with full-time or part-time enrollment status and whether or not the student is on track for completion of a bachelor’s degree.

H₀46: There is not a significant relationship between whether an urban, first-generation student began college as a campus resident or commuter and whether or not the student is on track for completion of a bachelor’s degree.

H₁46: There is a significant relationship between whether an urban, first-generation student began college as a campus resident or commuter and whether or not the student is on track for completion of a bachelor’s degree.

H₀47: There is not a significant relationship between whether an urban, first-generation student’s full-time financial aid package covered their first year of tuition expenses and whether or not the student is on track for completion of a bachelor’s degree.

H₁47: There is a significant relationship between whether an urban, first-generation student’s full-time financial aid package covered their first year of tuition expenses and whether or not the student is on track for completion of a bachelor’s degree.

H₀48: There is not a significant relationship between whether an urban, first-generation student placed into remedial courses in English and whether or not the student is on track for completion of a bachelor’s degree.
H₁₄₈: There is a significant relationship between whether an urban, first-generation student placed into remedial courses in English and whether or not the student is on track for completion of a bachelor’s degree.

H₀₄₉: There is not a significant relationship between whether an urban, first-generation student placed into remedial courses in mathematics and whether or not the student is on track for completion of a bachelor’s degree.

H₁₄₉: There is a significant relationship between whether an urban, first-generation student placed into remedial courses in mathematics and whether or not the student is on track for completion of a bachelor’s degree.

H₀₅₀: There is not a significant relationship between whether an urban, first-generation student placed into remedial courses in both English and mathematics and whether or not the student is on track for completion of a bachelor’s degree.

H₁₅₀: There is a significant relationship between whether an urban, first-generation student placed into remedial courses in both English and mathematics and whether or not the student is on track for completion of a bachelor’s degree.

**Definition of Terms**

For the purposes of this study, these terms are defined as follows:

- **Biological sex**: Anatomical identity as female, male, or intersex as determined by internal and external physical features

- **Bridge programming**: College access and success programming taking place during the summer between high school graduation and fall enrollment in college

- **Campus resident**: Student who lives on property considered to be part of the college campus during the school year
- **College access and success programming**: Structured, scheduled programming with the purpose of educating students about college-related topics such as college applications or financial aid, primarily serving students who are low-income, first-generation, or of color

- **Commuter**: Student who does not live on property considered to be part of the college campus during the school year

- **Extreme hunger**: Frequent missing of meals and/or undernourishment due to lack of resources

- **Financial aid package**: All scholarships, grants, and institutional loans awarded to the student during a given school year (not to include private loans or family lending)

- **First-generation**: Description of a student pursuing higher education with no parent(s) or guardian(s) having completed a bachelor’s degree or higher

- **Homelessness**: Lacking a permanent home, including instances of staying with friends or extended family due to lack of safety and/or financial stability

- **Lesbian, gay, bisexual, transgender, queer, etc. (LGBTQ+)**: Population with sexual orientations or gender identities differing from the heterosexual or cisgender majority

- **Married**: Legally or culturally wedded to a spouse

- **Meaningful relationship**: A relationship of a year or more in which the student had ongoing contact and perceived the connection as impactful

- **On track**: Description of a student who is at or above the appropriate education level in accordance with the year he or she graduated from high school as
measured by a standard six-year maximum timeframe to attain a bachelor’s degree (see Table 1, pages 27-28)

- **Other illegal drugs**: Unlawful drugs not including alcohol or marijuana, but including prescription medication not belonging to the student
- **Parental incarceration**: A parent or guardian serving time in jail or prison
- **Person of color**: An individual who identifies as a race other than Caucasian or white
- **Pre-college programming**: College access and success programming taking place prior to enrollment in college
- **Remedial courses**: Classes worth zero credit that some college students are required or recommended to take in order to build their skills before taking college-level classes
- **Serious illness or injury**: A physical or mental ailment causing immense pain and/or strongly interfering with everyday tasks or routines
- **Undocumented immigrant**: A foreign-born person without legal right to be or remain in the United States
- **United States Armed Forces**: All federal military service including the United States Army, Coast Guard, Marine Corps, Air Force, and Navy
- **Urban**: Description relating to the largest 100 metropolitan areas in the United States by population size as estimated by the U.S. Census Bureau in 2015 (2016)

**Chapter Summary**

The first-generation college student experience varies significantly from that of other college students and is reflected in college persistence and completion rates
nationally. The goal of this research study was to clarify not only which student
background variables and personal experiences are related to a student’s college access
and success, but also investigate which variables may have the strongest impact on first-
generation, urban students’ likelihood to successfully attain a four-year college degree.
Chapter 2

Review of Related Literature

Overview

A review of the literature on the background and experiences that first-generation students and other students bring with them to the classroom is essential to understanding students’ needs. Whether in K-12 or higher education settings, students’ circumstances play a role in their academic success and overall well-being. In this chapter, previous research on these individual circumstances and subsequent impact on students’ likelihood to move forward with their pursuit of a bachelor’s degree will be explored.

Review of Related Literature

First-generation students often experience increased adversity in their pursuit of higher education. Generational status alone may make a direct impact on whether or not a student applies to college or whether they will delay college enrollment upon high school graduation (Grodsky & Rieglecrumb, 2010; Wells & Lynch, 2012). Non-first-generation students are more likely to grow up with the expectation and assumption that they will attend college, making their question not if, but where they will pursue the next level of their education (Grodsky & Rieglecrumb, 2010; Blackwell & Pinder, 2014). This belief has a noticeable impact on students’ decisions. A review of the literature shows that high school students who believe they will attend college are significantly more likely to perform better in school, take advanced mathematics courses, and take the PSAT or PACT, actions that in turn increase their college readiness (Grodsky & Rieglecrumb, 2010).
In comparison to their non-first-generation peers, first-generation students lack healthy levels of self-efficacy and social support, while reporting higher rates of stress (Ramos-Sanchez & Nichols, 2007; Mehta et al., 2011; Barry et al., 2009). They are significantly less likely to disclose stressful experiences to family and friends even though disclosure itself can offer some sense of relief from and control over potentially psychologically damaging experiences (Barry et al., 2009). Even among long-time friends, first-generation students may feel that their college experiences are not understood, and feelings of family achievement guilt may leave them feeling further isolated and depressed (Maramba, 2008; Covarrubias et al., 2015).

Prior research often recommends that institutions of higher education focus on planned interventions for first-generation students, such as artificial opportunities to disclose stressful or traumatic experiences or to build social interaction and confidence in their ability (Barry et al., 2009; Ramos-Sanchez & Nichols, 2007). However, often the data presented is for full-time, residential, traditional-aged students, which leaves out a large proportion of first-generation students who can only manage to go part-time, must commute, or plan to return to their studies later in life (Alcantar, 2014). Other populations within the first-generation student demographic are underrepresented in discussions as well, such as those who are not only first-generation college students, but first-generation high school graduates, a proportion seven percent less likely to expect that they will attend college as compared to other first-generation peers (Grodsky & Rieglecrumb, 2010). Dropout rates among urban students surpass those of suburban and rural students, and dropout rates among students from public school districts outweigh those of private schools by as much as nine percent (Carpenter II & Ramirez, 2007).
It is important to take the wide range of characteristics and experiences that urban, first-generation students may encounter into consideration as institutional practices are determined. Prior research related to the characteristics and experiences explored in this study will be reviewed below:

I. Sex, Gender, and Sexual Orientation

Previous research shows that female college students demonstrate higher levels of contingent self-esteem (i.e. comparing themselves to others) and higher concern about their weight than their male counterparts (Grossbard et al., 2008). For support at the college level, female students of color may seek female staff members of color as role models that may better understand their struggles (Mamba, 2008). Males’ self-esteem has been found to be associated with the pursuit of masculinity in light of social expectations, a ‘mask’ that male college students may find difficulty in removing (Grossbard et al., 2008; Edwards & Jones, 2009). Black males specifically have presented a decreased likelihood of bachelor degree completion as compared to black females in cases where their mother lacked a college degree, though this gender gap disappeared for those whose mother had a degree (Keels, 2013). Gender and sexual minorities face additional challenges. Bisexual students report increased frequency of sexually transmitted diseases, while transsexual students’ persistence in college is influenced by their weighing of the academic, social, financial, and emotional costs of attendance (Lindley et al., 2008; Goodrich, 2010). At the high school level, sexual minorities experience increased likelihood of bullying both at school and online (Schneider et al., 2015).
II. Race, Language, and Immigration Status

Non-first-generation students of color are twice as likely as their first-generation counterparts to complete a bachelor’s degree, but measurements by race alone for all undergraduate students indicate higher completion rates for Caucasian and Asian students than Hispanics and African-Americans (U.S. Department of Education, 2016). This variance in graduation rates by race is found at the high school level as well (Office of English Language Acquisition, 2010). However, some research shows that race alone may not be the significant predictor in student dropout rates, as in one study that pinpointed rates of school suspensions and being held back by grade level as more influential (Carpenter II & Ramirez, 2007). In addition to race, students categorized as English language learners or immigrants face unique challenges. English language learners complete high school at a rate of 62.6%, almost 20% below the national average and lower than both economically disadvantaged students and students with disabilities (Office of English Language Acquisition, 2010). Immigrant students or students with immigrant caretakers may face additional challenges, especially undocumented immigrants, who move through their studies with an underlying fear and are some of the most disadvantaged within a culture that values higher education (Muñoz, 2016; Grodsky & Rieglecrumb, 2010).

III. Employment

Few changes in employment rates or hours for students overall have been observed in the last few decades (Warren & Cataldi, 2006). However, over time there has been an increased gap between African-American and Caucasian high school student employment rates (Warren & Cataldi, 2006). High school students with comparatively
advantaged socioeconomic status and academic records typically work fewer hours per week than other students and are less likely to drop out of school (Warren & Cataldi, 2006). A positive correlation exists between employment of college students and their persistence towards degree completion, although employment also was found to have a negative correlation with grade point averages (Kulm & Cramer, 2006). Should a high school graduate forego immediate enrollment in college courses and choose to enroll in the U.S. Armed Forces, this form of employment may have very different repercussions in terms of degree completion. Veterans who later return to college may experience ‘invisible wounds’ such as post-traumatic stress disorder or perceive the transition to college life as either a loss or a gain depending on their experiences and perspective (Barry et al., 2012; DiRamio & Jarvis, 2011). For veteran students with post-traumatic stress disorder, the risk of lower academic performance, increased alcohol-related concerns, and lower college persistence rates were found to be consequential (Barry et al., 2012).

IV. Marriage and Children

Previous research has found that college women involved in committed relationships express fewer signs of depression as opposed to those who remain single, and both male and female students in committed relationships exhibit lower levels of alcohol use (Whitton et al., 2013). However, relationships that go wrong for couples at a younger age can be devastating. High school students in grades 9-11 who exhibited physical dating perpetration or victimization were found to be at an increased risk for suicidal thoughts (Nahapetyan et al., 2014). Age increases the likelihood of marital satisfaction among college students, even after adjusting for length of time being married.
(Weinstein et al., 2010). Bringing children into the picture as a student can add an additional layer of challenges, such as lack of appropriate childcare, balancing coursework with responsibilities at home, and often needing to return to college later in life as a non-traditional student (Pellegrino & Hoggan, 2015; Rankin et al., 2011).

V. Alcohol and Other Drug Use

Among high school students, the students’ use of marijuana and the substance use norms exhibited by parents and guardians are both linked to a decrease in students’ positive intentions in school, as measured by the level of confidence in their belief that they will complete the school year (Williams et al., 2007). Youth who begin substance use at an early age are often influenced by peer groups and are normalized by what they witness at home with their families, with decreased likelihood of substance use among students who believed their families would strongly disapprove (Russell et al., 2015; Curran, 2007). African-American high school students, particularly those in urban settings, demonstrate lower rates of marijuana and alcohol use than other groups (Williams et al., 2007; Chen & Killeya-Jones, 2006). College students who develop a Substance Use Disorder are likely to misperceive their peers’ use of alcohol and marijuana at a higher rate than others, and college males report higher frequency of marijuana use and in greater amounts than females (Lewis & Mobley, 2010; Allen & Holder, 2014). In terms of other drugs, some usage patterns among specific demographics have been identified as well. In the case of prescription opioids, women who earn their high school diploma but do not enroll in college demonstrate a significantly higher risk of opioid misuse (Martins et al., 2014). Among adolescents,
African-American students have the highest rate of opioid misuse, contrary to the findings for marijuana and alcohol (Ford & Rigg, 2015).

