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First-Generation Student Success After Academic Warning: An Exploratory Analysis of Academic Integration, Personal Adjustment, Family and Social Adjustment and Psychological Factors

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First-Generation Student Success After Academic Warning: An Exploratory Analysis of
Academic Integration, Personal Adjustment, Family and Social Adjustment and
Psychological Factors

by

Gabrielle Shoshana Zeisman

A dissertation submitted in partial fulfillment of the
requirements for the degree of

Doctor of Education
in
Educational Leadership: Postsecondary Education

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Abstract

As many as a quarter of undergraduate college students are placed on academic probation at least once during their college career. In addition, first-generation college students are even more at-risk for stopping out or dropping out due to being less academically prepared than their non-first-generation peers. In order to examine factors that influence first generation student academic risk and success, this exploratory study examined the intersection of academic standing and four primary conceptual contributors: academic integration, personal adjustment, family and social adjustment, and psychological factors. Survey data were collected from first generation undergraduate students at an urban research university who were placed on academic probation and those who returned to good standing. Six overarching themes emerged that demonstrate critical importance in first generation student academic success: 1) overall study skills, 2) class attendance 3) health-related issues, 4) financial difficulties, 5) family and personal issues, and 6) physiological symptoms. In addition, these factors appear to have additive and multiplier affects for students. First generation students may be able to overcome one set of factors but each new dimension can further inhibit academic good standing. Recommendations include mandatory advising and college success classes.

Acknowledgements

It is hard to believe that I am actually done. I have been working on my doctoral degree for 7 (alright almost 8) years now and it is time to close a very significant chapter in my life. I found this experience to be challenging, humbling, and most importantly character developing. My passion is student success and I feel fortunate to have been able to dedicate many years of my life to researching, writing and studying academically struggling first-generation college students.

I realize that I could not have done this on my own. First and foremost, I would like to thank Dr. Christine Cress for her patience, guidance, support and wisdom. She pushed me when I was ready to give up and helped me persevere when I thought I could not do any more. Additionally, I would like to thank my dissertation committee for helping shape my study and supporting me throughout this endeavor. Lastly, I am so appreciative for all of my colleagues and coworkers in Student Affairs and Enrollment Management at Portland State University and more specifically the entire staff of the Advising and Career Services department. They gave me the time and support necessary for me to finish my dissertation, and I know that I could not have done this without them.

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Chapter 1 - Introduction

Background

In 2009, at a joint session of Congress, President Barack Obama expressed his desire to revitalize higher education in the United States and he stated that “by 2020, America will once again have the highest proportion of college graduates in the world.” Based on President Obama’s commitment to education, Congress passed The American Recovery and Reinvestment Act in 2009. This legislation was to lay the groundwork for increasing the efficiency and effectiveness of America’s public educational system. Within the American Recovery and Reinvestment Act there is over \$30 billion to help address the concerns of college affordability and to make significant improvements regarding access to higher education (The White House, 2010). Overall, President Obama is committed to restoring America’s role as a leader in higher education.

The guiding principles of the American Recovery and Reinvestment Act are simple. The first is to provide a high quality education for all children and citizens of the United States. One of the most important reasons to have an educated populous is to ensure that we are able to meet the challenges of living in a contemporary world and to be armed with the skills and abilities to be engaged citizens (White, Scotter, Hartoonian, Davis, 2007). The White House (2010) also claims that the economic future of the United States is predicated on having an educated population and it is committed to educating every child from “cradle to career” (The White House, 2010).

Currently, the United States is experiencing an all-time high with enrollments at post-secondary institutions. According to *The Condition of Education* (2010),

undergraduate enrollment in degree-granting, post-secondary institutions was 16.4 million in 2008. From 2000 to 2008 undergraduate enrollment rose by 24%, with female enrollment growing by as much as 26% and male enrollment increasing by 46%. There has been a 27% increase in the number of bachelor's degrees awarded at public, four-year institutions since the 1997-98 academic year (*The Condition of Education*, 2010).

The statistics above seemingly report gains in degrees awarded as well as the number of students participating in higher education. However, with the total percentage of the population with college degrees decreasing, the number is concerning. According to the Lumina Foundation for Education (2010), less than 40% of the U.S. adult population has either a two-year or four-year degree. These numbers are especially alarming when having a degree is critical to finding good, stable employment. The Integrated Postsecondary Education Data System (IPEDS) reports that 82% of 25-64 year olds with college degrees are working compared to 63% with less than high school completion and 76% with a high school diploma. Another way of viewing these statistics is to inspect the unemployment rates. In 2009, adults 25 years and older experienced a 4.6% unemployment rate with a bachelor's degree, and a 9.7% unemployment rate with just a high school diploma (*Digest of Educational Statistics*, 2010).

In addition to those who have not attended college, in 2011 there are already over 37 million Americans that have enrolled in and attended college but have not obtained a degree (Lumina Foundation, 2010). Approximately 30% of first-year students that started college in fall 2010 will not return to college in fall 2011 (Schneider, 2010). Additionally, only about 60% of students at four-year universities will graduate within six years of their

starting semester. Jones (2011) claims that in order to meet President Obama's goal of being a global leader in education, our nation would need five million more college graduates by 2020. In response to President Obama's challenge, The Lumina Foundation set a goal to increase the proportion of adults with degrees to 60% by 2025. As an example, for the state of Oregon, to reach this goal, colleges and universities would need to graduate 3,626 students annually, which would represent a 6.8% annual increase in graduation rates.

Most colleges and universities are required to track and report graduation rates for all first-year, full-time degree-seeking students. Universities measure this rate by using a figure that is 150% of the normal time to degree (Miller, 2010). For example, a first-year, full-time student at a four-year college or university would be tracked for six years. IPEDS reports that only 36% of students pursuing bachelor's degrees finish within the first four years and this number only increases to 57% for the six year timeframe. It is not that the United States has an enrollment problem; it appears that the issues lie in the inability for colleges and universities to retain their students and to help students reach their educational goals.

Not only do our lagging graduation rates impact our ability to be a world leader in higher education, but our inability to retain students, especially after the first year, is expensive for both the federal and state governments as well as for tax payers. Currently, the U.S. spends more on higher education than any other nation in the world. The American Institutes for Research (2010) reported that the costs of funding full-time, first-year students that did not return the following year have increased 15% from 2003 to

2008. These amounts are \$1.2 billion for the 2003 academic school year and \$1.35 billion for the 2007 academic year. These appropriations are funded through federal and state monies, as well as taxpayer dollars. Alarming over the last five years, state governments have spent over \$1.4 billion on support services for students that did not return for their second year of college. In the last five years, the state of Oregon has spent \$56,400,000 on first-year dropouts (Schneider, 2010).

To reach the goals outlined by President Obama, the United States needs to develop and implement programs to retain students at better rates than are currently being reported. One of the first steps in designing programs to address the needs of our college students is to find out who these students are, as well as their specific concerns.

First-Generation College Students

The “traditional college student” is a description that is beginning to a less standard meaning. In fact, college and university personnel have witnessed a shift in the profile of the traditional college student. In the past, the term traditional college student referred to a young adult, between the ages of 18 and 22, attending a college or a university. Now, in 2012, a college student can vary in age from 18 to elderly. Students have varying levels of academic preparation and many are unfamiliar with university policies and procedures especially if their parents did not graduate from a college.

The most common definition of a first-generation student is a student who has had neither parent graduate from a four-year university (McKay & Estrella, 2008). First-generation college students enroll at four-year universities at a lower percentage than their non-first-generation peers, with 43% and 59% enrollment respectively (Ishanti,

2003). Ishanti (2003) also claims that first-generation students have a 71% higher chance of departing their institution without a degree than their non-first-generation peers. This is especially true at urban institutions where they are a higher percentage of the student population in part because urban institutions may have lower academic requirements.

Indeed, one reason for the lower retention rate of first-generation college students is that they are unfamiliar with university processes (Cho, Hudley, Lee, Barry & Kelly, 2008). This lack of information can range from the admissions process to being knowledgeable about financial aid to scheduling classes. First-generation college students enter the university at a disadvantage because everything is new for them including college terminology, lingo and jargon.

A first-generation college student has typically had less rigorous academic preparation for college than a non-first-generation college student (Horwedel, 2008). In a report by Kuh, Kinzie, Buckley, Bridges and Hayek (2006) on student success, the authors found that the quality of college preparation in high school predicts the chances for success in college, with success measured by enrollment, persistence, and grades. Lack of academic preparation can lead to poor study skills, which in turn can lead to poor academic performance. In a recent study examining potential first-generation college students (7th graders), the researchers found that the participants reported lower college going self-efficacy expectations, than the potential non-first-generation college students (Gibbons & Borders, 2010). Self-efficacy, one facet of motivation, can be described as the way a person's beliefs about her capabilities to perform a specific task will influence

her actual ability to perform the task (Bandura, 1994) In this case, self-efficacy impacts a student's sense of expectation about her ability to attend college.

Literature on Academic Probation

Unfortunately, as a population, first-generation students are more likely to end up in academic jeopardy because they are less academically prepared than their non-first-generation peers (Pascarella, Pierson, Wolniak, & Terenzini, 2004). Typically a student will be placed on academic probation the term or semester after her cumulative grade point average (GPA) falls below a 2.0. Although every school has different ways of addressing, defining, and handling probationary students, most universities have established a standing academic policy (Kelley, 1996). According to Issak, Graves, and Mayers (2006) the following are characteristics of students in academic jeopardy: lower social skills, weaker social networks than students in good standing, higher rates of employment (Coleman & Freedman, 1996; Trombley, 2000), more financial difficulties, lower high school GPA (Trombley, 2000), lack of institutional commitment (Heisserer & Parette, 2002), and family obligations (Trombley, 2000).

In addition to the list of characteristics of students on academic probation, the literature suggests that academically struggling students reported difficulties with procrastination, time management, motivation, stress management, personal problems related to family obligations and financial concerns, difficult classes, attendance issues, and instructor issues (Austin, Cherney, Crower & Hill, 1997; Coleman & Freedman, 1996; Isaak et al., 2006; Thombs, 1995; Trombley, 2000).

Some researchers would argue that academic performance is linked to a student's self-regulation as defined by Zimmerman and Schunk (2008) as involving setting specific goals, organizing tasks, having high levels of self-efficacy and intrinsic interest, and being able to self-reflect. These cognitive skills also influence behavioral patterns such as being a self-starter and using a variety of learning strategies to accomplish learning goals (Zimmerman, 2008).

Wang and Castañeda-Sound (2008) discovered that self-esteem was the single most important variable impacting a first-generation college student's psychological well-being. First-generation college students who reported higher levels of self-esteem had lower levels of stress, greater life satisfaction, and fewer psychological problems (Wang & Castañeda-Sound, 2008). The practical implications of this finding can be far reaching. Wang and Castañeda-Sound contend that universities providing programs geared towards first-generation college students need to include comprehensive services and address the need for these students to create a sense of community to enhance their psychological well-being.

There are many different models for "intrusive" interventions for students on academic probation, but it appears that holistic interventions can address many of the needs of these students. An intrusive intervention is one in which the student is required to participate (Issak, Graves, & Mayers, 2006). An intrusive, holistic intervention should include information regarding study skills, time management, procrastination, stress management, goal setting, money management, social competence, and self-monitoring of academic and emotional problems (Coleman & Freedman, 1996; Isaak et al., 2006).

Group interventions, as well as college success courses have been found to be beneficial (Coleman & Freedman, 1996). Lastly, the majority of the research suggests that the more intrusive an intervention, the more likely the intervention will result in a higher GPA the term following academic probation, and the higher likelihood of returning students to good standing (Isaak et al., 2006).

Thus, it appears that an intervention is necessary not only to explain the academic standing policy to a student, but to provide the student an opportunity to explore why she is on probation and to access campus resources. Because nearly a quarter of the undergraduates in the United States are placed on academic probation at least once during their college tenure, this is a population of students that the university needs to better understand in order to create programs to increase students' success and hopefully improve the university's retention rate (Coleman & Freedman, 1996). At this time, there is little empirical research regarding first-generation college students on academic probation which is yet another reason to examine this particular population of students.

Statement of the Problem

Colleges and universities face unique problems when it comes to retaining first-generation college students. First of all, first-generation college students are often more diverse, work more hours, and commute more than their non-first-generation peers. Secondly, according to Horwedel (2008), first-generation college students are less academically prepared than their non-first-generation college peers. This paper argues that universities have an obligation to provide resources for underprepared, admitted first-generation college students.

By example, at one large, public university in the Pacific Northwest approximately 500 students go on academic warning each term. Academic warning at this particular institution is enacted when a student has below a 2.0 cumulative GPA. Additionally, there are between 200 – 250 students that go on academic probation each term. Academic probation occurs when the student is unable to raise her cumulative GPA above a 2.0 and earns less than a 2.25 term GPA the term following academic warning. Lastly, 70-100 students are academically dismissed each term from this institution. Academic dismissal occurs when a student who is on academic probation is unable to raise her cumulative GPA above a 2.0 and earns less than a 2.25 term GPA. Although these numbers are not a large percentage, approximately three percent, of the total student population, they do represent students that may leave the institution, either voluntarily or involuntarily, which leads to reduced tuition dollars and lower retention and persistence rates. In order to reach President Obama's goals, it is imperative to look at this subpopulation and implement programs designed to increase their retention.

Nature of the Study and Statement of Purpose

The purpose of this quantitative study was to explore first-generation college students and factors that relate to their academic success at a large, public, university in the Pacific Northwest. Specifically, the goal is to better understand issues of academic integration, personal adjustment, social and family adjustment in first-generation students. The study uses motivational theories and psychological factors to explore how these issues may relate to academic achievement for first-generation students.

Research Question

As will be further explained in chapter two, the research question for this study was formulated after a comprehensive literature review on research about first-generation college students with a focus on adult developmental and motivational theories as they apply to students on academic probation. The primary research question guiding this study was: *what factors promote or inhibit first-generation college students to return to good standing after being on academic warning?* This inquiry will also investigate several secondary questions:

1. Is there a statistically significant difference in academic integration between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
2. Is there a statistically significant difference in personal adjustment between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
3. Is there a statistically significant difference in family and social adjustment between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
4. Is there a statistically significant difference in regards to psychological factors between first-generation college students that return to good standing after being on

academic warning and first-generation college students that go onto academic probation from academic warning?

Educational Significance of the Problem

Currently, little empirical evidence exists exploring the relationship between goal setting, self-efficacy, and self-determination in students that are either successful after being on academic warning and those students that end up falling further behind. Additionally, very few studies look specifically at first-generation college students that are on academic probation. This study is timely in that colleges and universities are seeing an increase in first-generation college students on their campuses. Lastly, this study is in alignment with President Obama's goal of increasing graduation rates and being the world leader in higher education by 2020.

The potential implications of this study could be far reaching. The findings from this study will be used to make recommendations for first-generation college student programming. It was the intent of the researcher to provide two types of programming recommendations. The first recommendation concerns programs that are intended to be proactive in nature and help students be successful from the first term that they are admitted to the university. The second recommendation is based on the findings of this study and centered around students that are on academic probation. Through this study, the researcher identified the ways in which academic integration, personal adjustment, family and social adjustment, and psychological factors affect a student's academic success. Understanding why one student returns to good standing while another student

with similar pre-college characteristics falls further behind can lead to more proactive measures, rather than reactive, when working with students.

Definition of Operational Terms

For the purpose of this study, the following definitions were used:

Academic jeopardy – A general term to describe when a student is not in compliance with her university's academic standing policy. This term is synonymous with academic probation.

Academic probation – A general term to describe when a student is not in compliance with her university's academic standing policy.

Academic standing – A term used to describe where a student stands with the university in terms of the academic standing policy. Students are often either in good academic standing, academic warning, academic probation, or academic dismissal.

Academic warning – When a student's cumulative GPA falls below a 2.0, they are placed on academic warning.

First-generation college student – A student who has had neither parent graduate from a university.

Intervention – Any act on the behalf of the university to assist a student that is on academic probation.

Self-efficacy – The way a person's beliefs about her capabilities to perform a specific task will influence her actual ability to perform the task (Bandura, 1994).

Conclusion

In order to reach President Obama's goal of increasing U.S. graduation rates and being the world leader in higher education by 2020, colleges and universities are will need to provide proactive programming designed for first-generation college student success. This study explores first-generation college student success and predictors of academic success.

The next chapter reviews the literature relevant to this study, highlighting the most salient conceptual components of the study, including first-generation college students, adult developmental theories, academic preparation, personal and social adjustment, family support and psychological factors including self-efficacy, goal setting, and self-determination. Chapter three explains the study methodology including description of the subjects, study instrument, data collection methods, and procedures. This chapter details the quantitative method research design that will be used for data analysis. Chapter four analyzes the results of this study. Chapter five interprets the findings from this study and discusses implications and opportunities for further research.

Chapter 2 – Literature Review

Introduction

Chapter two focuses on literature pertaining to first-generation college students as well as probationary students. Beyond defining both of these student populations, Chapter two includes literature on academic integration, personal adjustment, and family and social adjustment for first-generation college students. Additionally, included in this literature review are adult learning theories and psychological theories including self-efficacy, self-determination theory, and goal setting.

The organization of this chapter is based on prominent themes that presented themselves in the literature search as they relate to the research question in Chapter one. The review starts with an overview of first-generation college students, including a working definition for first-generation college students. Next the literature review summarizes key adult developmental theories and motivation theories as they relate to the research question and research study. Figure 1 represents the four factors that this study examined and their impact on first-generation college students' academic standing. This literature review is organized by each of these factors. Lastly, this chapter outlines the seminal studies on academic probation and provides a summary of these studies.

Figure 1

Predictive Factors of First-Generation Student Success **First-Generation College Students**

There are many definitions of first generation college students, but for the purpose of this paper, this population is defined as any person who has had neither parent graduate from a four year university (McKay & Estrella, 2008). Approximately one in three college students come from families where neither parent has had any postsecondary education (NSSE, 2005).

First-generation college student challenges. Generally, a first-generation college student is unfamiliar with university processes (Cho, Hudley, Lee, Barry & Kelly, 2008). This can range from the admissions process to being knowledgeable about financial aid to scheduling classes. For a first-generation college student, college language and terminology may not have been discussed in the house while the student was growing up. Therefore, this student is disadvantaged in comparison to her non-first-generation peers because everything is new for her, including college lingo and jargon.

One study found that many students that do not have an understanding of the college environment, often silently accept inappropriate challenges that could otherwise be resolved (Clark, 2006). One way in which a student silently accepts challenges is her unwillingness to question professors or administration about policies, deadlines, and grading.

Another challenge facing a first-generation college student is that she has typically had less rigorous academic preparation for college (Horwedel, 2008). In a report on student success Kuh, Kinzie, Buckley, Bridges and Hayek (2006), found that the quality of college preparation in high school predicts the chances for success in college, with success measured by enrollment, persistence, and grades. For example, a student may not be academically prepared for an introductory college level writing course because her high school did not adequately prepare her enough through her writing and English classes.

In a multi-institutional study, Pascarella, Pierson, Wolniak, and Terenzini (2004) found that first-generation students enrolled in fewer credits, worked more, were more likely to live off campus, and earned lower grades than students whose parents had earned a bachelor's degree. These factors can explain the likelihood that a first-generation college student will be less involved in extracurricular activities and non-course related interactions with peers, all of which are factors known to support student academic success (Pascarella et al., 2004). Pascarella et al. also showed a distinct positive net effect of peer interactions on first-generation college students. In fact, the study

showed that first-generation college students derived greater benefit from peer interactions than non-first-generation college students (Pascarella et al., 2004).

In 2001, the National Center for Education Statistics (as cited in Cho, Hudley, Lee, Barry & Kelly, 2008) reported that dropout rates are consistently higher for first-generation college students than their traditional peers. On average a campus will lose up to 50% of its first-generation student population by the end of the students' first year (Clark, 2006). Although it is hard to pinpoint the exact reasons for first-generation college students' lackluster retention rates, the very fact that this student population is less academically prepared for college than their non-first-generation peers could explain the low persistence rates.

In sum, there are several challenges that first-generation college students face on campuses. The following is a list of many of the challenges discussed in the literature regarding first-generation college students:

- Unfamiliar with university processes
- Less rigorous academic preparation
- Enroll in fewer credits
- Work more hours
- More likely to live off campus
- Earn lower credits per term
- Less involved in extracurricular activities
- Consistently higher dropout rates

As evidenced in the literature, first-generation college students have many more challenges than their non-first-generation peers. It is these challenges that need to be addressed when working with first-generation college students

First-generation College Student Academic Integration

The research regarding the pre-college characteristics of first-generation college students is abundant; however, it is imperative to examine the academic integration that happens while in college. We must not only look at study skills, but also academic major choice. The NSSE (2010) reports that a student's major choice not only affects her job prospects, but major choice can also influence how a student learns and engages in the academic realm of the university.

Academic integration – major choice. In a recent study focusing on business majors, Malgwi, Howe and Burnaby (2005) found that interest in the subject matter was the strongest influence on student's major choice. A close second were the assumed job and career related benefits of a particular major. One of the most interesting findings of the study was that positive factors such as interest in the subject area, discussion with other students, instructors, departmental advisers, career opportunities, and introductory courses in the major had a much larger impact on the decision to change a major than did negative factors (Malgwi et al., 2005).