VI. Physical, Mental, and Sexual Abuse

Research shows that the effects of abuse and neglect on children can be seen beyond their immediate physical harm (Frederico et al., 2008). When a child is a victim of abuse or neglect, they are more likely to demonstrate attendance issues in school, engage in sexual exploitation and related behaviors, and run away from home (Frederico et al., 2008; Benoit-Bryan, 2011). Children who have experienced verbal or sexual abuse are twice as likely to run away as those who have not, and children who have experienced physical abuse are three times as likely to run away as those who have not (Benoit-Bryan, 2011). Young people who have run away from home go on to lower incomes, higher arrest rates, and lower education levels as adults (Benoit-Bryan, 2011). For sexual abuse specifically, children who continue on to college demonstrate higher rates of problematic drinking behavior due to what may be the desire to dissociate (Klanecky et al., 2012; Monks et al., 2010). They also are prone to revictimization as adults, especially if they are female (Walsh et al., 2007). Even within consensual relationships, dating violence and emotional abuse are prevalent among students in high school and college with a consequential impact on students’ mental health (Nahapetyan et al., 2014; Gormley & Lopez, 2010).

VII. Additional Personal Challenges

There are many other personal challenges adolescents and young adults may face as they attempt to further their education. Prior research shows that 22-30% of college students are within the first year of grieving over the death of a loved one, and students
may be dealing with their own illnesses and injuries that have a direct impact on their ability to function in school (Balk, 2008; Sohlberg, 2015). Students may also be coping with the repercussions of their parents’ or guardians’ circumstances, as in the case of those who face homelessness. Homelessness presents obstacles to students’ learning and persistence due to the threat of food insecurity, lack of shelter, and failure to meet other basic needs (Hallett, 2010; McDonald, 2013). Children who rely on access to meals during the school day and college students who rely on housing provisions through residence halls on campus suffer during school breaks (Hallett, 2010; McDonald, 2013). Even slight failure to meet these needs impacts students’ emotional well-being and development (Hallett, 2010; McDonald, 2013; Anderson, 2011). However, prior research indicates that there may be resiliency among these students as they are able to make use of support systems within their environment (Rahman et al., 2015).

VIII. Relationships with Adults

The relationship between students and their parent(s) or guardian(s) is extremely important. In situations where students have been removed from care due to incarceration, students demonstrated a significant relationship between these circumstances and delinquent behavior patterns, as well as their likelihood to drop out of school (Aaron & Dallaire, 2010). Children of incarcerated mothers in particular are at risk of decreased intellectual outcomes in areas such as vocabulary, pattern analysis, and memory (Poehlmann, 2005). In cases where a child’s incarcerated mother ended her education with less than a high school diploma or G.E.D., these risks are increasingly present (Poehlmann, 2005). Parent or guardian engagement while a young person attempts to further their education is largely beneficial, and in challenging cases where
parents or guardians demonstrate indifference towards or lack knowledge about their child’s college preparations, students may seek replacement support from other adults such as the teachers they encounter at school (Marschall, 2006; Blackwell & Pinder, 2014; Auerbach, 2006; Gibbons & Woodside, 2014; Hayes et al., 2011). Research-focused, mentoring relationships with faculty have also been found to positively impact satisfaction rates among African-American college students, though informal mentoring relationships with faculty do not play a significant role (Strayhorn & Terrell, 2007).

IX. College Access and Success Programming

A review of the literature shows that students also benefit from college-going habitus, a conscious or unconscious expectation of furthering their education beyond high school, as well as an environment focused on interdependence rather than the independent achievement culture often found on college campuses (Grodsky & Rieglercrumb, 2010; Stephens et al., 2012). Parental education, race or ethnicity, and nativity have all been found to influence levels of college-going habitus among students, but once given access to it, disadvantaged youth reap the benefits of a college-going habitus as much as their more advantaged peers (Grodsky & Rieglercrumb, 2010). College access and success programs for disadvantaged students often create a college-going culture composed of beneficial patterns of behavior in the form of college application assistance, career exploration, preparation for standardized college admissions tests, and an overall future orientation (Parikh, 2012; Avery, 2013). The additional support for students throughout the college application, admission, and persistence process and the relationships they are able to build in the process are related to improved academic outcomes, as in the case of College Possible™ where program participants’ college
enrollment increased by more than 15% compared to their non-participant peers (U.S. Department of Education, 2016; Avery, 2013). First-year experience programs, such as bridge programs, at the college level can also improve students’ achievement (U.S. Department of Education, 2016).

X. Classifications and Logistics in Higher Education Settings

Finally, the status of students’ enrollment, housing, academic placements, and finances may play a role in their success (Wasley, 2007; Dugan et al., 2008; The Pell Institute, 2011; The Executive Office of the President, 2014). Studies show that even after controlling for other variables such as family income, part-time college students were less likely to persist in their studies and complete their degree, with urban students at higher risk due to a higher percentage of part-time enrollment as compared to their rural peers (Wasley, 2007; Copeland et al., 2008). Commuter students experience increased obstacles to their success in the college environment as well, with a wide range of within-group differences (Dugan et al., 2008). While commuting or taking courses part-time on campus are choices a student can make, other classifications a student might experience may stem from circumstances outside of their control. For example, remediation in core subject areas is common at many institutions of higher education, and the majority of students needing high levels of remedial coursework never move on to college-level work (The Executive Office of the President, 2014). Furthermore, students with fewer financial resources are less likely to graduate from high school, more likely to be placed into remedial coursework, less likely to have parents or guardians covering five percent or more of their tuition costs, and more likely to take out student loans (Office of English Language Acquisition, 2010; Sandy & Duncan, 2010; Mehta et al., 2011).
According to a longitudinal study by the Pell Institute, only 10.9% of low-income, first-generation students attain their bachelor’s degree within six years in comparison to 24.1% for low-income, non-first-generation students; 24.9% for non-low-income, first-generation students; and 54% for non-low-income, non-first-generation students (2011). An increase in annual family income of just $10,000 results in a lower likelihood of a student delaying entry into college by approximately three percent (Wells & Lynch, 2012). However, high school seniors with assistance in completing the Free Application for Federal Student Aid (FAFSA®) have shown an increase in college enrollment and persistence once enrolled, demonstrating that intervention is possible and worthwhile (The Executive Office of the President, 2014).

**Chapter Summary**

The challenges that first-generation students and students from all backgrounds face are immense and complicated as a review of the literature demonstrates. However, few studies have been conducted to assess which student backgrounds and experiences are most impactful in terms of bachelor’s degree completion when compared to one another. Due to the unique needs of first-generation students, especially those from urban backgrounds, this research study addresses the extent to which urban, first-generation students’ unique backgrounds and experiences play a role in their bachelor’s degree completion. The methodology for this study will be discussed in Chapter 3.
Chapter 3

Methodology

Overview

Identifying and correlating key characteristics of first-generation students who are successful in terms of college access and success can pinpoint areas for more intentional intervention by educators. This chapter will discuss how this research study was designed and distributed to participants in order to pinpoint specific characteristics and experiences that may demonstrate need for intervention from educators.

Sample

The sample for this study was drawn from the population of students who earned their high school diploma from an urban, public K-12 school district between May 1, 2005, and July 1, 2015. School districts were deemed ‘urban’ if they were located in one of the largest 100 metropolitan areas in the United States as estimated by the U.S. Census Bureau for the year 2015, ranging from New York City, NY at an estimated 8,550,405 residents to San Bernardino, CA at an estimated 216,108 residents (2016). Consideration was given to the best way for results to transcend individual cities, high schools, and colleges, as well as include a vast array of student experiences. Contact information for graduates of K-12 school districts presents limitations in accuracy over time, while samples composed of students at particular colleges excludes the experiences of students who did not enroll in college or left their college studies prior to graduation. For these reasons, this study used a non-random, convenience sample enabling the researcher to attain information from students across many different cities, high schools, and colleges. A non-random sample also enabled an increased variety in age and personal experiences.
Participants’ responses were authenticated by survey questions to ensure they met the date and district criteria, then sorted to limit data analyses specifically to students who indicated they did not have a parent or guardian who had attained a bachelor degree at the time of their high school graduation.

Out of the 293 total responses received, 63 responses were deemed unusable due to not being graduates of the appropriate districts during the designated timeframe between 2005 and 2015. Of the remaining 230 participants who completed the survey, 177 were found to be first-generation students. These 177 high school graduates are the primary sample used in this study. The sample was composed of 62.1% females and 37.9% males. Participants self-identified as non-Caucasian at a rate of 81.8% and 11.4% of the sample identified themselves as a member of the LGBTQ+ community. For 47.7% of the sample, English was not their first language and 55.1% of the sample noted being from immigrant households. Of the 177 first-generation participants, 155 indicated that they had spent some time in college.

**Instruments**

The data in this study consisted of self-reported participant responses collected using an online survey developed by the researcher via Google Forms (see Appendix A). Survey questions reflected the struggles that the researcher most frequently observed first-generation students facing during her eight years of experience with college advising and college access and success programs. Questions solely used multiple choice and checkbox designs for the purposes of quantitative evaluation. Completion of the survey was estimated to take less than five minutes. The survey was designed with sorting technology in order to determine how much of the survey participants needed to complete
as they answered questions. Questions were also designed to give participants the ability to select ‘prefer not to answer’ should they feel uncomfortable responding to a particular question. The survey was reviewed and approved as exempt by the Institutional Review Board at Carthage College prior to the collection of responses. Upon survey availability, all responses were anonymous and identified by a timestamp.

**Procedure**

The survey for this study was sent as a link via Facebook®, Twitter™, LinkedIn® and e-mail to students, educators, and city residents from or near urban school districts across the United States during the 2016-2017 school year, allowing the last cohort of participants from the high school graduating class of 2015 to have passed the period of first to third-semester retention in college. Recipients were encouraged to share the survey link with additional contacts who may fit the criteria for the study. The survey was closed upon reaching the 230 responses from appropriate urban K-12 school districts within the range of high school graduation years (2005 through 2015). Responses were then consolidated and exported as a Microsoft Excel® file to be sorted for first-generation status.

**Data Analysis**

Statistical analysis tools available in Microsoft Excel® were used to complete chi-square analyses for each of the 50 sets of hypotheses in this study, ranging from one to four degrees of freedom as appropriate for each survey question’s possible responses. Chi-square tests provided the best tool for analysis of the survey data due to their ability to measure whether observed survey results fit with the expected distribution for each variable and their utility in observing several nominal variables within the same sample
for significant relationships at the 0.05 significance level. In order to compare variables, student participants were categorized as either ‘on track’ or ‘not on track’ based on their progress towards degree completion at the time of the survey. The criteria for categorizing these students was based on a standard six-year maximum timeframe for graduating with a bachelor’s degree after high school completion (see Table 1 below). The 50 sets of hypotheses analyzed were categorized within ten overarching themes to better summarize the results for readers and identify trends in relationships across the span of the 50 hypotheses.

Table 1

*Bachelor’s Degree Timeframes by Year of High School Completion*

<table>
<thead>
<tr>
<th>Year of high school completion</th>
<th>Six-year timeframe</th>
<th>Current academic Status</th>
<th>On or off track</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2005-2011</td>
<td>Bachelor’s Degree Attained Enrolled, No Degree Not Enrolled, No Degree</td>
<td>On Track Off Track</td>
</tr>
<tr>
<td>2006</td>
<td>2006-2012</td>
<td>Bachelor’s Degree Attained Enrolled, No Degree Not Enrolled, No Degree</td>
<td>On Track Off Track</td>
</tr>
<tr>
<td>2007</td>
<td>2007-2013</td>
<td>Bachelor’s Degree Attained Enrolled, No Degree Not Enrolled, No Degree</td>
<td>On Track Off Track</td>
</tr>
<tr>
<td>2008</td>
<td>2008-2014</td>
<td>Bachelor’s Degree Attained Enrolled, No Degree Not Enrolled, No Degree</td>
<td>On Track Off Track</td>
</tr>
<tr>
<td>2009</td>
<td>2009-2015</td>
<td>Bachelor’s Degree Attained Enrolled, No Degree Not Enrolled, No Degree</td>
<td>On Track Off Track</td>
</tr>
<tr>
<td>Year</td>
<td>Years</td>
<td>Bachelor’s Degree Attained</td>
<td>On Track</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>-----------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>2010</td>
<td>2010-2016</td>
<td>Bachelor’s Degree Attained</td>
<td>On Track</td>
</tr>
<tr>
<td>2011</td>
<td>2011-2017</td>
<td>Bachelor’s Degree Attained</td>
<td>On Track</td>
</tr>
<tr>
<td>2012</td>
<td>2012-2018</td>
<td>Bachelor’s Degree Attained</td>
<td>On Track</td>
</tr>
<tr>
<td>2013</td>
<td>2013-2019</td>
<td>Bachelor’s Degree Attained</td>
<td>On Track</td>
</tr>
<tr>
<td>2014</td>
<td>2014-2020</td>
<td>Bachelor’s Degree Attained</td>
<td>On Track</td>
</tr>
<tr>
<td>2015</td>
<td>2015-2021</td>
<td>Bachelor’s Degree Attained</td>
<td>On Track</td>
</tr>
</tbody>
</table>

Chapter Summary

Use of an online survey enabled the tabulation of data from participants to be exported in a format simplified for quantitative use. A total of 177 survey responses were ultimately attained from first-generation students who graduated from urban K-12 school districts between 2005 and 2015. The chi-square analyses results using these participant responses can be found in Chapter 4.
Chapter 4

Results

Overview

The investigator performed chi-square analyses to assess each of the 50 sets of hypotheses researched in this study. A 0.05 significance level was utilized to accept or reject each null hypothesis, confirming whether or not an urban, first-generation student’s particular background or experience was related to their completion of a bachelor’s degree within six years of high school graduation.