When working with students who are undecided on their major, it is important to understand the implications of not having chosen a major. In one study, the researcher found that undecided students exhibited low levels of academic self-efficacy (Elias, 2008). There is a push within academic advising towards having a college student explore

majors during her first year. Students often experience anxiety when they are unsure of their major. Although there is no evidence to suggest whether more undecided students are first-generation, it appears that first-generation college students often feel as if they do not want to waste time or money on courses that are unnecessary. Perhaps colleges and universities need to provide better explanations regarding what a liberal arts education is and how major and career are not always related.

Academic integration – academic decisions. Aside from major choice, first-generation college students are faced with important academic decisions every day. From how many hours a day they should study to dealing with test anxiety, first-generation college students must learn to navigate the academic realm. Collier and Morgan (2008) used a conceptual model to examine the effects that understanding professors' expectations and the course material has on first-generation college students' performance and abilities. In Collier and Morgan's conceptual model (see Figure 2 below), the student's abilities are split into two areas: cultural capital and academic skills. Additionally, a student's performance is comprised of demonstrated and actual capacity. Actual capacity refers to what a student "knows and understands," while demonstrated capacity refers to the student's ability to demonstrate what she "knows and understands" (Collier & Morgan, 2008, p. 429).

Figure 2

Collier and Morgan's Conceptual Model

The results from Collier and Morgan's (2008) work with first-generation college students clearly illuminated the differences in expectations about workload and priorities between first-generation and non-first-generation college students. This study showed that first-generation college students reported more problems with time management and prioritization than their non-first-generation peers. Additionally, the first-generation college students had fewer resources to help with the demands of the college level workload. Another important finding from Collier and Morgan's work is that first-generation college students wanted faculty expectations to be more detailed. They wanted more information on assignments and what the faculty expected of them.

First-generation college student academic integration – summary. A first-generation college student potentially differs in both pre-college academic preparation and in-college academic skills than her non-first-generation college peers. Examining the academic skills that a first-generation college student employs while in college is

necessary when looking at how successful (or unsuccessful) she is during her first year in college. Recognizing that a first-generation college student approaches academics differently than a non-first-generation college student is something that college and university administrators could use in designing programs for first-generation college students. Figure 3 below summarizes the components of first-generation students' academic integration.

Figure 3

First-Generation College Students' Academic Integration

First-generation College Student Integration: Personal and Social Adjustment

The last several decades of research and literature on student success in a college environment shows that intentional formal and informal student-faculty interactions lead to better academic integration for the student (Pascarella & Terenzini, 2005). According to Nora (1987), academic integration is achieved through intentional, formal interactions with faculty, staff and peers typically in an educational and academic context. These interactions can range from a student meeting with her faculty member during office hours to a faculty member dining with residents in the dorms. Several studies suggest that it may not be the actual student-faculty interaction, but rather the student's perception that her faculty member is available and cares about her success and development. These "perceptions" could be enough of an academic integration to promote persistence (Pascarella & Terenzini, 2005). One longitudinal survey found that it was the opportunity for student-faculty interpersonal relationships that led to higher GPA (Cress, 2008). In fact, these perceived opportunities also led to higher confidence in academic ability, even if the student was academically underprepared when she started college (Cress, 2008).

Personal adjustment – student interactions. A report by Kuh and Hu (2001) suggested that the type of interaction between the student and the faculty member determines whether or not the interaction had an impact on self-reported gains in academic skill development. The type of interaction that showed statistical impact was a substantive interaction. As defined by Kuh and Hu (2001), a substantive interaction is one in which the student asks the instructor a question regarding the course content, about feedback she received on an assignment, or makes an office appointment.

Social integration is achieved through a strong connection with the college social environment, including less formal interactions with staff, faculty and students (Nora, 1993). Less formal interactions can occur through students meeting with faculty members outside of the classroom or office hours, meeting other students at organized and unorganized events, and generally spending time on campus. However, research on first-generation college students indicates that these students are somewhat less likely to be involved in extracurricular activities than their non-first generation peers (Pascarella et al., 2004). Interestingly, first-generation college students tend to have a significantly more positive benefit from these interactions and involvement than students whose parents were highly educated (Pascarella et. al, 2004). Therefore it can be hypothesized that peer interactions, as well as less formal interactions with faculty are crucial to a student's academic success and retention.

Personal adjustment – college bureaucracies. Institutional size, policies, and procedures all can affect a student's ability to be successful and persist to degree attainment. According to Bean (1983), a student's beliefs are shaped by her experiences and interactions with the institution and the institutional policies. It is these beliefs that evolve into attitudes about the institution and can affect the student's perception of how well she fits into the institution (Bean, 1983).

One issue involving large universities is the perceived notion of getting the "runaround" between offices, paperwork, and communication from departments (Godwin & Markham, 1996). This "runaround" can affect a new college student's adjustment and social integration into the campus community. A student can often get frustrated with

lines, bureaucracy, and institutional policies. Ultimately this frustration can affect a student's decision to persist or leave an institution.

Another issue facing students on a college campus is the feeling of being powerless in relation to the rules, regulations, and bureaucracy (Godwin & Markham, 1996). When a student approaches a particular office to attend to business she is often met with rules and policies that seem unfair or overly complicated. Godwin and Markham state that it is not necessary for a student and a college staff member to have the same goals for a successful interaction, but they do claim that there is a power disadvantage for students. A student needs to be able to advocate for themselves through the bureaucracy and understand the system enough to know "how to work the system" (Godwin & Markham, 1996).

Students bring a variety of perceptions regarding college with them on the first day of school. Sometimes these perceptions are helpful for students in attaining their educational goals, while at other times these perceptions lead students down the wrong path. Some students do not have the cultural capital or background to understand how to work through the bureaucracy on a large college campus or when they need to advocate for themselves. Colleges and universities need to work to provide transparent policies and to consider all of the "hoops" that they make a student "jump" through on her way to degree attainment.

Personal adjustment – cultural capital. Cultural capital is a sociological concept first developed by Bourdieu in 1973 and refers to the nonfinancial assets which might promote social mobility. It is believed that cultural capital is passed down by the

family and is often related to social status (Dumais, 2002). Bourdieu's main insight is that a student with more cultural capital will do better than a student who lacks cultural capital. For example, a person with more cultural capital is more likely to be successful in both the academic world, as well as in society at large. It is believed that people who have more cultural capital are able to handle the life obstacles with greater ease than someone who is lacking in cultural capital. Additionally, people with higher cultural capital are often given more opportunities for growth and success than people with less cultural capital.

As compared to a non-first-generation college student, a first-generation student is often lacking the cultural capital that gives her prior knowledge about expectations for the college experience (Deil-Amen & Tevis, 2010). This lack of cultural capital often leads a first-generation college student to use her high school experiences as a reference point to inform how she interprets her experiences in college (Deil-Amen & Tevis, 2010). In other words, a non-first-generation college student would be less likely to go on academic warning because she attends class more often, knows to ask questions, and can interpret the policies and procedures more accurately than a first-generation college student.

First-generation College Student Family Support

Throughout the literature on family support of college students there is a clear relationship between family support and decision to enroll in college. One study examined the relationship between family interdependence, as defined by closeness and obligations within the family, and intent to enroll in college. The researchers examined

this relationship through socio-economic status and ethnic differences. Phinney, Dennis, and Osorio (2006) found that students with family interdependence are more likely to attend college when they are encouraged to do so by family members. Ethnic identity also made a significant positive contribution to one's desire to enroll in college. Overall, the researchers found that there are multiple dimensions involved in the decision to enroll in college, including socio-economic status, ethnic identity, and family interdependence (Phinney, Dennis & Osorio, 2006).

In a review of Tierney, Corwin, and Colyar's *Nine Elements of Effective Outreach*, Hossler (2006) points out how important family support is for low-income and first-generation college students. Most programs that are designed to increase the enrollment of low-income and first-generation college students have embedded information including programming, support services, and encouragement to enroll. One of the key ingredients in recruiting low-income and first-generation college students is family support. Hossler argues that it is essential to have family programs that engage the student's family, especially the parents, and allow them to participate in the process. One suggestion is to include family members as part of the orientation process. Orienting first-generation college student families to the university provides an opportunity to family members to understand what to expect as a family member especially if they did not go to college themselves (Terenzini et al., 1994). Orientation programs often focus on the time commitment that is needed for a student to be successful and the resources that are available on campus.

Family support – parental involvement. In terms of the effects of parental involvement and support on students while they are in college there appears to be mixed data. Tinto (1993) argues that it is necessary for a student, to a certain degree, to leave behind, or separate themselves, from her “communities of the past” (p. 95). These communities typically include the student’s family, high school friends and acquaintances, and other aspects of her local community. These external constituents have the ability to inhibit a student’s ability to fully immerse herself into the institutions academic and social communities, thus directly affecting the student’s likelihood of degree attainment (Tinto, 2003).

Originally proposed in 1975, Tinto’s theory provides a longitudinal model of the institutional impact on a student’s likelihood to persist through college to degree attainment (Pascarella & Terenzini, 2005). The theory (1975) is based in a sociological framework borrowing from the works of Van Gennep and his studies on rites of passage and Durkheim’s Theory of Suicide (1897). The model is intended to speak to the activities and experiences that occur for a student within a single institution. Additionally, the model assumes that students are voluntarily leaving the institution rather than being academically dismissed. Furthermore, the model is designed to not only describe departure from an institution, but rather explain why the phenomenon exists (Tinto, 1993).

According to Tinto’s theory, a student is more likely to persist in college if she is able to integrate herself into the social and academic systems within the institution. As a student becomes more integrated into the social and academic systems, it is more likely

that the student's commitment to the institution will become stronger and in turn create a stronger desire to persist to degree attainment (Tinto, 1993). However, Tinto's model seems to exclude the individual factors that affect a student such as, gender, race, individual, cultural identity, and first-generation college student status. Therefore, it is important to have intentional programs in place at a university to increase students' social and academic integration, therefore increasing retention.

One recent study examined the impact of family support on academic success for first-generation and non-first generation college students. Wang and Castañeda-Sound (2008) found no statistically significant difference between first-generation and non-first-generation college students' perceptions of family and friends support. However, they noted that a first-generation student's stress level is linked to her perception of family support. Wang and Castañeda-Sound's (2008) findings suggest that a first-generation college student's stress level decreases with increased family support. Support from family members is an essential part of the equation for academic success for first-generation college students. Although first-generation college students may lack the cultural capital to understand the lingo and processes of college, it seems that having a supportive family can ease stress and in turn allow them to be more successful on the college campus.

Adult Development Theories and First-Generation College Students

Many theorists describe adult development as a set of stages that an individual passes through as she gains greater cognitive, affective, psychological and social abilities. When working with a first-year, first-generation college student it is helpful to

understand where she may be developmentally. One adult developmental theory stands out when working with a struggling student. Chickering and Reisser (1993) attempt to describe their understanding of adult development as a map of seven vectors. Each vector represents paths that individuals take on their way to becoming an individual with a unique way of viewing and dealing with the world around them. As an individual passes through one vector to the next, she presumably gains skills and confidence (Chickering & Reisser, 1993). Although the authors caution us about viewing these paths as sequential, it is difficult to not think of these as steps that must be completed before moving on to the next stage. The seven vectors include: *Developing Competence, Managing Emotions, Moving through Autonomy towards Interdependence, Developing Mature Interpersonal Relationships, Establishing Identity, Developing Purpose, and Developing Integrity*. All of these vectors have significant impact on students.