Data Analysis

Results for each hypothesis as evaluated by a chi-square analysis at the 0.05 significance level are indicated in Table 2 below:

Table 2

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>$\chi^2$ Critical</th>
<th>$\chi^2$ Value</th>
<th>p-Value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Sex, Gender, and Sexual Orientation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3.8415</td>
<td>0.012</td>
<td>0.9127</td>
<td>Accept $H_01$.</td>
</tr>
<tr>
<td>2</td>
<td>3.8415</td>
<td>0.6697</td>
<td>0.4132</td>
<td>Accept $H_02$.</td>
</tr>
</tbody>
</table>

| II. Race, Language, and Immigration Status | | | | |
| 3 | 9.4877 | 7.9077 | 0.095 | Accept $H_03$. |
| 5 | 3.8415 | 0.4764 | 0.4901 | Accept $H_05$. |
| 6 | 3.8415 | 0.2372 | 0.6262 | Accept $H_06$. |
| 7 | 3.8415 | 0.209 | 0.6476 | Accept $H_07$. |
| 8 | 3.8415 | 4.0415 | 0.0444 | Reject $H_08$. Accept $H_18$. |
| 9 | 3.8415 | 2.1378 | 0.1437 | Accept $H_09$. |

| III. Employment | | | | |
| 10 | 7.8147 | 3.2353 | 0.3568 | Accept $H_010$. |
| 11 | 7.8147 | 3.2315 | 0.3573 | Accept $H_011$. |
| 12 | 3.8415 | 1.6465 | 0.1994 | Accept $H_012$. |
### IV. Marriage and Children

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### VI. Physical, Mental, and Sexual Abuse

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### VII. Additional Personal Challenges

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### VIII. Relationships with Adults

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### IX. College Access and Success Programming

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X. Classifications and Logistics in Higher Education Settings

<p>| | | | | |</p>
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See Appendices B-AY.

I. Sex, Gender, and Sexual Orientation

In terms of H$_0$1, the researcher accepts null hypothesis one, which means that there was not a significant relationship between an urban, first-generation student’s biological sex and whether or not the student was on track for completion of a bachelor’s degree (see Appendix B).

In terms of H$_0$2, the researcher accepts null hypothesis two, which means that there was not a significant relationship between an urban, first-generation student’s identity as part of the LGBTQ+ community and whether or not the student was on track for completion of a bachelor’s degree (see Appendix C).

II. Race, Language, and Immigration Status

In terms of H$_0$3, the researcher accepts null hypothesis three, which means that there was not a significant relationship between an urban, first-generation student’s racial identity and whether or not the student was on track for completion of a bachelor’s degree (see Appendix D).

In terms of H$_0$4, the researcher rejected null hypothesis four and accepted alternative hypothesis four, which means that there was a significant relationship between an urban, first-generation student’s identity as a person of color and whether or not the student was on track for completion of a bachelor’s degree (see Appendix E).
In terms of H₀⁵, the researcher accepts null hypothesis five, which means that there was not a significant relationship between whether an urban, first-generation student is a native English speaker and whether or not the student was on track for completion of a bachelor’s degree (see Appendix F).

In terms of H₀⁶, the researcher accepts null hypothesis six, which means that there was not a significant relationship between whether an urban, first-generation student’s parent(s) or guardian(s) are immigrants to the United States and whether or not the student was on track for completion of a bachelor’s degree (see Appendix G).

In terms of H₀⁷, the researcher accepts null hypothesis seven, which means that there was not a significant relationship between whether an urban, first-generation student’s parent(s) or guardian(s) were previously or are currently undocumented immigrants living in the United States and whether or not the student was on track for completion of a bachelor’s degree (see Appendix H).

In terms of H₀⁸, the researcher rejected null hypothesis eight and accepted alternative hypothesis eight, which means that there was a significant relationship between whether an urban, first-generation student is an immigrant to the United States and whether or not the student was on track for completion of a bachelor’s degree (see Appendix I).

In terms of H₀⁹, the researcher accepts null hypothesis nine, which means that there was not a significant relationship between whether an urban, first-generation student was previously or is currently an undocumented immigrant living in the United States and whether or not the student was on track for completion of a bachelor’s degree (see Appendix J).
III. Employment

In terms of H₀₁₀, the researcher accepts null hypothesis ten, which means that there was not a significant relationship between the number of hours an urban, first-generation student worked per week prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix K).

In terms of H₀₁₁, the researcher accepts null hypothesis eleven, which means that there was not a significant relationship between the number of hours an urban, first-generation student worked while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix L).

In terms of H₀₁₂, the researcher accepts null hypothesis twelve, which means that there was not a significant relationship between whether an urban, first-generation student served in the United States Armed Forces and whether or not the student was on track for completion of a bachelor’s degree (see Appendix M).

IV. Marriage and Children

In terms of H₀₁₃, the researcher accepts null hypothesis thirteen, which means that there was not a significant relationship between whether an urban, first-generation student got married at age 22 or below and whether or not the student was on track for completion of a bachelor’s degree (see Appendix N).

In terms of H₀₁₄, the researcher rejected null hypothesis fourteen and accepted alternative hypothesis fourteen, which means that there was a significant relationship between whether an urban, first-generation student became a parent or guardian at age 22 or below and whether or not the student was on track for completion of a bachelor’s degree (see Appendix O).
V. Alcohol and Other Drug Use

In terms of H₀₁₅, the researcher accepts null hypothesis fifteen, which means that there was not a significant relationship between an urban, first-generation student’s use of alcohol prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix P).

In terms of H₀₁₆, the researcher accepts null hypothesis sixteen, which means that there was not a significant relationship between an urban, first-generation student’s use of alcohol while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix Q).

In terms of H₀₁₇, the researcher rejected null hypothesis seventeen and accepted alternative hypothesis seventeen, which means that there was a significant relationship between an urban, first-generation student’s use of marijuana prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix R).

In terms of H₀₁₈, the researcher rejected null hypothesis eighteen and accepted alternative hypothesis eighteen, which means that there was a significant relationship between an urban, first-generation student’s use of marijuana while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix S).

In terms of H₀₁₉, the researcher accepts null hypothesis nineteen, which means that there was not a significant relationship between an urban, first-generation student’s use of other illegal drugs prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix T).
In terms of H$_{020}$, the researcher accepts null hypothesis twenty, which means that there was not a significant relationship between an urban, first-generation student’s use of other illegal drugs while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix U).

**VI. Physical, Mental, and Sexual Abuse**

In terms of H$_{021}$, the researcher accepts null hypothesis twenty-one, which means that there was not a significant relationship between whether an urban, first-generation student experienced physical abuse or neglect prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix V).

In terms of H$_{022}$, the researcher accepts null hypothesis twenty-two, which means that there was not a significant relationship between whether an urban, first-generation student experienced physical abuse while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix W).

In terms of H$_{023}$, the researcher accepts null hypothesis twenty-three, which means that there was not a significant relationship between whether an urban, first-generation student experienced mental or emotional abuse prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix X).

In terms of H$_{024}$, the researcher accepts null hypothesis twenty-four, which means that there was not a significant relationship between whether an urban, first-generation student experienced mental or emotional abuse while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix Y).
In terms of $H_{025}$, the researcher rejected null hypothesis twenty-five and accepted alternative hypothesis twenty-five, which means that there was a significant relationship between whether an urban, first-generation student experienced sexual abuse, sexual assault, or rape prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix Z).

In terms of $H_{026}$, the researcher accepts null hypothesis twenty-six, which means that there was not a significant relationship between whether an urban, first-generation student experienced sexual abuse, sexual assault, or rape while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AA).

**VII. Additional Personal Challenges**

In terms of $H_{027}$, the researcher accepts null hypothesis twenty-seven, which means that there was not a significant relationship between whether an urban, first-generation student experienced extreme hunger prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AB).

In terms of $H_{028}$, the researcher accepts null hypothesis twenty-eight, which means that there was not significant relationship between whether an urban, first-generation student experienced extreme hunger while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AC).

In terms of $H_{029}$, the researcher accepts null hypothesis twenty-nine, which means that there was not a significant relationship between whether an urban, first-generation student experienced homelessness prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AD).
In terms of H₀30, the researcher accepts null hypothesis thirty, which means that there was not a significant relationship between whether an urban, first-generation student experienced homelessness while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AE).

In terms of H₀31, the researcher rejected null hypothesis thirty-one and accepted alternative hypothesis thirty-one, which means that there was a significant relationship between whether an urban, first-generation student experienced the death of an immediate family member prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AF).

In terms of H₀32, the researcher accepts null hypothesis thirty-two, which means that there was not a significant relationship between whether an urban, first-generation student experienced the death of an immediate family member while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AG).

In terms of H₀33, the researcher accepts null hypothesis thirty-three, which means that there was not a significant relationship between whether an urban, first-generation student experienced a serious illness or injury prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AH).

In terms of H₀34, the researcher accepts null hypothesis thirty-four, which means that there was not a significant relationship between whether an urban, first-generation student experienced a serious illness or injury in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AI).
VIII. Relationships with Adults

In terms of H035, the researcher accepts null hypothesis thirty-five, which means that there was not a significant relationship between the number of times an urban, first-generation student was discouraged from attending college by an adult prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AJ).

In terms of H036, the researcher accepts null hypothesis thirty-six, which means that there was not a significant relationship between whether an urban, first-generation student’s parent(s) or guardian(s) encouraged them to pursue a college education and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AK).

In terms of H037, the researcher accepts null hypothesis thirty-seven, which means that there was not a significant relationship between the number of meaningful relationships an urban, first-generation student had with a degree-holding adult prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AL).

In terms of H038, the researcher accepts null hypothesis thirty-eight, which means that there was not a significant relationship between whether an urban, first-generation student experienced parental incarceration prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AM).

In terms of H039, the researcher accepts null hypothesis thirty-nine, which means that there was not a significant relationship between whether an urban, first-generation
student experienced parental incarceration while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AN).

In terms of H040, the researcher accepts null hypothesis forty, which means that there was not a significant relationship between whether an urban, first-generation student believed their parent(s) or guardian(s) had the majority of knowledge needed to assist them with the college-going process and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AO).

**IX. College Access and Success Programming**

In terms of H041, the researcher rejected null hypothesis forty-one and accepted alternative hypothesis forty-one, which means that there was a significant relationship between an urban, first-generation student’s participation in college access and success programming prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AP).

In terms of H042, the researcher rejected null hypothesis forty-two and accepted alternative hypothesis forty-two, which means that there was a significant relationship between the number of years an urban, first-generation student participated in college access and success programming prior to high school graduation and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AQ).

In terms of H043, the researcher rejected null hypothesis forty-three and accepted alternative hypothesis forty-three, which means that there was a significant relationship between whether an urban, first-generation student participated in college access and success programming, including bridge programming, while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AR).
In terms of \( H_044 \), the researcher rejected null hypothesis forty-four and accepted alternative hypothesis forty-four, which means that there was a significant relationship between whether an urban, first-generation student participated in college access and success programming, including bridge programming, while in college and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AS).

X. Classifications and Logistics in Higher Education Settings

In terms of \( H_045 \), the researcher accepts null hypothesis forty-five, which means that there was not a significant relationship between whether an urban, first-generation student began college with full-time or part-time enrollment status and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AT).

In terms of \( H_046 \), the researcher rejected null hypothesis forty-six and accepted alternative hypothesis forty-six, which means that there was a significant relationship between whether an urban, first-generation student began college as a campus resident or commuter and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AU).

In terms of \( H_047 \), the researcher accepts null hypothesis forty-seven, which means that there was not a significant relationship between whether an urban, first-generation student’s full-time financial aid package covered their first year of tuition expenses and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AV).

In terms of \( H_048 \), the researcher accepts null hypothesis forty-eight, which means that there was not a significant relationship between whether an urban, first-generation
student placed into remedial courses in English and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AW).

In terms of $H_049$, the researcher accepts null hypothesis forty-nine, which means that there was not a significant relationship between whether an urban, first-generation student placed into remedial courses in mathematics and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AX).

In terms of $H_050$, the researcher accepts null hypothesis fifty, which means that there was not a significant relationship between whether an urban, first-generation student placed into remedial courses in both English and mathematics and whether or not the student was on track for completion of a bachelor’s degree (see Appendix AY).

**Chapter Summary**

The data analysis from this research study indicated that for urban, first-generation students, several factors are related to successful completion of a bachelor’s degree. The most significant relationships between whether an urban, first-generation student was on track for completion of a bachelor’s degree are participation in college access and success programming prior to high school graduation and/or while in college and the number of years an urban, first-generation student spends participating in such programming. Additional characteristics and experiences found to have a significantly positive relationship with urban, first-generation students’ likelihood to remain on track are: identity as a person of color; immigrant status; death of an immediate family member prior to high school graduation; and campus residency upon beginning college. Additional characteristics and experiences found to have a significantly negative relationship with urban, first-generation students’ likelihood to remain on track are:
becoming a parent/guardian at age 22 or below; use of marijuana prior to high school graduation; use of marijuana while in college; and sexual abuse, sexual assault, and rape prior to high school graduation. These findings will be discussed in further depth in Chapter 5.
Chapter 5
Discussion, Conclusion, and Implications

Overview

As mentioned earlier in this study, the guiding questions established by the researcher sought to identify which background characteristics and experiences are related to an urban, first-generation student’s success in bachelor’s degree completion, and to what extent, through quantitative analysis. In this chapter, the researcher discusses how the results of the chi-square analysis for each hypothesis may assist current and future educators in strategically positioning time, staff, and resources to keep this student demographic on track for attaining their college degree.

Discussion of Results

This research study found that of all of the attributes of urban, first-generation students investigated in this study, a student’s participation in college access and success programming and the length of time a student spends in such programming are the strongest positive indicators of whether or not a student is on track towards completion of a bachelor’s degree as appropriate for their age group. College access and success programs provide guidance through college preparation processes and higher education policies that are frequently difficult for first-generation students to navigate. They also provide academic support and skill building to succeed in college-level classrooms and establish a sense of belonging and comradery among students whom otherwise may feel isolated in the new and unfamiliar college environment. The $p$-value identified for the four hypotheses related to college access and success programming was less than 0.01, indicating that educators can believe this programming is related to bachelor’s degree
completion with only a one in 100 chance of error. Interestingly, the strongest relationship occurs with participation in college success programming while in college, which could mean that students who lack this support in high school still have a strong chance at bachelor’s degree completion if the appropriate support is provided once they arrive on campus.

According to the findings in this study, whether an urban, first-generation student is also a person of color is positively related to bachelor’s degree completion at the 0.01 level. This finding may contradict the focus on students of color in institutions of higher education across the nation, but warrants a closer look at the subpopulation of Caucasian students who would have met the criteria to complete this survey. These students remained in urban, public K-12 school districts through high school graduation, an action that some Caucasian families with the resources to move to suburban areas or place their children in private, urban schools may have chosen to avoid. While families across racial categories may pursue these other paths, Caucasian families have a documented history of this movement out of urban areas across several decades (Kruse, 2007). Additionally, urban students of color may experience a stronger sense of community and identify more role models who look like them based on their experience in urban communities and schools.

At the 0.05 level of significance, living on campus as a first year student, being an immigrant, and experiencing the death of an immediate family member prior to high school graduation are all statistically related to completion of a bachelor’s degree for urban, first-generation students. Living on campus may remove barriers to truancy such as transportation costs or family demands, while at the same time improving students’
sense of belonging through the relationships built outside of the classroom with both peers and potential role models such as resident assistants and hall directors. Being an immigrant or experiencing the influence of the passing of an immediate family member sheds an interesting light on child and adolescent development and the underlying motivations for academic achievement. While it might be assumed that a student’s experiences in immigrating to the United States or grief over the loss of a loved one would interfere with their aspirations to attain a bachelor’s degree, this finding demonstrates that it may actually motivate them to move forward with purpose in spite of the obstacle, perhaps in memory of the family member they lost or in the search of increased opportunities that could be afforded to them in a new country. The loss of an immediate family member, being an immigrant, and residing on campus as a first year student are related to urban, first-generation students’ completion of a bachelor degree with only a two in 100 chance of error.

Also within the 0.05 level of significance, but negatively related, are a student’s experience having dependents prior to age 22, marijuana use prior to high school and while in college, and abuse of a sexual nature prior to high school graduation. The barriers to achieving a college degree stemming from these experiences and actions may be both logistical and psychological in nature. For a young parent, it may be challenging to afford both tuition payments and childcare simultaneously, or the already less than ideal commuter status may be exacerbated by the addition of one or more dependents if a college campus does not provide family living options. Outside of what may be legal and health repercussions of marijuana use or sexual abuse, there may be a psychological relationship between these actions or experiences and students’ success on campus. It
may be that students’ determination decreases in the face of these obstacles and decisions, therefore increasing their likelihood to get off track from their goal of obtaining a bachelor’s degree.

While other findings from this study were not significant at the 0.05 level, several are noteworthy due to trending in that direction (see Table 3 below). Unique racial identity, as opposed to collective students of color, is trending in the direction of significance. In addition, urban, first-generation students who indicated that their parent(s) or guardian(s) lacked sufficient knowledge of the college-going process were less likely to be on track for bachelor’s degree completion. This demonstrates the self-awareness that urban, first-generation students may have about their circumstances relative to other students. The access to an appropriate level of financial assistance during the students’ first year of college is also trending in this direction. For all hypotheses, the $p$-value for each chi-square analysis is listed below in order of strongest to weakest relationship:

Table 3

*Summary of $p$-Values in Increasing Order*

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
<th>$p$-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Significant at the 0.01 level:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Participation in College Access and Success Programming while in College</td>
<td>0.0000</td>
</tr>
<tr>
<td>44</td>
<td>Participation in College Access and Success Programming prior to High School Graduation and while in College</td>
<td>0.0000</td>
</tr>
<tr>
<td>41</td>
<td>Participation in College Access and Success Programming prior to High School Graduation</td>
<td>0.0036</td>
</tr>
<tr>
<td>42</td>
<td>Years of Participation in College Access and Success Programming prior to High School Graduation</td>
<td>0.009</td>
</tr>
<tr>
<td>4</td>
<td>Person of Color</td>
<td>0.0094</td>
</tr>
</tbody>
</table>
Significant at the 0.05 level:

46  Residency Status During First Year of College  0.0162
31  Death of an Immediate Family Member prior to High School Graduation  0.0199
14  Dependents prior to Age 22  0.0274
18  Marijuana Use while in College  0.0278
17  Marijuana Use prior to High School Graduation  0.0308
8   Immigrant  0.0444
25  Sexual Abuse, Sexual Assault, or Rape prior to High School Graduation  0.0484

Significant at the 0.1 level:

3   Racial Identity  0.095

Significant at the 0.25 level:

40  Parent(s)/Guardian(s)’ Knowledge of College-Going Process  0.1008
9   Undocumented Immigrant  0.1437
36  Encouragement from Parent(s)/Guardian(s) to Attend College  0.1623
22  Physical Abuse while in College  0.1672
23  Mental or Emotional Abuse prior to High School Graduation  0.1699
27  Extreme Hunger prior to High School Graduation  0.1731
47  Financial Aid Package Coverage of Tuition Expenses During First Year of College  0.1789
13  Marriage prior to Age 22  0.193
12  Member of U.S. Armed Forces  0.1994
30  Homelessness while in College  0.2255
39  Incarceration of a Parent or Guardian while in College  0.2255
21  Physical Abuse or Neglect prior to High School Graduation  0.2457

Significant beyond the 0.25 level:

32  Death of an Immediate Family Member while in College  0.3398
20  Use of Other Illegal Drugs while in College  0.3132
10  Employment Hours per Week prior to High School Graduation  0.3568
11  Employment Hours per Week while in College  0.3573
34  Serious Illness or Injury while in College  0.3879
2   LGBTQ+ Identity  0.4132
26  Sexual Abuse, Sexual Assault, or Rape while in College  0.4137
29  Homelessness prior to High School Graduation  0.44
5   Native English Speaker  0.4901
38 Incarceration of a Parent or Guardian prior to High School Graduation 0.5714
49 Remedial Mathematics Placement 0.621
6 Parent(s)/Guardian(s) are Immigrants 0.6262
16 Alcohol Use while in College 0.6434
28 Extreme Hunger while in College 0.6436
7 Parent(s)/Guardian(s) are or were Undocumented Immigrants 0.6476
24 Mental or Emotional Abuse while in College 0.6847
37 Meaningful Relationships with Degree-Holding Adults prior to High School Graduation 0.7039
15 Alcohol Use prior to High School Graduation 0.707
50 Remedial English and Mathematics Placement 0.7081
35 Discouraged from Attending College by an Adult prior to High School Graduation 0.7366
33 Serious Illness or Injury prior to High School Graduation 0.7415
45 Enrollment Status During First Year of College 0.745
19 Use of Other Illegal Drugs prior to High School Graduation 0.7621
1 Biological Sex 0.9127
48 Remedial English Placement 0.9725

See Appendices B-AY.

Ultimately, hypotheses with the lowest calculated \( p \)-values may provide additional aspects to consider in terms of college success. Frequently remedial coursework, gender, enrolling full or part time, and mentorship are discussed as influencing students’ completion of a bachelor’s degree within six years. However, the chi-square analyses for the hypotheses in this study demonstrate a lack of strong, consistent relationships to support those beliefs.

**Implications**

Given the strong tie between college access and success programming and bachelor’s degree completion for urban, first-generation students, educators should consider how to focus their energies in this area. Particularly in institutions of higher education, the impact is pronounced, and students who benefit from programming both
prior to high school graduation and while in college appear to have increased odds of success. Currently, college access and success programming is unequally distributed between schools, cities, and students due to limitations in funding sources. For example, Federal TRIO Programs, already limited to select institutions of higher education and K-12 districts, are in danger of decreased federal funding (Mangan, 2017). Similarly, not-for-profit organizations like College Possible™ that rely on low-cost AmeriCorps staffing through the Corporation for National and Community Service are in danger of decreased funding (Jaschik, 2017). Stabilizing and/or reallocating the funding for college access and success programming is imperative in order to ensure consistent staffing, resources, and overall access across institutions for students who want and need the additional support. Streamlining college access and success programming between urban, public K-12 school districts and institutions of higher education while focusing on holistic, proactive interventions during students’ preparations for college could provide additional positive results for urban, first-generation students.

In terms of design around specific student demographics, this research study shows that increased focus on urban, first-generation students who are Caucasian, parents/guardians at an early age, commuters, or victims of sexual abuse prior to high school graduation is important and may be underutilized in current models. Logistical support for students with dependents or students who live off campus may prove to be a good investment for colleges (i.e. bus passes, on campus childcare, on campus family housing, etc.). In the K-12 system, additional supports from guidance counselors, social workers, and referrals to outside agencies may need an increased focus on how to get victims of sexual abuse readjusted to the classroom and reconnected with peers who may
not understand their experience. Finally, an awareness of and increased commitment to the inclusion of urban, first-generation, Caucasian students in college access and success programming may be necessary. At times, this subpopulation may be overlooked by programming primarily designed to support students of color. Ultimately, these shifts in support could make the difference between certain students continuing the pursuit of their degree or giving up on their dream.

Several other findings from this study may warrant increased awareness, discussion, and re-prioritization among educators in urban, public K-12 school districts and institutions of higher education. Instead of looking at marijuana use as a health, legal, or campus policy compliance issue, higher education administrators may need to consider viewing marijuana use as a retention concern. Instead of not-for-profit organizations spending staff time on the recruitment and training of college-educated mentors for urban, first-generation adolescents, time may be more appropriately allocated if focused on educating and supporting parents and guardians. Finally, the focus on remedial coursework alone upon admission to college may need to shift to more holistic support for incoming students, a culture change for many campuses across the nation. It would benefit both educators and the urban, first-generation students they serve to revisit practices and renew conversations on how to most effectively and efficiently use time, staff, and resources to improve rates of bachelor’s degree completion for this student demographic.

Future Research

There is extensive potential for additional research on first-generation students in the United States. This research study analyzed 50 characteristics and experiences with
which the researcher witnessed first-generation students struggling during her time as a college access and success program manager for a non-profit organization and as a professional advisor in a higher education setting. However, the number of unique characteristics and experiences an urban, first-generation adolescent or young adult may face in their development are many and future research in this area should focus on additional points of impact during these students’ pursuit of a bachelor’s degree. The depth of the characteristics and experiences analyzed in this study could be explored further as well. Analyzing not only if a certain characteristic or experience is related to bachelor’s degree completion within six years, but why the characteristic or experience is related, is valuable for educators in school districts and higher education settings. This could be explored further through qualitative study.