Utilizing student development theories while working with first-generation students provides a knowledge base to better understand what is happening with students in terms of identity and personal development and how these worlds intersect with the new college environment. The purposes or uses of theory can be far reaching. For example, using theory to help describe what happens during the first-year of college for a first-generation college student is particularly helpful. Chickering and Reisser's Seven Vectors (1993) assist a university professional in understanding that the student is going on a journey and this journey includes finding themselves and eventually developing integrity. The Seven Vectors provide a framework to better understand first-generation college students experience and needs during the first year of college.

Perry (1981) also describes adult development as stages or positions. Perry's work is most often used in describing the cognitive developmental stages of young adults (Merriam, Caffarella, & Baumgartner, 2007). Through his work with Ivy League, white males Perry identified nine stages, or ways of interpreting learning experiences in young adults. He points out that positions can be perceived as "places" that someone gets to and remains for a period of time. In fact, Perry argues that perhaps development occurs during the transitional periods between the different positions and the positions are mere resting points. Although Perry's work is based on a student population very different than first-generation college students, his theory still provides a framework to view the development of students.

Perry's scheme includes nine positions. These positions can be simplified to four stages – dualism, multiplicity, relativity, and commitment. Dualistic thinking can be described as viewing the world in terms of right and wrong. According to Perry's positions a student would begin the transformation at Position 1, which is best described as viewing the world in dualistic terms. In this position, the teacher holds the answers and the student is to take in all of the information and to not question the validity of the information. Dialectical thinking, on the other hand, allows the student to handle contradictory thoughts and paradoxical thinking (Merriam, Caffarella, & Baumgartner, 2007). As a student progresses through the positions she will be able to take information provided and begin to question it. This student will move through the positions and develop stronger critical thinking skills and be able to handle contradictory notions that may occur through learning experiences (Merriam, Caffarella, & Baumgartner, 2007).

Both of these theories look at learning as a transformational process. A student will learn and grow as she experiences new situations. A first-generation college student is not only going through this transformational process, but she is also navigating through a world that is new to her. For a first-generation college student, the first-year of college is full of learning experiences both in and out of the classroom. The first-generation college student is adapting to the differences between high school and college in both the academic and social realms. For most students the end of the first year of college marks the beginning of a journey that allows them to see the world through a different perspective than when they started college. Students are often more able to handle ambiguity in the classroom and have begun to hone their critical thinking skills.

Psychological Factors

In addition to adult developmental theories, psychological literature and motivational theories are emerging as a way to explain a student's likelihood to persist to degree attainment (Robbins, Lauver, Le, Davis, Langley & Carlstrom, 2004).

Psychosocial factors, including self-efficacy, goal orientation, and motivation have been proven by research studies to affect a student's adjustment to college life (Elias, Noordin & Mahyuddin, 2010). Several literature reviews focusing on motivational theories, including self-efficacy, self-regulation, and expectancy values have brought attention to the need and benefit of integrating these psychological theories into student success theories (Covington, 2000; Dweck, 1999; Eccles & Wigfield, 2002).

Self-efficacy. Self-efficacy, one facet of motivational theory, can be described as the way a person's beliefs about her capabilities to perform a specific task will influence

her actual ability to perform the task (Bandura, 1994). Self-efficacy beliefs determine how people behave, think, and motivate themselves. These beliefs are shaped by family and peer groups, with peers having a more significant impact on a person's self-efficacy as they grow into adolescence (Bandura, 1994). A person with low self-efficacy will often shy away from challenging tasks and her commitment to goals is weaker than someone with a higher self-efficacy. In fact, a person with low self-efficacy will give up much more quickly when faced with difficulties than a person with higher self-efficacy (Bandura, 1994).

Bandura (1994) argues that the stronger the self-efficacy the more ability that person has to visualize future scenarios of success, rather than failure. The lower the self-efficacy the more a person will dwell on the failures of a possible situation, perhaps even quitting before she has the opportunity to fail. In regards to motivation, self-efficacy determines our beliefs about what we can accomplish. Furthermore, even a person with high self-efficacy may not always succeed at a given task or goal. However, the higher the self-efficacy, the better the person is able to delineate between ability and other circumstances that prevented her from reaching her goal, i.e., inadequate resources (Bandura, 1994).

A college student's self-efficacy can affect her educational aspirations, how involved she is in campus activities, and her academic accomplishments (Bandura, 1994). In a recent study examining first-generation college students and non-first-generation college students' self-efficacy, researchers found that academic success was a function of self-efficacy for all participants (Vuong, Brown-Welty, & Tracz, 2010). The researchers

defined academic success by previous and current term GPA, as well as a student's self-reported intention of finishing the current term and returning for the next term. This study showed no significant difference of student's self-efficacy between first-generation college students and non-first-generation students. However, the study did find a difference between GPA's. The non-first-generation college students had higher previous term and current term GPA's (Vuong, Brown-Welty, & Tracz, 2010). This study leads one to ponder if academic success truly comes down to academic skills.

Self-efficacy – research studies and academic success. In 2002, a group of researchers examined the relationship between psychological and study skills factors and college outcomes by conducting a meta-analysis on 109 studies. The researchers looked at various cognitive psychological constructs including self-efficacy beliefs and outcome expectancies, as well as achievement and performance goals. In addition, the researchers layered the psychological literature with studies that focused on traditional educational literature examining GPAs, persistence, and other standard measurements for academic success (Robbins, et al., 2004). Robbins et al., hypothesized that academic goals, general self-concept, and self-efficacy should impact persistence. In fact, Allen (1999) found that although motivation did not appear to directly affect academic performance it did predict persistence.

Through the meta-analysis, Robbins et al. (2004) found that academic self-efficacy remains the best psychological and study skills factor predictor of GPA in college. After self-efficacy, achievement motivation was the second best predictor of GPA. Robbins et al. defines achievement motivation as "one's motivation to achieve

success; enjoyment of surmounting obstacles and completing tasks undertaken; the drive to strive for success and excellence” (p. 267). A surprising find was the low relationship between general self-concept, which is the belief that a person can influence her actions and environmental outcomes and college outcomes.

Perhaps one of the most exciting findings from the meta-analysis is that academic goals, institutional support, social support, social involvement, academic self-efficacy, and academic-related skills contribute incrementally in predicting retention above and beyond using SES, high school GPA, and standardized test scores (Robbins, et al., 2004). Additionally, these same psychological and study skills factor variables were found to correlate positively with retention, but not as strongly with college GPA (Robbins, et al., 2004).

Self-determination theory. Another motivational learning theory that can be applied to students is self-determination theory (SDT). SDT is a theory of human motivation and personality. Deci and Ryan (2008) state that SDT explains a person’s motivation based on reasons that energize behavior. There are three main categories of SDT: intrinsic motivation, extrinsic motivation, and amotivation. SDT is based on the premise that there are three basic psychological needs that determine human behavior regardless of culture or contextual situations (Deci & Ryan, 2000). These three psychological needs are competence, relatedness, and autonomy (Deci & Ryan, 2000).

Self-determination theory: motivation. Intrinsic motivation is considered to be the most internal and healthy form of motivation. Intrinsic motivation comes from within a person and has been linked to several positive academic outcomes, such as higher

grades, greater rates of retention and persistence, and better enjoyment of learning (de Bilde, Vansteenkiste, & Lens, 2011). Students who are intrinsically motivated are spontaneously interested and engaged in their learning and become fully immersed in the learning activity at hand (de Bilde, Vansteenkiste, & Lens, 2011). When a student chooses to do a learning activity of their own volition it is often due to intrinsic motivation (de Bilde, Vansteenkiste, & Lens, 2011).

Extrinsic motivation, on the other hand, focuses on engaging in behavior for an external outcome (Ryan & Deci, 2000). There are four categories of extrinsic motivation: integration, identification, introjections, and external forms of extrinsic motivation (Deci & Ryan, 2000). These four forms of extrinsic motivation vary according to the amount of internalization, either self-determined or non-self-determined.

Integration refers to engaging in behavior because it is imbedded in one's value system. For example, a student may perform well at school because she values the praise that she receives from her instructors. Identification is characterized by participating in behavior because it is personally important and for an external reward. In the case of identification, a student may perform well because she values earning good grades. Introjection is when a person engages in behavior for social approval. A student exhibiting introjection will strive to do well in school to earn the praise of her parents. Lastly, external motivation is when a person behaves in a way to satisfy an external demand (Garn, Mathews, & Jolly, 2010). One instance external motivated is when a student turns in her homework assignment to avoid punishment or to earn points. To summarize, extrinsic motivation refers to behaviors that are carried out because they are

necessary to achieve an outcome that is separate from the activity at hand (Garn, Mathews, & Jolly, 2010).

Amotivation is considered to be the most external and least self-determined form of motivation (Garn, Mathews, & Jolly, 2010). Amotivation emphasizes lack of value for a particular behavior that results in either no action or passive behavior (Ryan & Deci, 2002). This type of motivation often results from feelings or perceptions of helplessness or lack of self-efficacy. People who have amotivation often do not see the value in an activity and feel they do not have the competency to complete it (Ryan & Deci, 2000). Students who exhibit amotivation simply do not follow through on course assignments, going to class, or even the most rudimentary tasks involved in being college students.

Self-determination theory: three basic human psychological needs. The three basic human psychological needs for SDT are autonomy, competence, and relatedness. Autonomy is the desire to self-regulate behavior. Competence is the desire to interact effectively with the surrounding environment. Relatedness is the desire to feel a reciprocal connection with others (Deci & Ryan, 2008). Theorists of SDT claim that developing self-determined forms of motivation will enable the needs for autonomy, competence, and relatedness to be met and supported (Garn, Mathews, & Jolly, 2010).

Self-determination theory summary. Throughout the literature on SDT, authors have argued about importance of intrinsic motivation versus extrinsic motivation. Additionally, researchers have identified the three psychological needs that must be met for optimal performance. Viewing SDT through the lens of adult education provides educators and administrators an opportunity to ensure that a student understands where

her motivation stems from as well as providing space for a student to feel autonomous, competent, and connected with others.

Although there is not a specific link between first-generation college students and self-determination, one can presume that the affects of both intrinsic and extrinsic motivation are at the very least the same as the effects on non-first-generation students.

Figure 4 below provides a visual representation of the key components of SDT.

Figure 4

The Self-Determination Continuum

One area of motivational research that is related to SDT is goal setting. While SDT provides a context through which to understand student motivation, goal setting literature examines the effects of goal setting on students and the importance of setting both long and short-term goals. Goal setting is extremely important for first-generation students because goals lay the foundation for what a person is hoping to achieve.