Further research that supports the development of a multiple regression model for students’ self-reported characteristics and experiences may assist educators in their discussions about how to provide the highest quality support for urban, first-generation students pursuing a college degree. This analysis could provide additional information regarding where the characteristics and experiences of students intersect to create ideal pathways for success, or as an alternative, which challenges when compounded may raise meaningful early warning signs signaling a need for intervention. This type of analysis could also more closely identify variables of causation in terms of an urban, first-generation student leaving their studies, rather than variables that are only related to this outcome.

Finally, variations in sample and survey design could provide additional information for educators looking to increase their understanding of first-generation
students. While this research study explored urban, first-generation students, additional research on the unique challenges of rural, first-generation students is warranted. Research conducted with students who take more than six years to complete their bachelor’s degree or adult, first-generation students who choose to return to college-level studies many years later may prove useful in pinpointing where they went off track in terms of degree completion and why they decided to one day return. Use of a non-first-generation sample for comparison or performance of a qualitative research study on first-generation students could be of additional benefit. Lastly, use of a larger, random sample could further confirm this study’s findings and overcome the limitations of a non-random, convenience sample.

Chapter Summary

This research study extends previous work investigating the experience of urban, first-generation students. The concluding findings from this quantitative research study are that for this student demographic, living on campus, being a person of color or an immigrant, experiencing the death of an immediate family member prior to high school graduation, or participating in college access and success programming indicated a significant positive relationship with being on track for bachelor’s degree completion. For this student demographic, using marijuana, having dependents prior to age 22, or experiencing sexual abuse prior to high school graduation were found to have a significant negative relationship with being on track for bachelor’s degree completion. Should this study be modified and repeated in the future, additional student characteristics, random sampling, and/or use of non-first-generation or rural first-generation student participants should be considered in the research design to further
discuss these findings. It is the hope of the researcher that the findings in this study will assist current and future educators in focusing their efforts strategically and holistically to better meet the needs of first-generation students from urban, public K-12 school districts.
REFERENCES


Blackwell, E., and Pinder, P. J. (2014). What are the motivational factors of first-generation minority college students who overcome their family histories to pursue higher education?” *College Student Journal, 48* (1), 45-56.


U.S. Department of Education (2016, November). Advancing diversity and inclusion in higher education: Key data highlights focusing on race and ethnicity and promising practices. 1-95


APPENDIX A

SURVEY
APPENDIX A

Survey

Quantitative Research Study

This research study will explore whether the personal characteristics and life experiences of students from urban, public school districts are related to their pursuit and/or completion of a college degree. Participants in this study must be high school graduates from public school districts in the 100 largest metropolitan areas in the United States between May 1, 2005, and July 1, 2015.

Please only complete the questionnaire once and answer each question as accurately as possible. Your responses will remain anonymous throughout the course of the study, but should you wish not to answer a question of a sensitive nature, please select “Prefer not to answer.” You must be 18 years of age or older to participate.

*Required

1. What school district did you graduate from?*

Districts are organized in ‘state – city – district’ format.

Mark only one oval.

- I did not graduate from any of the school districts listed below. *Stop filling out this form.*
- AK – Anchorage – Anchorage School District
- AZ – Chandler – Chandler Unified School District
- AZ – Gilbert – Gilbert Public School District
- AZ – Glendale – Various Districts
- AZ – Mesa – Mesa Unified School District
- AZ – Phoenix – Various Districts
- AZ – Scottsdale – Scottsdale Unified School District
- AZ – Tucson – Tucson Unified School District
- CA – Anaheim – Various Districts
- CA – Bakersfield – Various Districts
- CA – Chula Vista – Various Districts
- CA – Fremont – Fremont Unified School District
- CA – Fresno – Fresno Unified School District
- CA – Irvine – Irvine Unified School District
- CA – Long Beach – Long Beach Unified School District
- CA – Los Angeles – Los Angeles Unified School District
- CA – Oakland – Oakland Unified School District
- CA – Riverside – Riverside Unified School District
- CA – Sacramento – Sacramento City Unified School District
- CA – San Bernardino – San Bernardino City Unified School District
- CA – San Diego – San Diego Unified School District
- CA – San Francisco – San Francisco Unified School District
- CA – San Jose – San Jose Unified School District
o CA – Santa Ana – Santa Ana Unified School District
o CA – Stockton – Stockton Unified School District
o CO – Aurora – Aurora Public Schools
o CO – Colorado Springs – Colorado Springs School District 11
o CO – Denver – Denver Public Schools
o FL – Hialeah – Miami-Dade County Public Schools
o FL – Jacksonville – Duval County Public Schools
o FL – Miami – Miami-Dade County Public Schools
o FL – Orlando – Orange County Public Schools
o FL – St. Petersburg – Pinellas County Schools
o FL – Tampa – Hillsborough County Public Schools
o GA – Atlanta – Atlanta Public Schools
o HI – Honolulu – Hawaii Department of Education
o ID – Boise – Boise School District
o IL – Chicago – Chicago Public Schools
o IN – Fort Wayne – Fort Wayne Community Schools
o IN – Indianapolis – Indianapolis Public Schools
o KS – Wichita – Wichita Public Schools
o KY – Lexington – Fayette County Public Schools
o KY – Louisville – Jefferson County Public Schools
o LA – Baton Rouge – Various Districts
o LA – New Orleans – New Orleans Public Schools
o MA – Boston – Boston Public Schools
o MD – Baltimore – Baltimore City Public Schools
o MI – Detroit – Detroit Public Schools Community District
o MN – Minneapolis – Minneapolis Public Schools
o MN – St. Paul – St. Paul Public Schools
o MO – Kansas City – Kansas City Public Schools
o MO – St. Louis – St. Louis Public Schools
o NC – Charlotte – Charlotte-Mecklenburg Schools
o NC – Durham – Durham Public Schools
o NC – Greensboro – Guilford County Schools
o NC – Raleigh – Wake County Public Schools
o NC – Winston-Salem – Winston-Salem/Forsyth County Schools
o NE – Lincoln – Lincoln Public Schools
o NE – Omaha – Omaha Public Schools
o NJ – Jersey City – Jersey City Public Schools
o NJ – Newark – Newark Public Schools
o NM – Albuquerque – Albuquerque Public Schools
o NV – Henderson – Clark County School District
o NV – Las Vegas – Clark County School District
o NV – North Las Vegas – Clark County School District
o NV – Reno – Washoe County School District
o NY – Buffalo – Buffalo Public Schools
o NY – New York City – New York City Public Schools
2. Did you graduate from high school between May 1, 2005, and July 1, 2015?*
   Mark only one oval.
   o Yes
   o No
   Stop filling out this form.

3. Are you currently 18 years of age or older?*
   Mark only one oval.
   o Yes
   o No
   Stop filling out this form.
4. What year did you graduate from high school?*
   Mark only one oval.
   - 2005
   - 2006
   - 2007
   - 2008
   - 2009
   - 2010
   - 2011
   - 2012
   - 2013
   - 2014
   - 2015

5. What was the highest level of education your mother (or parent/guardian 1) had completed at the time of your high school graduation?*
   Please answer to the best of your ability if this individual is not an active participant in your life.
   Mark only one oval.
   - Middle school or below
   - High School Diploma or G.E.D.
   - Some college, no degree
   - Technical Certificate
   - Associate Degree
   - Bachelor’s Degree
   - Master’s Degree or higher

6. What was the highest level of education your father (or parent/guardian 2) had completed at the time of your high school graduation?*
   Please answer to the best of your ability if this individual is not an active participant in your life.
   Mark only one oval.
   - Middle school or below
   - High School Diploma or G.E.D.
   - Some college, no degree
   - Technical Certificate
   - Associate Degree
   - Bachelor’s Degree
   - Master’s Degree or higher
7. How would you describe your biological sex?*  
*Mark only one oval.*  
- Female  
- Male  
- Other  
- Prefer not to answer

8. Do you identify as a member of the LGBTQ+ community?*  
*Mark only one oval.*  
- Yes  
- No  
- Prefer not to answer

9. How would you describe your race?*  
*Mark only one oval.*  
- African American/Black  
- Asian/Pacific Islander  
- Caucasian  
- Hispanic/Latino  
- American Indian/Alaska Native  
- More than one race  
- Other  
- Prefer not to answer

10. Is English your first language?*  
*Mark only one oval.*  
- Yes  
- No  
- Prefer not to answer

11. Were your parents/guardians born outside of the United States?*  
*Mark only one oval.*  
- Yes  
- No  
- Prefer not to answer

12. Are your parents/guardians or were your parents/guardians ever undocumented immigrants?*  
*Mark only one oval.*  
- Yes  
- No  
- Prefer not to answer
13. Were you born outside of the United States?*
   
   *Mark only one oval.*
   
   o Yes
   o No
   o Prefer not to answer

14. Are you or were you ever an undocumented immigrant?*
   
   *Mark only one oval.*
   
   o Yes
   o No
   o Prefer not to answer

15. Are you married (legally or culturally)?*
   
   *Mark only one oval.*
   
   o Yes
   o No, but I was married in the past
   o No, I have never been married
   o Prefer not to answer

16. At what age did you get married?*
   
   *Mark only one oval.*
   
   o 22 or below
   o 23 or above
   o I have never been married
   o Prefer not to answer

17. Do you have children, including any adoptions or guardianships?*
   
   *Mark only one oval.*
   
   o Yes
   o No, but I have been pregnant or had children in the past
   o No, I have never been pregnant nor had children
   o Prefer not to answer

18. At what age did you become a parent or guardian?*
   
   *Mark only one oval.*
   
   o 22 or below
   o 23 or above
   o I have never been a parent or guardian
   o Prefer not to answer
19. Did you regularly work 25 hours per week or more before graduating from high school?*

*Mark only one oval.*
- No, I didn’t work at all
- No, I worked less
- Yes, but primarily during summer breaks
- Yes, I worked 25 or more
- Prefer not to answer

20. How many meaningful relationships did you have with a degree-holding adult before graduating from high school?*

For the purposes of this study, a meaningful relationship is signified by at least one year of ongoing contact which had a lasting impact on your life.

*Mark only one oval.*
- 0
- 1-2
- 3 or more
- Prefer not to answer

21. By the time you graduated from high school, how many times had an adult discouraged you from attending college?*

*Mark only one oval.*
- 0
- 1-2
- 3 or more
- Prefer not to answer

22. While in high school, how frequently did you consume alcoholic beverages at most?*

*Mark only one oval.*
- Twice or more per week in small amounts
- Twice or more per month in excessive amounts
- Less frequently than the first two options
- Not at all
- Prefer not to answer

23. While in high school, how frequently did you use marijuana at most?*

*Mark only one oval.*
- Twice or more per week in small amounts
- Twice or more per month in excessive amounts
- Less frequently than the first two options
- Not at all
- Prefer not to answer
24. While in high school, how frequently did you use other illegal drugs at most, including prescription medication that did not belong to you?*  
Mark only one oval.  
○ Twice or more per week in small amounts  
○ Twice or more per month in excessive amounts  
○ Less frequently than the first two options  
○ Not at all  
○ Prefer not to answer  

25. Did you experience any of the following before graduating from high school?*  
For the purposes of this study, homelessness includes staying with friends or extended family due to lack of safety and/or financial stability, extreme hunger refers to the frequent missing of meals and/or undernourishment due to lack of resources, and serious illness or injury refers to a physical or mental ailment causing immense pain or strongly interfering with everyday tasks or routines. Check all that apply.  
○ Extreme hunger  
○ Homelessness  
○ Death of a parent/guardian or sibling  
○ Serious illness or injury  
○ Mental or emotional abuse  
○ Physical abuse or neglect  
○ Sexual abuse, assault, or rape  
○ Parental incarceration  
○ None of the above  
○ Prefer not to answer  

26. Did you participate in a pre-college program based on being first-generation, low-income, or a student of color before graduating from high school?*  
Mark only one oval.  
○ Yes  
○ No  
○ Prefer not to answer  

27. How many years did you participate in pre-college programming altogether?*  
Mark only one oval.  
○ 0  
○ 1-2  
○ 3 or more  
○ Prefer not to answer
28. Do you feel that your parents/guardians had the majority of the knowledge needed to assist you with the college-going process?*
   *Mark only one oval.
   o Yes
   o No
   o Prefer not to answer

29. Do you feel that your parents/guardians encouraged you to pursue a college education?*
   *Mark only one oval.
   o Yes
   o No
   o Prefer not to answer

30. Are you or were you ever a member of the U.S. Armed Forces?*
   *Mark only one oval.
   o Yes
   o No
   o Prefer not to answer

31. What is the highest level of education you have completed?*
   For the purposes of this study, please include summer bridge programs on campus where you had the opportunity to earn college credit prior to fall of your freshman year as ‘Less than one year of college, no degree.’
   *Mark only one oval.
   o High School Diploma or G.E.D.
     Stop filling out this form.
   o Less than one year of college, no degree
   o One to two years of college, no degree
   o Three to four years of college, no degree
   o More than four years of college, no degree
   o Technical Certificate
   o Associate Degree
   o Bachelor’s Degree
   o Master’s Degree or higher

32. In college, did you participate in any formal college support programming based on being first-generation, low-income, or a student of color?*
   For the purposes of this study, please include summer bridge programs on campus prior to fall of your freshman year.
   *Mark only one oval.
   o Yes
   o No
   o Prefer not to answer
33. Did you regularly work 25 hours per week or more while in college?*
   *Mark only one oval.*
   ○ No, I didn’t work at all
   ○ No, I worked less
   ○ Yes, but primarily during summer breaks
   ○ Yes, I worked 25 or more
   ○ Prefer not to answer

34. While in college, how frequently did you consume alcoholic beverages at most?*
   *Mark only one oval.*
   ○ Twice or more per week in small amounts
   ○ Twice or more per month in excessive amounts
   ○ Less frequently than the first two options
   ○ Not at all
   ○ Prefer not to answer

35. While in college, how frequently did you use marijuana at most?*
   *Mark only one oval.*
   ○ Twice or more per week in small amounts
   ○ Twice or more per month in excessive amounts
   ○ Less frequently than the first two options
   ○ Not at all
   ○ Prefer not to answer

36. While in college, how frequently did you use other illegal drugs at most, including prescription medication that did not belong to you?*
   *Mark only one oval.*
   ○ Twice or more per week in small amounts
   ○ Twice or more per month in excessive amounts
   ○ Less frequently than the first two options
   ○ Not at all
   ○ Prefer not to answer
37. Did you experience any of the following during college?*
   For the purposes of this study, homelessness includes staying with friends or extended family due to lack of safety and/or financial stability, extreme hunger refers to the frequent missing of meals and/or undernourishment due to lack of resources, and serious illness or injury refers to a physical or mental ailment causing immense pain or strongly interfering with everyday tasks or routines.
   Check all that apply.
   - Extreme hunger
   - Homelessness
   - Death of a parent/guardian or sibling
   - Serious illness or injury
   - Mental or emotional abuse
   - Physical abuse
   - Sexual abuse, assault, or rape
   - Parental incarceration
   - None of the above
   - Prefer not to answer

38. Were you a full-time or part-time student during your first year of college?*
   Mark only one oval.
   - Full-time
   - Part-time
   - Prefer not to answer

39. If full-time, did your financial aid package cover your first full year of tuition expenses?*
   For the purposes of this study, please include all scholarships, grants, and institutionally-awarded loans. Do not include private loans or family lending.
   Mark only one oval.
   - Yes
   - No
   - I was not full-time
   - Prefer not to answer

40. Did you live on campus or commute during your first year of college?*
   Mark only one oval.
   - On campus
   - Commute
   - Prefer not to answer
41. Did you place into any remedial level courses in mathematics or English upon college admission?*
For the purposes of this study, remedial courses should be counted as those worth 0 college credit.

Mark only one oval.

- Yes, mathematics only
- Yes, English only
- Yes, both mathematics and English
- No, neither mathematics nor English
- Prefer not to answer

42. Are you currently enrolled in college (i.e. registered for current or upcoming classes)?*

Mark only one oval.

- Yes
  Stop filling out this form.
- No
  Stop filling out this form.
APPENDIX B

CHI-SQUARE ANALYSIS: BIOLOGICAL SEX
APPENDIX B

Chi-square Analysis: Biological Sex

<table>
<thead>
<tr>
<th>Biological Sex</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>73</td>
<td>45</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td>37</td>
<td>22</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>67</td>
<td>177</td>
</tr>
</tbody>
</table>

\[ \chi^2 \] critical = 3.8415
\chi^2 \text{ value} = 0.012
\[ p \text{-Value} = 0.9127 \]

Notes: No responses indicated a biological sex other than female or male.
APPENDIX C

CHI-SQUARE ANALYSIS: LGBTQ+ IDENTITY
APPENDIX C

Chi-square Analysis: LGBTQ+ Identity

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>LGBTQ+ Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>On Track</td>
<td>14</td>
</tr>
<tr>
<td>Not on Track</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
</tr>
</tbody>
</table>

\[ df = 1 \]
\[ \text{significance level} = 0.05 \]
\[ \chi^2 \text{ critical} = 3.8415 \]
\[ \chi^2 \text{ value} = 0.6697 \]
\[ p\text{-Value} = 0.4132 \]

Notes: 10 participants preferred not to answer.
APPENDIX D

CHI-SQUARE ANALYSIS: RACIAL IDENTITY
APPENDIX D

Chi-square Analysis: Racial Identity

<table>
<thead>
<tr>
<th>Racial Identity</th>
<th>African American /Black</th>
<th>Asian/ Pacific Islander</th>
<th>Caucasian</th>
<th>Hispanic /Latino</th>
<th>More than one race</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>25</td>
<td>26</td>
<td>15</td>
<td>43</td>
<td>8</td>
<td>117</td>
</tr>
<tr>
<td>Not on Track</td>
<td>7</td>
<td>13</td>
<td>17</td>
<td>18</td>
<td>4</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>39</td>
<td>32</td>
<td>61</td>
<td>12</td>
<td>176</td>
</tr>
</tbody>
</table>

df = 4
significance level = 0.05
\( \chi^2 \) critical = 9.4877
\( \chi^2 \) value = 7.9077
p-Value = 0.095

Notes: No responses indicated race as American Indian/Alaska Native or Other. There is one value of <5 which is not recommended for use with the chi-square test. 1 participant preferred not to answer.
APPENDIX E

CHI-SQUARE ANALYSIS: PERSON OF COLOR
APPENDIX E

Chi-square Analysis: Person of Color

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>102</td>
<td>15</td>
<td>117</td>
</tr>
<tr>
<td>Not on Track</td>
<td>42</td>
<td>17</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>144</td>
<td>32</td>
<td>176</td>
</tr>
</tbody>
</table>

df = 1  
significance level = 0.05  
$\chi^2$ critical = 3.8415  
$\chi^2$ value = 6.7437  
p-Value = 0.0094

Notes: 1 participant preferred not to answer.
APPENDIX F

CHI-SQUARE ANALYSIS: NATIVE ENGLISH SPEAKER
APPENDIX F

Chi-square Analysis: Native English Speaker

<table>
<thead>
<tr>
<th>Native English Speaker</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>59</td>
<td>58</td>
<td>117</td>
</tr>
<tr>
<td>Not on Track</td>
<td>33</td>
<td>26</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>84</td>
<td>176</td>
</tr>
</tbody>
</table>

df = 1
significance level = 0.05
χ² critical = 3.8415
χ² value = 0.4764
p-value = 0.4901

Notes: 1 participant preferred not to answer.
APPENDIX G

CHI-SQUARE ANALYSIS: PARENT(S)/GUARDIAN(S) ARE IMMIGRANTS
APPENDIX G

Chi-square Analysis: Parent(s)/Guardian(s) are Immigrants

<table>
<thead>
<tr>
<th>Parent(s)/Guardian(s) are Immigrants</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>66</td>
<td>51</td>
<td>117</td>
</tr>
<tr>
<td>Not on Track</td>
<td>31</td>
<td>28</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>79</td>
<td>176</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 0.2372 \]

Notes: 1 participant preferred not to answer.
APPENDIX H

CHI-SQUARE ANALYSIS: PARENT(S)/GUARDIAN(S) ARE OR WERE UNDOCUMENTED IMMIGRANTS
APPENDIX H

Chi-square Analysis: Parent(s)/Guardian(s) are or were Undocumented Immigrants

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>33</td>
<td>82</td>
<td>115</td>
</tr>
<tr>
<td>Not on Track</td>
<td>15</td>
<td>44</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>126</td>
<td>174</td>
</tr>
</tbody>
</table>

\[ \chi^2 \text{ critical} = 3.8415 \]
\[ \chi^2 \text{ value} = 0.209 \]
\[ p-\text{Value} = 0.6476 \]

Notes: 3 participants preferred not to answer.
APPENDIX I

CHI-SQUARE ANALYSIS: IMMIGRANT
### APPENDIX I

**Chi-square Analysis: Immigrant**

<table>
<thead>
<tr>
<th>Immigrant</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Progress Towards Bachelor’s Degree Completion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>24</td>
<td>94</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td>5</td>
<td>54</td>
<td>59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>29</td>
<td>148</td>
<td>177</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 4.0415 \]

\[ p\text{-Value} = 0.0444 \]

**Notes:**
- \( df = 1 \)
- Significance level = 0.05
- \( \chi^2 \) critical = 3.8415
- \( \chi^2 \) value = 4.0415
- \( p\)-Value = 0.0444
APPENDIX J

CHI-SQUARE ANALYSIS: UNDOCUMENTED IMMIGRANT
APPENDIX J

Chi-square Analysis: Undocumented Immigrant

<table>
<thead>
<tr>
<th>Undocumented Immigrant</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>8</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>Not on Track</td>
<td>1</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>9</td>
<td>167</td>
</tr>
</tbody>
</table>

\( df = 1 \)
\( \text{significance level} = 0.05 \)
\( \chi^2 \text{ critical} = 3.8415 \)
\( \chi^2 \text{ value} = 2.1378 \)
\( p\)-Value = 0.1437

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 1 participant preferred not to answer.
APPENDIX K

CHI-SQUARE ANALYSIS: EMPLOYMENT HOURS PER WEEK PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX K

Chi-square Analysis: Employment Hours per Week prior to High School Graduation

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Employment Hours per Week prior to High School Graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>34</td>
</tr>
<tr>
<td>Not on Track</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
</tr>
</tbody>
</table>

\( \chi^2 \text{ critical} = 7.8147 \)
\( \chi^2 \text{ value} = 3.2353 \)
\( p\)-Value = 0.3568

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 1 participant preferred not to answer.
APPENDIX L

CHI-SQUARE ANALYSIS: EMPLOYMENT HOURS PER WEEK WHILE IN COLLEGE
APPENDIX L

Chi-square Analysis: Employment Hours per Week while in College

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Employment Hours per Week while in College</th>
<th>0</th>
<th>&lt;25</th>
<th>≥25 in Summer</th>
<th>≥25 Year-Round</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td></td>
<td>8</td>
<td>25</td>
<td>14</td>
<td>71</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td></td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>24</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>12</td>
<td>32</td>
<td>15</td>
<td>95</td>
<td>154</td>
</tr>
</tbody>
</table>

df = 3
significance level = 0.05
χ² critical = 7.8147
χ² value = 3.2315
p-Value = 0.3573

Notes: There are two values of <5 which is not recommended for use with the chi-square test. 1 participant preferred not to answer.
APPENDIX M

CHI-SQUARE ANALYSIS: MEMBER OF THE U.S. ARMED FORCES
APPENDIX M

Chi-square Analysis: Member of U.S. Armed Forces

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>2</td>
<td>116</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td>3</td>
<td>56</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>172</td>
<td>177</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 1.6465 \]

\[ p = 0.1994 \]

Notes: There are two values of <5 which is not recommended for use with the chi-square test.
APPENDIX N

CHI-SQUARE ANALYSIS: MARRIAGE PRIOR TO AGE 22
APPENDIX N

Chi-square Analysis: Marriage prior to Age 22

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>9</td>
<td>109</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td>8</td>
<td>50</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>159</td>
<td>176</td>
</tr>
</tbody>
</table>

\[ \chi^2 \text{ critical} = 3.8415 \]
\[ \chi^2 \text{ value} = 1.6943 \]
\[ p\text{-Value} = 0.193 \]

Notes: 1 participant provided an illogical response.
APPENDIX O

CHI-SQUARE ANALYSIS: DEPENDENTS PRIOR TO AGE 22
APPENDIX O

Chi-square Analysis: Dependents prior to Age 22

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>9</td>
<td>108</td>
<td>117</td>
</tr>
<tr>
<td>Not on Track</td>
<td>11</td>
<td>47</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>155</td>
<td>175</td>
</tr>
</tbody>
</table>

df = 1  
significance level = 0.05  
$\chi^2$ critical = 3.8415  
$\chi^2$ value = 4.8684  
p-Value = 0.0274

Notes: 2 participants provided illogical responses.
APPENDIX P

CHI-SQUARE ANALYSIS: ALCOHOL USE PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX P

Chi-square Analysis: Alcohol Use prior to High School Graduation

<table>
<thead>
<tr>
<th>Alcohol Use prior to High School Graduation</th>
<th>None</th>
<th>Less Frequently</th>
<th>≥2x per week (small amounts)</th>
<th>≥2x per month (excessive amounts)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>68</td>
<td>36</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Not on Track</td>
<td>36</td>
<td>15</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>104</td>
<td>51</td>
<td>1</td>
<td>17</td>
</tr>
</tbody>
</table>

df = 3  
significance level = 0.05  
χ² critical = 7.8147  
χ² value = 1.3936  
p-Value = 0.707