Goal-setting. According to goal setting theory, individuals who set goals are more likely to perform at higher levels than individuals who do not set goals (Friedman

& Mandel, 2009). Not only is it important to set goals, but it is imperative that the goals have certain characteristics. For example, a goal needs to be specific. The more specific the goal, the more likely an individual is to know when she has achieved her goal.

According to Friedman and Mandel (2009), students who set specific goals that they are in control of and that are relevant to student life are more likely to be motivated to meet the expectation set forth in the goal. Additionally, goals need to be measureable, relevant, and challenging (Friedman & Mandel, 2009). One benefit of having measureable goals is having the ability to manage the goal. Students should set measureable goals and establish concrete criteria for measuring progress.

Goal-setting: research studies. Harackiewicz, Baron, Tauer, and Elliot (2002) discuss goals as they relate to students as being either performance based or mastery based. When a student is pursuing a performance goal in a learning environment, her purpose is to demonstrate her competence as related to others (Harackiewicz, et al., 2002). A mastery goal, on the other hand, is when a student is driven by the desire to demonstrate competence by acquiring new knowledge and skills (Harackiewicz, et al., 2002). A research study conducted in 2000 found that mastery goals were unrelated to academic performance, but there was a correlation between mastery goals and interest in the class (Harackiewicz, Barron, Tauer, Carter & Elliot, 2000). The interest that is developed through master goals can create continued interest in that particular subject and influence grades in that particular class. Harackiewicz et al., (2000) found that performance goals predicted grades and academic GPA for three terms. The findings from this study suggest that both performance and mastery goals can promote important

educational outcomes. A student who endorses both mastery and performance goals will be the most likely to be successful in college (Harackiewicz, et al., 2000).

Harackiewicz et al., (2002) followed up with the participants in their original study from 2000. They obtained additional background information and then followed these students through graduation. The initial component of the study took place over the course of a semester in an introductory psychology course. The researchers measured students' achievement goals for the class two to three weeks into the semester and their interest in psychology and enjoyment of the lectures at the end of the semester. For the follow up study, the researchers obtained complete academic records to examine subsequent course choice, grades, and choice of major (Harackiewicz, et al., 2002).

In the follow-up study, Harackiewicz et al., (2002) found clear evidence of goal effects in the short term. Students who adopted performance goals attained higher grades in that class, as well as in their coursework for that semester. Additionally, the researchers found that mastery goals appear to play an integral part in motivation by creating initial and continuing interest in the subject (Harackiewicz, et al., 2002). Overall, the findings of this research study illustrated the need for both mastery and performance-approach goals with regards to academic success in the college environment (Harackiewicz, et al., 2002).

In another study focusing on goal setting, Friedman and Mandel (2009) surveyed freshmen students entering a state college in New York during the third week of the semester. The survey included questions to measure freshmen college students' goal setting behaviors. The study included 583 participants, which was roughly 43% of the

freshmen class for that academic year (Friedman & Mandel, 2009). The researchers hypothesized that freshmen who set academic and social goals were more likely to stay in college beyond their first year and achieve higher GPAs than students that did not set goals. Friedman and Mandel utilized 16 items from the Student Motivation Questionnaire. The goal setting questions were factor analyzed to determine the factor structure of the Student Motivation Questionnaire items that addressed goal setting. Additionally, the researchers performed an ANOVA to determine if students with different retention outcomes varied with respect to their responses to the questionnaire (Friedman & Mandel, 2009).

Friedman and Mandel (2009) looked at three factors as they relate to goal setting. The first factor was goal clarity and influence. This factor measured students' perception regarding setting clear and specific goals. The second factor was peer competition. This factor measured how students felt about competing with peers with respect to achieving good grades. The third, and final factor was goal performance feedback. This factor measured the feedback students received from instructors regarding their grades and performance (Friedman & Mandel, 2009). Friedman and Mandel regressed the three goal setting factors on cumulative GPA.

Although the research findings from this study did not fully match the literature and the researchers' hypotheses, Friedman and Mandel (2009) found that academic expectancy motivation significantly predicted cumulative GPA. Comparing academically disqualified students to continuing students, Friedman and Mandel found that continuing students found good grades to be attractive and worth the effort to achieve them. Overall,

this study supported the traditional predictors of academic success for freshmen (i.e., SAT scores and high school GPA), as well as provided evidence that student academic performance expectancies provide an additional prediction of academic performance for first-year students (Friedman & Mandel, 2009).

Goal-setting: future time perspective. Future time perspective (FTP) is a theory closely related to both goal setting and academic success. Students who display a sense of future-orientation have been found to have better grades in school (Zimbardo & Boyd, 1999). Additionally, a student with an extended FTP creates better goal structures and is more motivated for her current studies because she views the current work as instrumental to meeting her long-term goals (de Bilde, Vansteenkiste, & Lens, 2011). Jackson, Fritch, Nagasaka, and Pope (2003) found that a student with a future-orientation displays less procrastination than a student who does not think about the future or set long-term goals.

In a recent research study examining the effects of FTP, de Bilde, Vansteenkiste and Lens (2011) surveyed 275 Flemish students, of which 247 were high school students and 28 were university students. de Bilde, Vansteenkiste, and Lens' findings strongly support the importance of setting both short and long-term goals. When a student is able to see the future consequences of her current actions, she seems to be able to plan and manage study time better and to stay more focused on the task at hand (de Bilde, Vansteenkiste, & Lens, 2011). According to de Bilde, Vansteenkiste and Lens, future-oriented students cognitively process the learning more deeply and are able to focus on the ideas in the text material. One of the greatest benefits of being future-oriented is that

it can lead a student to perceive her current studying as more valuable and meaningful because the student understands the long-term implications (de Bilde, Vansteenkiste, & Lens, 2011).

Psychological well-being. At the center of psychological factors that can affect a student is the construct of well-being. Simply stated, well-being is “an individual’s subjective perception of her or his psychological health or quality of life” (Wang & Castañeda-Sound, 2008, p. 102). Lent (2004) argues that there are two distinct views of well-being: hedonic well-being and eudaimonic well-being.

Hedonic well-being can be best described as feelings of pleasure or happiness. Hedonic well-being also looks at the balance between positive and negative effect in a person’s life. Simply stated, hedonic well-being is how someone may answer the typical question of “how are you?” Hedonic well-being can be physical, or health, related and focuses on how a person’s well-being is at the current moment (Lent, 2004). Literature and research on hedonic well-being suggests that this form of well-being is most closely related to happiness.

The other view of well-being is the eudaimonic view (Ryff, 1989). This view comprises of more than just personal happiness, rather it incorporates a person’s experiences and personal goals. This view looks at well-being from the perspective of psychological growth and how a person is progressing towards her purpose in life. By utilizing the eudaimonic view of well-being, it is possible to see that there are alternative forms, or paths, to well-being (Lent, 2004).

A key author in psychological well-being, Carol Ryff, aligns her definition of well-being with the eudaimonic view. Ryff (1989) argues that it is not necessarily happiness people are striving for, but happiness is rather a result of living a full, goal-centered life. To measure a person's well-being, Ryff developed the Scales of Psychological Well-Being which include 6 scales that can affect a person's psychological well-being. These scales are autonomy, personal growth, self-acceptance, purpose in life, environmental mastery, and positive relations with other others. When creating the Scales of Psychological Well-Being, Ryff drew upon several areas of well-being literature to include views of mental health, clinical and life span development.

Lent (2004) points out how closely the aspects of psychological well-being and SDT are related. The three basic psychological needs of SDT – autonomy, competence, and relatedness – are predictors of well-being. Ryan and Deci (2001) argue that these psychological needs foster well-being, while Ryff (1989) would argue that these constructs are what defines well-being. Both SDT and Ryff's work on psychological well-being encompass aspects of eudaimonic well-being, however, SDT views eudaimonic constructs as predictors of well-being, while Ryff's scales serve as a measure of well-being (Ryan & Deci, 2001, Ryff, 1989).

When working with college students and having them assess their well-being, it is important to distinguish which form of well-being the researcher is assessing. The literature suggests that there are better assessment tools aligned with hedonic well-being than with eudaimonic well-being, however, with eudaimonic well-being, college

professionals are able to assess how a student is feeling about her own college experience and educational goals.

The eudaimonic perspective provides a framework to see how a student can be motivated by things other than happiness. For example, a student may want to earn good grades and this journey may not be easy, but it is satisfying to know that the effort exerted on this task will aid in personal growth and goal realization. Lent (2004) argues that eudaimonic well-being “captures the potential tension between happiness and growth” (p. 486). This tension gives light to the fact that not everything is pleasurable, but that does not mean that it is not worth the effort.

In an effort to create an assessment tool that focuses on both hedonic and eudaimonic well-being, Lent (2004) created an integrated framework of well-being. The framework provides a basic model that promotes well-being under normal circumstances and has an overlaying model that is comprised of coping mechanisms that “restore well-being under adverse life conditions or challenges” (p. 498). This framework for well-being focuses on both psychological recovery and growth while drawing upon the literature concerning goals, values, life task participation and coping methods (Lent, 2004). Beyond the factors that contribute to a person’s well-being, it is necessary to examine the demographic variables that may impact well-being, such as first-generation college student status and gender.

Psychological well-being and first-generation college students. In a study published in 2008, the researchers examined the predictive effects of academic self-efficacy, perceived support from family and friends, and self-esteem on psychological

well-being among first-generation and non-first-generation college students. Wang and Castañeda-Sound (2008) hypothesized that first-generation college students would exhibit lower levels of psychological well-being, academic self-efficacy, and perceived social support than their non-first-generation peers. The researchers also hypothesized that self-esteem, self-efficacy, and perceived social support would have significant impact on psychological well-being (Wang & Castañeda-Sound, 2008).

In this study, the researchers observed that first-generation college students reported lower levels of academic self-efficacy than their non-first-generation peers. Wang and Castañeda-Sound (2008) discovered that self-esteem was the single most important variable impacting a first-generation college student's psychological well-being. First-generation college students who reported higher levels of self-esteem had lower levels of stress, greater life satisfaction, and fewer psychological problems (Wang & Castañeda-Sound, 2008). Wang and Castañeda-Sound (2008) contend that universities providing programs geared towards first-generation college students need to include comprehensive services and address the need for these students to create a sense of community to enhance their psychological well-being.

Psychological well-being – summary. Well-being is an integral part of a student's success and happiness. By examining well-being, researchers can glean which psychological variables account for a student's ability to grow and prosper under academic circumstances while being goal-oriented and working to meet her educational aspirations. As outlined above, well-being is about more than just being happy; it is

having the ability to recognize that the path is not always easy, but the destination is usually worth the challenge and effort.