Notes: There are two values of <5 which is not recommended for use with the chi-square test. 4 participants preferred not to answer.
APPENDIX Q

CHI-SQUARE ANALYSIS: ALCOHOL USE WHILE IN COLLEGE
APPENDIX Q

Chi-square Analysis: Alcohol Use while in College

<table>
<thead>
<tr>
<th>Alcohol Use while in College</th>
<th>None</th>
<th>Less Frequently</th>
<th>≥2x per week (small amounts)</th>
<th>≥2x per month (excessive amounts)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>21</td>
<td>46</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td>Not on Track</td>
<td>10</td>
<td>15</td>
<td>5</td>
<td>7</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>61</td>
<td>25</td>
<td>35</td>
<td>152</td>
</tr>
</tbody>
</table>

df = 3
significance level = 0.05
\( \chi^2 \) critical = 7.8147
\( \chi^2 \) value = 1.671
p-Value = 0.6434

Notes: 3 participants preferred not to answer.
APPENDIX R

CHI-SQUARE ANALYSIS: MARIJUANA USE PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX R

Chi-square Analysis: Marijuana Use prior to High School Graduation

<table>
<thead>
<tr>
<th>Marijuana Use prior to High School Graduation</th>
<th>None</th>
<th>Less Frequently</th>
<th>≥2x per week (small amounts)</th>
<th>≥2x per month (excessive amounts)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>93</td>
<td>15</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not on Track</td>
<td>39</td>
<td>6</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>132</td>
<td>21</td>
<td>14</td>
<td>7</td>
</tr>
</tbody>
</table>

\[ df = 3 \]

significance level = 0.05

\[ \chi^2 \text{ critical} = 7.8147 \]

\[ \chi^2 \text{ value} = 8.888 \]

\[ p\text{-Value} = 0.0308 \]

Notes: There are two values of <5 which is not recommended for use with the chi-square test. 3 participants preferred not to answer.
APPENDIX S

CHI-SQUARE ANALYSIS: MARIJUANA USE WHILE IN COLLEGE
APPENDIX S

Chi-square Analysis: Marijuana Use while in College

<table>
<thead>
<tr>
<th>Marijuana Use while in College</th>
<th>None</th>
<th>Less Frequently</th>
<th>≥2x per week (small amounts)</th>
<th>≥2x per month (excessive amounts)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>76</td>
<td>29</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Not on Track</td>
<td>22</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>34</td>
<td>10</td>
<td>10</td>
<td>152</td>
</tr>
</tbody>
</table>

\[ df = 3 \]
\[ \text{significance level} = 0.05 \]
\[ \chi^2 \text{ critical} = 7.8147 \]
\[ \chi^2 \text{ value} = 9.1163 \]
\[ p\text{-Value} = 0.0278 \]

Notes: There are two values of <5 which is not recommended for use with the chi-square test. 3 participants preferred not to answer.
APPENDIX T

CHI-SQUARE ANALYSIS: USE OF OTHER ILLEGAL DRUGS PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX T

Chi-square Analysis: Use of Other Illegal Drugs prior to High School Graduation

<table>
<thead>
<tr>
<th>Use of Other Illegal Drugs prior to High School Graduation</th>
<th>None</th>
<th>Less Frequently</th>
<th>≥2x per week (small amounts)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>108</td>
<td>7</td>
<td>1</td>
<td>116</td>
</tr>
<tr>
<td>Not on Track</td>
<td>55</td>
<td>4</td>
<td>0</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td>11</td>
<td>1</td>
<td>175</td>
</tr>
</tbody>
</table>

\( df = 2 \)

significance level = 0.05

\( \chi^2 \) critical = 5.9915

\( \chi^2 \) value = 0.5432

\( p \)-Value = 0.7621

Notes: No responses indicated use at a rate of 2x or more per month in excessive amounts. There are three values of <5 which is not recommended for use with the chi-square test. 2 participants preferred not to answer.
APPENDIX U

CHI-SQUARE ANALYSIS: USE OF OTHER ILLEGAL DRUGS WHILE IN COLLEGE
APPENDIX U

Chi-square Analysis: Use of Other Illegal Drugs while in College

<table>
<thead>
<tr>
<th>Use of Other Illegal Drugs while in College</th>
<th>None</th>
<th>Less Frequently</th>
<th>≥2x per week (small amounts)</th>
<th>≥2x per month (excessive amounts)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Frequently</td>
<td>107</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>116</td>
</tr>
<tr>
<td>≥2x per month (excessive amounts)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>10</td>
<td>1</td>
<td>3</td>
<td>153</td>
</tr>
</tbody>
</table>

df = 3
significance level = 0.05
χ² critical = 7.8147
χ² value = 3.5590
p-Value = 0.3132

Notes: There are five values of <5 which is not recommended for use with the chi-square test. 2 participants preferred not to answer.
APPENDIX V

CHI-SQUARE ANALYSIS: PHYSICAL ABUSE OR NEGLECT PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX V

Chi-square Analysis: Physical Abuse or Neglect prior to High School Graduation

<table>
<thead>
<tr>
<th></th>
<th>Physical Abuse or Neglect prior to High School Graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
</tr>
<tr>
<td>Not on Track</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
</tr>
</tbody>
</table>

df = 1
significance level = 0.05
\( \chi^2 \) critical = 3.8415
\( \chi^2 \) value = 1.3473
\( p \)-Value = 0.2457

Notes: 1 participant provided an illogical response. 39 participants preferred not to answer.
APPENDIX W

CHI-SQUARE ANALYSIS: PHYSICAL ABUSE WHILE IN COLLEGE
APPENDIX W

Chi-square Analysis: Physical Abuse while in College

<table>
<thead>
<tr>
<th>Physical Abuse while in College</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>4</td>
<td>85</td>
<td>89</td>
</tr>
<tr>
<td>Not on Track</td>
<td>3</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>107</td>
<td>114</td>
</tr>
</tbody>
</table>

df = 1
significance level = 0.05
\( \chi^2 \) critical = 3.8415
\( \chi^2 \) value = 1.9078
\( p \)-Value = 0.1672

Notes: There are two values of <5 which is not recommended for use with the chi-square test. 41 participants preferred not to answer.
APPENDIX X

CHI-SQUARE ANALYSIS: MENTAL OR EMOTIONAL ABUSE PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX X

Chi-square Analysis: Mental or Emotional Abuse prior to High School Graduation

<table>
<thead>
<tr>
<th>Mental or Emotional Abuse prior to High School Graduation</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>25</td>
<td>72</td>
<td>97</td>
</tr>
<tr>
<td>Not on Track</td>
<td>15</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>97</td>
<td>137</td>
</tr>
</tbody>
</table>

df = 1  
significance level = 0.05  
$\chi^2$ critical = 3.8415  
$\chi^2$ value = 1.884  
p-Value = 0.1699

Notes: 1 participant provided an illogical response. 39 participants preferred not to answer.
APPENDIX Y

CHI-SQUARE ANALYSIS: MENTAL OR EMOTIONAL ABUSE WHILE IN COLLEGE
Chi-square Analysis: Mental or Emotional Abuse while in College

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>25</td>
<td>64</td>
<td>89</td>
</tr>
<tr>
<td>Not on Track</td>
<td>6</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>83</td>
<td>114</td>
</tr>
</tbody>
</table>

df = 1  
significance level = 0.05  
$\chi^2$ critical = 3.8415  
$\chi^2$ value = 0.1649  
$p$-Value = 0.6847

Notes: 41 participants preferred not to answer.
APPENDIX Z

CHI-SQUARE ANALYSIS: SEXUAL ABUSE, SEXUAL ASSAULT, OR RAPE PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX Z

Chi-square Analysis: Sexual Abuse, Sexual Assault, or Rape prior to High School Graduation

<table>
<thead>
<tr>
<th>Sexual Abuse, Sexual Assault, or Rape prior to High School Graduation</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>13</td>
<td>84</td>
<td>97</td>
</tr>
<tr>
<td>Not on Track</td>
<td>11</td>
<td>29</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>113</td>
<td>137</td>
</tr>
</tbody>
</table>

df = 1
significance level = 0.05
\( \chi^2 \) critical = 3.8415
\( \chi^2 \) value = 3.8956
p-Value = 0.0484

Notes: 1 participant provided an illogical response. 39 participants preferred not to answer.
APPENDIX AA

CHI-SQUARE ANALYSIS: SEXUAL ABUSE, SEXUAL ASSAULT, OR RAPE WHILE IN COLLEGE
APPENDIX AA

Chi-square Analysis: Sexual Abuse, Sexual Assault, or Rape while in College

<table>
<thead>
<tr>
<th>Sexual Abuse, Sexual Assault, or Rape while in College</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>8</td>
<td>81</td>
<td>89</td>
</tr>
<tr>
<td>Not on Track</td>
<td>1</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>105</td>
<td>114</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 1 \]
\[ \text{significance level} = 0.05 \]
\[ \chi^2 \text{ critical} = 3.8415 \]
\[ \chi^2 \text{ value} = 0.668 \]
\[ p\text{-Value} = 0.4137 \]

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 41 participants preferred not to answer.
APPENDIX AB

CHI-SQUARE ANALYSIS: EXTREME HUNGER PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX AB

Chi-square Analysis: Extreme Hunger prior to High School Graduation

<table>
<thead>
<tr>
<th>Extreme Hunger prior to High School Graduation</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor's Degree Completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>9</td>
<td>88</td>
<td>97</td>
</tr>
<tr>
<td>Not on Track</td>
<td>7</td>
<td>33</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>121</td>
<td>137</td>
</tr>
</tbody>
</table>

df = 1  
significance level = 0.05  
$\chi^2$ critical = 3.8415  
$\chi^2$ value = 1.8559  
p-Value = 0.1731

Notes: 1 participant provided an illogical response. 39 participants preferred not to answer.
APPENDIX AC

CHI-SQUARE ANALYSIS: EXTREME HUNGER WHILE IN COLLEGE
APPENDIX AC

Chi-square Analysis: Extreme Hunger while in College

<table>
<thead>
<tr>
<th>Extreme Hunger while in College</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>14</td>
<td>75</td>
</tr>
<tr>
<td>Not on Track</td>
<td>3</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>97</td>
<td>114</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 0.214 \]
\[ p \text{-Value} = 0.6436 \]

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 41 participants preferred not to answer.
APPENDIX AD

CHI-SQUARE ANALYSIS: HOMELESSNESS PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX AD

Chi-square Analysis: Homelessness prior to High School Graduation

<table>
<thead>
<tr>
<th>Homelessness prior to High School Graduation</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>8</td>
<td>89</td>
<td>97</td>
</tr>
<tr>
<td>Not on Track</td>
<td>5</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>124</td>
<td>137</td>
</tr>
</tbody>
</table>

\( \text{df} = 1 \)

significance level = 0.05

\( \chi^2 \) critical = 3.8415

\( \chi^2 \) value = 0.5963

\( p \)-Value = 0.44

Notes: 1 participant provided an illogical response. 39 participants preferred not to answer.
APPENDIX AE

CHI-SQUARE ANALYSIS: HOMELESSNESS WHILE IN COLLEGE
Chi-square Analysis: Homelessness while in College

<table>
<thead>
<tr>
<th>Homelessness while in College</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>5</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Not on Track</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>109</td>
<td>114</td>
</tr>
</tbody>
</table>

df = 1
significance level = 0.05
$\chi^2$ critical = 3.8415
$\chi^2$ value = 1.4689
p-Value = 0.2255

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 41 participants preferred not to answer.
APPENDIX AF

CHI-SQUARE ANALYSIS: DEATH OF AN IMMEDIATE FAMILY MEMBER PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX AF

Chi-square Analysis: Death of an Immediate Family Member prior to High School Graduation

<table>
<thead>
<tr>
<th>Death of an Immediate Family Member prior to High School Graduation</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>12</td>
<td>85</td>
<td>97</td>
</tr>
<tr>
<td>Not on Track</td>
<td>0</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>125</td>
<td>137</td>
</tr>
</tbody>
</table>

df = 1  
significance level = 0.05  
χ² critical = 3.8415  
χ² value = 5.4235  
p-Value = 0.0199

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 1 participant provided an illogical response. 39 participants preferred not to answer.
APPENDIX AG

CHI-SQUARE ANALYSIS: DEATH OF AN IMMEDIATE FAMILY MEMBER WHILE IN COLLEGE
APPENDIX AG

Chi-square Analysis: Death of an Immediate Family Member while in College

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>9</td>
<td>80</td>
<td>89</td>
</tr>
<tr>
<td>Not on Track</td>
<td>1</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>104</td>
<td>114</td>
</tr>
</tbody>
</table>

\[ \chi^2 = \frac{(O - E)^2}{E} \]

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 41 participants preferred not to answer.
APPENDIX AH