The Connection between Self-efficacy, Goal Setting, SDT and Psychological Well-Being and College Adjustment and Success

There is a strong connection between psychological factors and a student's adjustment to college and academic performance. In any given study looking at psychological factors, the factors are often grouped together to show the relationship between the variables and the impact that the variables have on each other. In a recent study examining first-year economically, educationally, disadvantaged students in Portugal, the researchers found that academic motivation, self-esteem, perceived stress and perceived academic overload explained 59% of the variance in the student's adjustment to college (Petersen, Louw, & Dumont, 2009). This study is a great example of how important it is to look at not just one of the psychological factors, but rather to look at several at once.

In a different study consisting of 252 undergraduate Portuguese students, the researchers set out to test a version of normative well-being (Lent, Taveria, Sheu & Signley, 2009). While testing Lent's (2004) integrative well-being model, the researchers used the following variables: self-efficacy, goal progress, environmental support, and domain adjustment. The findings suggest that stronger self-efficacy and having access to resources were associated with positive goal progress. The findings from this research study suggest that there could be a positive effect from promoting interventions that enhance self-efficacy, as this appears to be an integral part of college adjustment for

students. Thus, there is a connection between self-efficacy and academic success for students. The authors also suggest that ensuring access to programs intended to provide academic and social support for students is critical in helping college students adjust to the college environment (Lent, et al., 2009).

Some researchers would argue that academic performance is linked to a student's self-regulation, as defined by Zimmerman and Schunk (2008), as involving setting specific goals, organizing tasks, having high levels of self-efficacy and intrinsic interest, and being able to self-reflect. These cognitive skills also influence behavioral patterns such as being a self-starter and using a variety of learning strategies to accomplish learning goals (Zimmerman, 2008).

Kitsantas, Winsler and Huie (2008) examined the link between prior academic performance (math and verbal SAT scores), self-regulation, motivational beliefs and affective components (test anxiety) on academic performance (GPA) at the end of the second year of college. Kitsantas et al. collected data on 243 first-year undergraduate students enrolled at a large, public mid-Atlantic university. Questionnaires were administered to at the end of the first semester in several introductory courses. Furthermore, the researchers gathered the cumulative GPA for the participants at the end of the second semester. Aside from GPA, the study collected information regarding the student's demographics. The study asked questions relating to the student's motivational beliefs, including task value, self-efficacy, test anxiety, and self-regulation, including metacognitive self-regulation and time management (Kitsantas et al., 2008).

After a thorough analysis of the questionnaire data, as well as incoming demographics and cumulative GPA, Kitsantas et al. (2008) found that when predicting second semester GPA (academic performance), time management and self-efficacy contributed significantly. These findings support the basic tenant of providing a student an intervention and working with her to increase her time management skills and self-efficacy. In fact, Kitsantas et al. argue that if a student is able to become more knowledgeable about motivation and self-regulation processes, she will be able to maximize her college career. One way universities are able to impact a student's academic success is to provide better intervention programs focused not only on study skills, but self-regulation skills (Kitsantas et al., 2008).

Psychological factors including goal setting, self-efficacy, self-determination and well-being all play a vital role in the success of first-generation college students. The literature on these topics points to the importance of students being able to set specific and measurable goals as well as the significance of believing in their ability to succeed in the academic arena. These psychological factors provide tangible dimensions within students to help them foster success and reach their educational goals. Figure 5 below summarizes the key components in the literature on psychological factors and academic success.

Figure 5

Summary of Psychological Factors **Academic Probation**

According to Tinto (1993) more students leave college without completing their degree than students that persist to degree attainment. A significant number of students who leave their university, either voluntarily or involuntarily, without earning a degree had been placed on academic probation at least once during their tenure at their college (Coleman & Freedman, 1996). In fact, as many as a quarter of the undergraduate students at any given college have been placed on academic probation at least once during their college years (Garnett, 1990). With such significant numbers of students on academic probation it is important to review the literature regarding the characteristics of students on academic probation, predictors of success, and interventions for probationary students, including reviewing research studies that examine students on academic probation.

Academic probation – definition. Typically a student will be placed on academic probation the term, or semester, following her cumulative grade point average (GPA) falling below a 2.0. Although every school has different ways of addressing, defining, and handling probationary students, most universities publish the academic standing policy in the school catalog (Kelley, 1996). Additionally, when students are notified that they are on academic probation, there is typically an explanation of the policy as well as further instructions about how to proceed while on academic probation for the students (Kelley, 1996).

Kelley (1996) asserts that there are three possible reasons for universities to place a student on academic probation. The first reason is that probation is a punitive measure used for students who are performing at substandard levels. The second reason is to inform students of the gravity of not performing satisfactorily. The last reason that Kelley suggests is that universities use academic standing policies as a way to identify students who are at-risk for leaving and looking for ways to improve their academic studies.

Academic probation – policies. When looking at policies regarding students on academic probation, as well as the students themselves, it is imperative to think of academic probation holistically. Academic probation does not just start when a student's GPA falls below a 2.0 or a satisfactory level, but rather it begins with the student.

Kelley (1996) describes three distinct phases for academic probation. The first phase is the precursors which are often seen in students who end up on academic probation. For example, the student comes to the university with a certain level of academic proficiency, predetermined notions of college, and certain attitudes regarding

college, such as inaccurate ideas of how much time needs to be spent on studies and how much reading will be necessary for each course. These precursors are the beginning of academic probation. The second phase is the immediate reaction to finding out one is on probation (Kelley, 1996). Each student will handle this in his or her own way. There are students who will be proactive and take the necessary steps to improve their academic standing and then there are students that will be in denial regarding their academic standing. The third phase is the long-term consequences of being on academic probation (Kelley, 1996). For example, the student who does not accept personal responsibility may not change her behaviors and thus end up being academically dismissed from her institution.

Characteristics of probationary students. The body of literature regarding students on academic probation or in academic jeopardy, suggests that there are common characteristics that define these students. According to Issak, Graves, and Mayers (2006) the following are characteristics of students in academic jeopardy: lower social skills with weaker social networks than students in good standing, more likely to work (Coleman & Freedman, 1996, Trombley, 2000), more financial difficulties, high school GPA is lower than good standing students (Trombley, 2000), lack of institutional commitment, (Heisserer & Parette, 2002), and family obligations (Trombley, 2000).

Common characteristics between probationary and first-generation college students. It is important to note that many of the characteristics found to be associated with students on academic probation are the same characteristics used to describe first-

generation college students. These characteristics include hours worked per term, less rigorous academic preparation, family obligations, and having to commute to campus. While not all students on academic probation are first-generation students, it is important to note that first-generation college student status could also be another characteristic associated with students on academic probation.

Probationary students – predictors of academic success. With all of the discussion focusing on characteristics of students in academic jeopardy, it is important to note that there are several predictors of success in college students. Knowing these characteristics, in contrast with the characteristics of struggling, or academically at-risk, students, allows student support services personnel to develop programs that can help students and be proactive rather than reactive. The extensive body of literature regarding successful college students has outlined many predictors of success. However, for this literature review, the predictors of success listed below were found through an extensive search of academic probation literature. Okun, Benin and Brandt-Williams (1996) and Trombley (2000) argue that factors that can predict student success in the university environment include: the number of courses taken, course grade, class rank in senior year, total high school GPA, SAT score, taking more credit hours of classwork, encouragement by others, intent to persist, and connection with adviser.

Academic probation interventions. Also, while many institutions provide interventions for probationary students, they often do so without fully understanding the population they are seeking to help (Trombley, 2000). In addition to the list of characteristics of students on academic probation, the literature suggests that

academically struggling students reported difficulties with procrastination, time management, motivation, stress management, personal problems related to family obligations and financial concerns, difficult classes, attendance issues, and instructor issues (Thombs, 1995, Coleman & Freedman, 1996, Austin, Cherney, Crower & Hill, 1997, Trombley, 2000, Isaak et al., 2006).

Similarly, several seminal research studies (Austin et al., 1997; Coleman & Freedman, 1996; Isaak et al., 2006; Lipner & Ender, 1990, Thombs, 1995; Trombley, 2000) about students on academic probation outline the theme of intrusive interactions and their success. Intrusive interactions are defined as opportunities that bring together students on academic probation with professional or academic advisers to discuss the academic standing policy, as well as a multitude of other topics can be considered intrusive interactions for students on academic probation (Isaak, et al., 2006). These interactions could be either individual or workshop style and can focus on improving study skills, goal setting, communication skills, and other factors that facilitate student success (Austin et al., 1997, Isaak et al., 2006). Coleman and Freedman (1996) define intrusive interventions as ongoing meetings between students on academic probation and student development professionals.

Throughout the literature there are several discussions regarding the success of forced, or involuntary, interactions with academic professionals for students on academic probation. Kelley (1996) claims that if the student is not taking responsibility for being in academic jeopardy, then a forced intervention will not work because the student is in the mindset that they not only do not need the information provided, but that the intervention

is another hurdle the university is making her jump through. Typically, the student that feels that she does not need the intervention and is not receptive to the information being provided. On the other hand, Austin et al., (1997) found that if the university did not impose some sort of registration hold, or other punitive measure, then a student on academic probation was less likely to participate in any intervention.

There are many different models for intrusive interventions for students on academic probation, but it appears that holistic interventions can address many of the needs of these students. Holistic interventions should include information regarding study skills, time management, procrastination, stress management, goal setting, money management, social competence, and self-monitoring of academic and emotional problems (Coleman & Freedman, 1996, Isaak et al., 2006). Group interventions, as well as college success courses have been found to be successful (Coleman & Freedman, 1996). Lastly, the majority of the research suggests that the more intrusive an intervention, the more likely the intervention will result in a higher GPA the term following academic probation, and the higher likelihood of returning students to good standing (Isaak et al., 2006).

Probationary students – research study #1. One of the most intrusive programs in the literature reviewed occurs at a private, selective institution in New York. Students who went on academic probation at this institution were required to participate in the College Restoration Program (CRP), which means that students were removed from their academic programs, participated in an interview and diagnostic testing, and had a conference with an academic adviser to create an individualized plan for the student to

get back on track academically. Each student was steered into one of three tracks—skills, personal development, or career exploration based on the interview and diagnostic testing. The skills track includes skill development in math, reading and writing. The personal development track addresses issues concerning self-esteem, establishing independence, and managing procrastination. Lastly, the career exploration track is designed for students who need to explore academic and career options. Each student is able to take two regular courses in addition to the course that was assigned by her adviser (Isaak et al., 2006).

There were 150 participants in the CRP program in the fall quarters of 1996 through 1998. For the purpose of this research, the control group consisted of 153 regularly matriculated students who were enrolled in an introductory psychology course. Both groups had completed approximately two years of college at the time of data collection. The CRP group, as well as the control group completed a thirty item checklist of potential academic, emotional, and motivational problems (Isaak et al., 2006).

The findings from this research study showed that all students identified some of the items on the checklist as issues for themselves, especially items related to procrastination and time management. However, the CRP group endorsed motivation, procrastination and emotional problems as their top difficulties. Additionally, 65% of the CRP group reported that staying motivated was a major difficulty. Research findings affirm the importance of time management and personal development in the CRP curriculum (Isaak et al., 2006).

Probationary students – research study #2. Another important study evaluating students on academic probation focused on the difference between students in good standing and students on academic probation at a large community college in southwest Los Angeles (Trombley, 2000). Students on academic probation received a letter describing their academic status and a list of group counseling dates and times. Students who attended the group counseling sessions were instructed on how to calculate their GPA, strategies for raising their GPA, and ways to improve their study habits. Additionally, students were given a brochure that explained campus resources and were directed to complete a questionnaire that asked about their motivation, interest, concentration, determination, class difficulty and instructor difficulty. The control group, consisting of 138 students in good standing, was also asked to complete the same questionnaire (Trombley, 2000).

The researchers found that the probationary students worked more hours, had more children, and reported additional issues that distracted them from school as compared to students in good standing. The most significant finding of this study is that 73% of the probationary students did not report their own GPA from the prior semester, as compared to 48% of the students in the control group. This difference is significant (Trombley, 2000). Perhaps the significance of this finding is that it illustrates that poor performing students are often unable to assess their own strengths and weaknesses as compared to successful students (Austin et al., 1996). Additionally, this finding points to the problem of struggling students not being aware of how they were doing and not knowing their GPA after the semester or term commenced. The researchers did report

that one limitation of the study is that the two samples were obtained differently with the probation sample being taken from the group counseling sessions. This could cause a bias because the students that attend the counseling sessions are most likely the motivated, proactive students (Trombley, 2000).

Probationary students – research study #3. In a different study looking at the effects of structured group interventions for students on academic probation, Coleman and Freedman (1996) found that students who participated in a ten- session group intervention had higher rates of exit from probation than students that did not participate. Additionally, the students who participated earned significantly higher GPAs than the students who did not participate. This study invited students on academic probation to complete a ten-session, three-phase treatment. The three phases consisted of goal setting, interpersonal problem solving, developing positive peer relations, and seeking help. This intervention was voluntary and successful completion of the program resulted in the student earning one credit hour.

Overall, the study confirmed what the researchers had hypothesized which was that structured, lengthy and voluntary interventions are appropriate and effective for academically at-risk students. There were several limitations of this study. The first limitation was that the students were mostly European American undergraduates, which means that the study findings may not be applicable to all student populations. Another limitation of this student is that random assignments for the control and experiment group were not possible (Coleman & Freedman, 2006).

Probationary students – research study #4. Another study that examined the effects of a voluntary, intrusive advising intervention found that students who attended both a group advising session and a conference with their academic adviser increased the students GPA by .578 on a 4.0 scale (Austin et al., 1996). In comparison, students that only attended the group advising session raised their GPA .47 on a 4.0 scale (Austin et al., 1996). Overall, this study illustrated the need for early contact with professional staff and intrusive interventions for students on academic probation. Additionally, this study brings to light the question of whether or not a student will choose a voluntary intervention, or whether there needs to be some sort of registration hold associated with the choice. In this study, students were able to choose among different options, but failure to do anything would result in a registration hold barring the student from registering for the next semester (Austin et al., 1996)

Table 1 below organizes the research studies that the researcher used when gathering data and information regarding students on academic probation. To summarize, it appears that an intervention is necessary to not only explain the academic standing policy to students, but to provide the student an opportunity to explore why they are on probation, as well as provide resources. It appears that voluntary interventions have the most impact, but even “forced” interventions make a significant difference on GPA and academic standing.

Table 1

Academic Probation Studies

Title	Author(s)	Date	Method	Discussion
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The College Restoration Program at Rochester Institute of Technology	Isaak, Graves, and Mayers	2006	CRP group – 150 participants	65% of CRP group reported staying motivated was a difficulty
			Control group – 153 regularly matriculated undergraduates	CRP group identified more items as problems than control group
			30 item checklist of potential academic, motivational and emotional problems	CRP tended to endorse stress related items from checklist
			CRP students were pulled from regular academic programs	75% of CRP group immediately returned to degree programs following intervention
			CRP students took 2 regular courses and the CRP course focusing on either skills, personal development, or career exploration	
Evaluating Students on Probation and Determining Intervention Strategies: A Comparison of Probation and Good Standing Students	Trombley	2000	Students on probation received a letter describing status and a list of times for probation group counseling sessions	73% of probation students did not report their own GPA from prior semester, compared to 48% in good standing – statistically significant
			Students who attended session were instructed on GPA calculation, strategies for increasing GPA and various ways to improve study skills	HS GPA was significantly lower for probationary students
			Students were given a brochure of campus resources	Probationary students reported having more children and working more – significantly significant
			Students filled out a questionnaire	Limitations: issue of sampling – two samples were obtained
			138 students in good	

			standing filled out the same questionnaire	differently
Effects of a Structured Group Intervention on the Achievement of Academically At-Risk Undergraduates	Coleman, Freedman	1996	70 students on academic probation participated in a three phase, ten week group intervention Students were exposed to goal setting, strategies for meeting goals, interpersonal problem solving, assertiveness, developing positive peer interactions and seeking help	Students who completed the intervention demonstrated higher rates of removal from academic probation, as compared to student that did not complete the intervention Treatment groups achieved significantly higher GPA Structured, lengthy, voluntary interventions offered in group format provide to be appropriate for academically at-risk undergrads Limitations: mostly European American undergraduates, purely random sampling was not possible, examined relatively short-term effects
The Forum: Intrusive Group Advising for the Probationary	Austin, Cherney, Crownier, Hill	1996	500 students on academic probation received a letter stating they had the option to attend a Forum session, an advising appointment, or both	Students who attended a Forum and had a conference with their adviser increased their GPA .578

Student			The Forum consisted of information about effective learners and campus resources	Students who only attended a Forum increased their GPA by .47
			A six item questionnaire was sent to participants – 27% returned	Students who had individual probation conferences had a .4945 increase in their GPA
			First offering of the Forum had 189 students; Second offering of the Forum had 492 students (1/3 of probationary population)	Those who had early contact with professional staff experienced the most GPA improvement
Problem Behavior and Academic Achievement Among First-Semester College Freshmen	Thombs	1995	Participants: during new student orientation, the freshmen class of a public college was administered a 55 item questionnaire	Probation group had lower HS GPA
			Questionnaire consisted of questions from the Goal Instability Scale (GIS), 4 items from the Multidimensional Self-Esteem Inventory, an instrument used to assess common college student problems, and career certainty	Probation group was more likely to report problems with study skills and time management
				56.8% of freshmen reported they had poor study habits
				54% reported time management problems
			Usable sample of 576 students	
Impact of a Study Skills Course on Probationary	Lipsky, Ender	1990	State university	The experimental group in each year in earned significantly higher GPA than the
			Intervention: “Strategies for Achieving Academic	

Students' Academic Performance	Success'' – a 1 credit course focusing on goal setting, time management and study skills	control group
	Subjects: second-semester freshmen with below a 1.5 GPA; 41 in 1995 and 54 in 1986	The course had a positive impact on retention and academic performance of participating probationary students

As this table illustrates, the literature on academic probation is quite sparse.

Although all colleges and universities have some sort of academic standing policy, the literature does not provide us with enough research based studies regarding students on academic probation.

Conclusion

The decades of research on student success provides literature and theory on characteristics of successful students, as well as struggling students. The literature points to various methods and practices of working with students to help them reach their educational goals. Within the college success literature there is information about working with unique student populations. One growing population on college campuses are first-generation college students. Some of the characteristics for this unique and growing population on college campuses are that they are more likely to work, take fewer credit hours, be less academically prepared than their non-first-generation peers, and have greater problems understanding the college terminology, professor expectations, policies and procedures.

The literature points to a growing body of research that combines research on psychological factors and student success. Psychological factors including self-efficacy, goal orientation and motivation have been proven by research studies to affect a student's adjustment to college life (Elias, Noordin & Mahyuddin, 2010). Additionally, the construct of well-being seeks to explain how a student can use the tension between the discomfort of working on challenging academic tasks and using this discomfort as a way to stay motivated and grow both as an individual and as a student. Figure 6 below summarizes the main points of this literature review.

Figure 6

Summary of Characteristics and Factors Associated with College Success

One of the largest gaps in current research concerns the relationship students on academic probation and first-generation college students. The gap is evident in the lack of research studies focused primarily on first-generation college students that are on academic probation. The literature does provide a starting point to recognize how certain characteristics help and hinder a student's success, however it does not specifically point to predictors of success for first-generation students that are in academic jeopardy. Throughout this literature review it is evident that successful students demonstrate high levels of self-efficacy, are able to set specific and measureable goals, and are able to adjust to college life both academically and socially.

In sum, the literature examined highlights first-generation college student academic integration, personal adjustment, family and social adjustment, psychological factors to include self-efficacy, goal-setting, SDT and well-being, and academic probation. The next chapter discusses the methodologies used in this study to answer the primary research question: *what factors promote or inhibit first-generation college students to return to good standing after being on academic warning?* This study hopes to provide universities a better understanding of how the four factors measured in this study – academic integration, personal adjustment, family and social adjustment, and psychological factors – impact first-generation students' academic standing. Additionally, it seeks to identify programming recommendations for first-generation college students that are on academic warning.

Chapter 3 – Methodologies

Introduction

Due to the high numbers of students that end up on academic probation at least once during their tenure in college, it is important to have a better understanding of how to help students get back on track to reach their educational goals after being in academic distress. The purpose of this quantitative study is to explore factors that relate to the academic success of first-generation college students at a large, public, university in the Pacific Northwest. Specifically, this study seeks to better understand how issues of academic integration, personal adjustment, family and social adjustment, motivational theories and psychological factors may relate to academic achievement for first-generation students.

In this study, the researcher examined two distinct groups of students: students on academic probation (AP) and students in good academic standing (GS). For this study, students that are on academic probation failed to raise their cumulative GPA above a 2.0 the term following academic warning, while the students in academic good standing raised their cumulative GPA above a 2.0 the term following academic warning.

In order to assess the two groups, the researcher developed the Online Academic Warning Self-Assessment (OAWSA, Appendix A), to be taken by students on academic warning. In this particular instance, academic warning means that a student's cumulative GPA fell below 2.0. The students were notified of their academic standing and sent the link to complete the OAWSA. The OAWSA was designed to answer the research question described below.

Research Question

The primary research question guiding this study is: *what factors promote or inhibit first-generation college students to return to good standing after being on academic warning?* Based on the literature, this inquiry will also investigate several sub-questions:

1. Is there a statistically significant difference in academic integration between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
2. Is there a statistically significant difference in personal adjustment between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
3. Is there a statistically significant difference in family and social adjustment between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
4. Is there a statistically significant difference in regards to psychological factors between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?