CHI-SQUARE ANALYSIS: SERIOUS ILLNESS OR INJURY PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX AH

Chi-square Analysis: Serious Illness or Injury prior to High School Graduation

<table>
<thead>
<tr>
<th>Serious Illness or Injury prior to High School Graduation</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>8</td>
<td>89</td>
<td>97</td>
</tr>
<tr>
<td>Not on Track</td>
<td>4</td>
<td>36</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>125</td>
<td>137</td>
</tr>
</tbody>
</table>

df = 1  
significance level = 0.05  
$\chi^2$ critical = 3.8415  
$\chi^2$ value = 0.1088  
$p$-Value = 0.7415  

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 1 participant provided an illogical response. 39 participants preferred not to answer.
APPENDIX AI

CHI-SQUARE ANALYSIS: SERIOUS ILLNESS OR INJURY WHILE IN COLLEGE
APPENDIX AI

Chi-square Analysis: Serious Illness or Injury while in College

<table>
<thead>
<tr>
<th>Serious Illness or Injury while in College</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>13</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>Not on Track</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>15</td>
<td>99</td>
</tr>
</tbody>
</table>

$df = 1$

significance level = 0.05

$\chi^2$ critical = 3.8415

$\chi^2$ value = 0.7456

$p$-Value = 0.3879

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 41 participants preferred not to answer.
APPENDIX AJ

CHI-SQUARE ANALYSIS: DISCOURAGED FROM ATTENDING COLLEGE BY AN ADULT PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX AJ

Chi-square Analysis: Discouraged from Attending College by an Adult prior to High School Graduation

<table>
<thead>
<tr>
<th>Discouraged from Attending College by an Adult prior to High School Graduation</th>
<th>0x</th>
<th>1-2x</th>
<th>≥3x</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>76</td>
<td>24</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Not on Track</td>
<td>40</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>116</td>
<td>36</td>
<td>23</td>
<td>175</td>
</tr>
</tbody>
</table>

\(df = 2\)

significance level = 0.05

\(\chi^2\) critical = 5.9915

\(\chi^2\) value = 0.6113

\(p\)-Value = 0.7366

Notes: 2 participants preferred not to answer.
APPENDIX AK

CHI-SQUARE ANALYSIS: ENCOURAGEMENT FROM PARENT(S)/GUARDIAN(S) TO ATTEND COLLEGE
APPENDIX AK

Chi-square Analysis: Encouragement from Parent(s)/Guardian(s) to Attend College

<table>
<thead>
<tr>
<th>Encouragement from Parent(s)/Guardian(s) to Attend College</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>105</td>
<td>13</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td>48</td>
<td>11</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>153</td>
<td>24</td>
<td>177</td>
</tr>
</tbody>
</table>

$df = 1$

significance level = 0.05

$\chi^2$ critical = 3.8415

$\chi^2$ value = 1.9522

$p$-Value = 0.1623
APPENDIX AL

CHI-SQUARE ANALYSIS: MEANINGFUL RELATIONSHIPS WITH DEGREE-HOLDING ADULTS PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX AL

Chi-square Analysis: Meaningful Relationships with Degree-Holding Adults prior to High School Graduation

<table>
<thead>
<tr>
<th>Meaningful Relationships with Degree-Holding Adults prior to High School Graduation</th>
<th>0</th>
<th>1-2</th>
<th>≥3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>32</td>
<td>49</td>
<td>36</td>
<td>117</td>
</tr>
<tr>
<td>Not on Track</td>
<td>19</td>
<td>21</td>
<td>18</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>51</td>
<td>70</td>
<td>54</td>
<td>175</td>
</tr>
</tbody>
</table>

df = 2
significance level = 0.05
χ² critical = 5.9915
χ² value = 0.7021
\( p \)-Value = 0.7039

Notes: 2 participants preferred not to answer.
APPENDIX AM

CHI-SQUARE ANALYSIS: INCARCERATION OF A PARENT OR GUARDIAN PRIOR TO HIGH SCHOOL GRADUATION
Chi-square Analysis: Incarceration of a Parent or Guardian prior to High School Graduation

<table>
<thead>
<tr>
<th></th>
<th>Incarceration of a Parent or Guardian prior to High School Graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
</tr>
<tr>
<td></td>
<td>Not on Track</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

df = 1  
significance level = 0.05  
χ² critical = 3.8415  
χ² value = 0.3204  
p-Value = 0.5714

Notes: 1 participant provided an illogical response. 39 participants preferred not to answer.
APPENDIX AN

CHI-SQUARE ANALYSIS: INCARCERATION OF A PARENT OR GUARDIAN WHILE IN COLLEGE
APPENDIX AN

Chi-square Analysis: Incarceration of a Parent or Guardian while in College

<table>
<thead>
<tr>
<th>Incarceration of a Parent or Guardian while in College</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>5</td>
<td>84</td>
<td>89</td>
</tr>
<tr>
<td>Not on Track</td>
<td>0</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>109</td>
<td>114</td>
</tr>
</tbody>
</table>

\[\text{df} = 1\]

\[\text{significance level} = 0.05\]

\[\chi^2\text{ critical} = 3.8415\]

\[\chi^2\text{ value} = 1.4689\]

\[p\text{-Value} = 0.2255\]

Notes: There is one value of $<5$ which is not recommended for use with the chi-square test. 41 participants preferred not to answer.
APPENDIX AO

CHI-SQUARE ANALYSIS: PARENT(S)/GUARDIAN(S)’ KNOWLEDGE OF COLLEGE-GOING PROCESS
APPENDIX AO

Chi-square Analysis: Parent(s)/Guardian(s)' Knowledge of College-Going Process

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Sufficient</th>
<th>Not Sufficient</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>18</td>
<td>98</td>
<td>116</td>
</tr>
<tr>
<td>Not on Track</td>
<td>15</td>
<td>43</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>141</td>
<td>174</td>
</tr>
</tbody>
</table>

$\chi^2$ critical = 3.8415
$\chi^2$ value = 2.6925
$p$-Value = 0.1008

Notes: 3 participants preferred not to answer.
APPENDIX AP

CHI-SQUARE ANALYSIS: PARTICIPATION IN COLLEGE ACCESS AND SUCCESS PROGRAMMING PRIOR TO HIGH SCHOOL GRADUATION
APPENDIX AP

Chi-square Analysis: Participation in College Access and Success Programming prior to High School Graduation

<table>
<thead>
<tr>
<th>Participation in College Access and Success Programming prior to High School Graduation</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>81</td>
<td>33</td>
<td>114</td>
</tr>
<tr>
<td>Not on Track</td>
<td>27</td>
<td>29</td>
<td>56</td>
</tr>
<tr>
<td>Total</td>
<td>108</td>
<td>62</td>
<td>170</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 8.4539 \]

\( p \)-Value = 0.0036

Notes: 7 participants provided illogical responses.
APPENDIX AQ

CHI-SQUARE ANALYSIS: YEARS OF PARTICIPATION IN COLLEGE ACCESS AND SUCCESS PROGRAMMING PRIOR TO HIGH SCHOOL GRADUATION
Chi-square Analysis: Years of Participation in College Access and Success Programming prior to High School Graduation

<table>
<thead>
<tr>
<th>Years of Participation in College Access and Success Programming prior to High School Graduation</th>
<th>0</th>
<th>1-2</th>
<th>≥3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Track</td>
<td>33</td>
<td>16</td>
<td>69</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td>28</td>
<td>10</td>
<td>20</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>26</td>
<td>89</td>
<td>176</td>
</tr>
</tbody>
</table>

\( \text{df} = 2 \)

significance level = 0.05

\( \chi^2 \) critical = 5.9915

\( \chi^2 \) value = 9.4112

\( p \)-Value = 0.009

Notes: 1 participant preferred not to answer.
APPENDIX AR

CHI-SQUARE ANALYSIS: PARTICIPATION IN COLLEGE ACCESS AND SUCCESS PROGRAMMING WHILE IN COLLEGE
APPENDIX AR

Chi-square Analysis: Participation in College Access and Success Programming while in College

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>83</td>
<td>35</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td>8</td>
<td>29</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>64</td>
<td>155</td>
</tr>
</tbody>
</table>

df = 1  
significance level = 0.05  
$\chi^2$ critical = 3.8415  
$\chi^2$ value = 27.5779  
p-Value = .0000
APPENDIX AS

CHI-SQUARE ANALYSIS: PARTICIPATION IN COLLEGE ACCESS AND SUCCESS PROGRAMMING PRIOR TO HIGH SCHOOL GRADUATION AND WHILE IN COLLEGE
Chi-square Analysis: Participation in College Access and Success Programming prior to High School Graduation and while in College

<table>
<thead>
<tr>
<th>Participation in College Access and Success Programming prior to High School Graduation and while in College</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>65</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Not on Track</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>70</td>
<td>79</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 19.6308 \]

Notes: 6 participants provided illogical responses.
APPENDIX AT

CHI-SQUARE ANALYSIS: ENROLLMENT STATUS DURING FIRST YEAR OF COLLEGE
Chi-square Analysis: Enrollment Status During First Year of College

<table>
<thead>
<tr>
<th>Enrollment Status During First Year of College</th>
<th>Full-Time</th>
<th>Part-Time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>106</td>
<td>12</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td>33</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>15</td>
<td>154</td>
</tr>
</tbody>
</table>

\[
\chi^2 = 0.1058
\]

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 1 participant preferred not to answer.
APPENDIX AU

CHI-SQUARE ANALYSIS: RESIDENCY STATUS DURING FIRST YEAR OF COLLEGE
APPENDIX AU

Chi-square Analysis: Residency Status During First Year of College

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Campus Resident</th>
<th>Commuter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>71</td>
<td>47</td>
<td>118</td>
</tr>
<tr>
<td>Not on Track</td>
<td>13</td>
<td>22</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
<td>69</td>
<td>153</td>
</tr>
</tbody>
</table>

df = 1
significance level = 0.05
$\chi^2$ critical = 3.8415
$\chi^2$ value = 5.7806
$p$-Value = 0.0162

Notes: 2 participants preferred not to answer.
APPENDIX AV

CHI-SQUARE ANALYSIS: FINANCIAL AID PACKAGE COVERAGE OF TUITION EXPENSES DURING FIRST YEAR OF COLLEGE
APPENDIX A V

Chi-square Analysis: Financial Aid Package Coverage of Tuition Expenses During First Year of College

<table>
<thead>
<tr>
<th>Financial Aid Package Coverage of Tuition Expenses During First Year of College</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>72</td>
<td>42</td>
</tr>
<tr>
<td>Not on Track</td>
<td>16</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>58</td>
<td>146</td>
</tr>
</tbody>
</table>

\[ \chi^2 \text{ critical} = 3.8415 \]
\[ \chi^2 \text{ value} = 1.8066 \]
\[ p\text{-Value} = 0.1789 \]

Notes: 7 participants were not full-time. 2 participants preferred not to answer.
APPENDIX AW

CHI-SQUARE ANALYSIS: REMEDIAL ENGLISH PLACEMENT
APPENDIX AW

Chi-square Analysis: Remedial English Placement

<table>
<thead>
<tr>
<th>Remedial English Placement</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>20</td>
<td>95</td>
<td>115</td>
</tr>
<tr>
<td>Not on Track</td>
<td>6</td>
<td>28</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>123</td>
<td>149</td>
</tr>
</tbody>
</table>

\( \chi^2 \) critical = 3.8415
\( \chi^2 \) value = 0.0012
\( p \)-Value = 0.9725

Notes: 6 participants preferred not to answer.
APPENDIX AX

CHI-SQUARE ANALYSIS: REMEDIAL MATHEMATICS PLACEMENT
APPENDIX AX

Chi-square Analysis: Remedial Mathematics Placement

<table>
<thead>
<tr>
<th>Progress Towards Bachelor’s Degree Completion</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Track</td>
<td>46</td>
<td>69</td>
<td>115</td>
</tr>
<tr>
<td>Not on Track</td>
<td>12</td>
<td>22</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>91</td>
<td>149</td>
</tr>
</tbody>
</table>

\( \text{df} = 1 \)
\[ \chi^2 \text{ critical} = 3.8415 \]
\[ \chi^2 \text{ value} = 0.244 \]
\[ p\text{-Value} = 0.621 \]

Notes: 6 participants preferred not to answer.
APPENDIX AY

CHI-SQUARE ANALYSIS: REMEDIAL ENGLISH AND MATHEMATICS PLACEMENTS
APPENDIX AY

Chi-square Analysis: Remedial English and Mathematics Placements

<table>
<thead>
<tr>
<th>Remedial English and Mathematics Placements</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Towards Bachelor’s Degree Completion</td>
<td>On Track</td>
<td>11</td>
<td>104</td>
</tr>
<tr>
<td></td>
<td>Not on Track</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>15</td>
<td>134</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 0.1402 \]
\[ p = 0.7081 \]

Notes: There is one value of <5 which is not recommended for use with the chi-square test. 6 participants preferred not to answer.