Participants

This study included a sampling of the students that were placed on academic warning at a large, public university in the Pacific Northwest. At this particular university, students that are on academic warning are notified of their standing and the resulting registration hold through an email. This notification explains the policy, the registration hold and the mandatory intervention that is necessary to remove the registration hold. This notification also directs the student to the advising office's website where the student can find out more information regarding the mandatory intervention.

This data collection focused on students that voluntarily filled out the OAWSA as part of the intervention for students on academic warning. The participants were instructed to complete the OAWSA from the advising office's website. The OAWSA was available online from March 2011 through September 2011. The participants included in this study were first-generation college students that went on academic warning following winter 2011, spring 2011, or summer 2011 term and completed the OAWSA. This study excluded all non-first-generation college students, as well as students that left parts of the OAWSA incomplete, or did not include identifying information.

All data were collected from students at one, large, public, university in the Pacific Northwest from students that went on academic warning after winter 2011, spring 2011, or summer 2011. Approximately 1500 students went on academic warning during this time period. Due to the fact that the OAWSA was only strongly encouraged, and not required as part of the institutional intervention, only 312 students completed the OAWSA. Of the 312 students that completed the OAWSA, only 301 fully completed the

survey. After excluding all non-first-generation college students and incomplete surveys, there were 114 participants in this study.

Participant recruitment and remuneration. The data collection included all students that filled out the OAWSA through the website Campuslabs between March and September 2011 that were not excluded. Participants were excluded if they did not provide identifying information, or if they did not complete the survey. The participants filled out the OAWSA because they were instructed to on the advising office's website. Although the OAWSA was voluntary, participants were asked to fill out the OAWSA to provide important data to the advising office in order to provide better programs to help students. Campuslabs is a company that contracts with colleges and universities to provide online assessment tools. Campuslabs provides a comprehensive approach to assessment through online tools and data collection services. The OAWSA was administered through Campuslabs.

The OAWSA was collected through the Advising and Career Services department (ACS). ACS is a department within student affairs at a large, public university in the Pacific Northwest. ACS is charged with providing the intervention for students on academic warning from the governing body of the faculty senate. In addition to providing the intervention for students on academic warning, ACS provides advising for all undecided students, as well as serves as the central advising office to provide training and leadership for other professional advisers on campus. ACS also offers career counseling, to include workshops on the job search process, resume and cover letters, interviewing, as well as MBTI and the Strong Interests Inventory career assessments.

After the OAWSA was taken offline, the researcher reviewed each of the participants to determine eligibility for this study. After excluding all participants that did not meet the criteria for participating in this study, the researcher identified recorded the each student's academic standing the term immediately following academic warning through the Banner Student Information System. Additionally, the researcher identified gender, ethnicity, and class standing through Banner Information System.

Confidentiality and anonymity. The initial data collection was confidential but not anonymous. Participants were asked to provide their student identification numbers in order for the researcher to verify class standing, academic standing, first-generation college student status, ethnicity, and gender through Banner Student Information System. However, once all needed information was found and identified through Banner Student Information System, the researcher stripped all identifying information of the participants.

Obtaining participant consent. Students that completed the Academic Intervention Self-Assessment were notified upon starting the online assessment that their responses were to be gathered and used to provide a basis for academic programming. The self-assessment was originally designed to provide important programming information for ACS.

Study Duration

This study analyzed data collected from Campuslabs.com from March 2011 to September 2011. Additional information including academic standing and class standing was compiled from the end of spring term 2011 through the end of fall term 2011.

Demographic Information

The initial administration of the OAWSA to the participants contained questions at the beginning of the survey for participants to answer regarding name, student identification number, and first-generation college student status. Also, several pieces of demographic data were collected by the researcher at the university where the study took place. The data collected include:

- The academic standing of each participant the term immediately following being placed on academic warning.
- Gender
- Ethnicity
- Class Standing

Electronic survey and data collection program

A web-based assessment and data collection company called Campuslabs was utilized to collect the quantitative data for this study. Campuslabs contracts with various colleges and university and works with college personnel to create assessment tools. Campuslabs is available to educational institutions for purchase and is the main data collection program used at the university participating in this study. Campuslabs worked closely with the researcher to determine the type of assessment tool necessary and the appropriate delivery of the tool. For the sake of this study, there was a link to the OAWSA through Campuslabs on the ACS website. The researcher had access to the entire data set including reports and individual self-assessments.

Study Approval Process

The data collection process for this study was deemed exempt from Human Subjects Research Review Committee by the Institutional Review Board (IRB) at Portland State University (PSU) because this study analyzed existing data that had been collected for information purposes for the ACS department.

Researcher's Role in this Study

The researcher's professional role in ACS made it possible for her to obtain access to the participant population needed for this study. The researcher is employed as an academic professional in ACS. As part of her professional responsibilities she coordinates the services for probationary students, which includes students on academic warning.

Instrumentation: Online Academic Warning Self-Assessment (OAWSA)

The OAWSA is a four part online self-assessment. The first part asks the participant for identifying information, such as name, student identification number, adviser, campus involvement, email address and whether or not the participant is a first-generation college student. The second part of the OAWSA asks the question "in reviewing your academic performance, to what degree have these obstacles negatively impacted your grades?" Participants provide answers to this question through the lens of four main categories: academic, major/career, personal/other and family/social adjustment. Each category asks between six and eleven questions using a Likert scale of 1 to 5, with 1 being "never" and 5 being "always." This section concludes with asking participants how many hours they work per week. The third section of the online

assessment provides participants with an opportunity to expand on certain items, such as interpersonal violence and family situation. This section also includes a list of the resources available and asks participants which resources they have used or if they have not used any resources. The fourth, and final, section of the online assessment asks eighteen questions selected from the Scales of Psychological Well-Being.

The questions related to academic and major/career are intended to examine the student's academic adjustment while in college. The literature suggests that first-generation college students report more problems with time management and managing professor expectations than non-first-generation college students (Collier & Morgan, 2008). The intent in utilizing academic adjustment as a factor in this study is to provide programming aimed at increasing first-generation students' understanding of the academic skills necessary to be successful in college.

The questions under the personal/other section are questions related to a student's financial circumstances and overall health. Financial difficulty is a common concern for college students and is often associated with adverse academic outcomes, as well as with the mental and physical toll it can take on a student (Northern, O'Brien & Goetz, 2010). While it is often difficult for colleges and universities to assist students financially, it may be necessary to provide support services for students struggling to "make ends meet."

The questions under the family/social adjustment section were designed to determine how these issues may impact a student's academic performance. The questions survey the student regarding relationship, roommate, family, and adjustment issues. Pascarella et al., (2004) claim that first-generation college students tend to have

significantly more positive benefit from student-student interactions than their non-first-generation peers, however first-generation college students are often less likely to be involved in extracurricular activities. The intent of these questions on the OAWSA was to determine if relationship, roommate, family or adjustment issues have an effect on academic standing.

The Scales of Psychological Well-Being (1989) was designed to provide an assessment tool that was in alignment with existing literature on positive psychological well-being (Ryff, 1989). Ryff (1989) found that many of the assessment tools designed to test good psychological health were not grounded in theory, thus not accompanied by credible assessment tools. In designing the Scales of Psychological Well-Being, Ryff drew upon the theories that constitute the core dimensions of psychological well-being and in turn operationalized these core dimensions.

The two subscales from the Scales of Psychological Well-Being that were used for the purpose of this study were purpose in life and personal growth. Ryff (1989) defines purpose in life as having the feeling that one has purpose and meaning in one's life. People with purpose in life also have a sense of directedness and intentionality. One who functions highly in this area will have goals and directions as well as a sense of purpose. A low scorer lacks a sense of purpose in life, has few goals, and lacks direction. The second subscale used on the OAWSA was personal growth. Ryff defines personal growth as the "need to actualize oneself and realize one's potentialities" (p. 1071). One who functions highly in this area is open to new experiences. A low scorer in this area lacks a sense of improvement and has a sense of personal stagnation (Ryff, 1989).

Of the two scales used in this study, the internal consistency coefficients for the scale of purpose in life were .90 and .87 for personal growth (Ryff, 1989). In a six-week period with a subsample of respondents (n=117), the test-retest reliability coefficients for the 20-item scales were .82 for purpose in life and .81 for personal growth (Ryff, 1989). According to Ryff, correlations with prior measure of positive psychological functioning are all positive and significant. Approximately 48 studies have used the Scales of Psychological Well-Being.

Each of the 18 questions from the Scales of Psychological Well-Being falls under one of the following categories: goal setting, self-efficacy, or self-determination. The questions have a 6-point Likert scale of 1 to 6 ranging from strongly agree (1) to strongly disagree (6). For negatively scored questions, the scale is reversed with 1 being strongly agree and 6 being strongly disagree.

There is strong evidence to support a connection between psychological well being and academic success. As reviewed in Chapter 2, the literature on goal setting, self-efficacy, SDT and well-being all show that these factors have an impact on a student's ability to be successful in the college environment. The decision to use the Scales of Psychological Well-Being was made in order to utilize a standardized and validated questionnaire that could provide insight into the psychological well-being of the participants. The subsections chosen from the Scales of Psychological Well-Being feel most closely related to the psychological factors as outlined below.

According to goal setting theory, individuals who set goals are more likely to perform at higher levels than individuals that do not set goals (Friedman & Mandel,

2009). Harackiewicz et al., (2002) found clear evidence of goal effects in the short term for students, including attaining higher grades. Through the literature there is a clear link between goal setting and academic success. The questions from the Scales of Psychological Well-Being related to goal setting are intended to shed light on a whether a participant sets goals for herself or not, and whether or not she sees “the big picture” related to goals and her future plan.

Goal Setting:

- I don't have a good sense of what it is I'm trying to accomplish.
- I used to set goals for myself, but that now seems like a waste of time.
- I enjoy making plans for the future and working to make them a reality.
- I am an active person in carrying out the plans I set for myself.
- Some people wonder aimlessly through life, I am not one of them.

Self-efficacy, one facet of motivational theory, can be described as a person's beliefs about her capabilities to perform a specific task and the idea that those beliefs will influence her actual ability to perform the task (Bandura, 1994). As it relates to college students, self-efficacy can affect students' educational aspirations, how involved they are in campus activities, and their academic accomplishments (Bandura, 1994). In a recent study examining first-generation college students and non-first-generation college students' self-efficacy, the researchers found that academic success was a function of self-efficacy for all participants (Vuoung, Brown-Welty & Tracz, 2010). The questions from the Scales of Psychological Well-Being related to self-efficacy are intended to

determine if there is indeed a link between how a student feels about herself and her abilities with academic success.

Self-efficacy:

- My daily activities often seem trivial and unimportant to me.
- When I think about it, I haven't really improved much as a person over the years.
- I have the sense that I have developed a lot as a person over time.
- I do not enjoy being in new situations that require me to change my old familiar way of doing things.
- I gave up trying to make big improvements or changes in my life a long time ago.
- I sometimes feel as if I've done all there is to do in life.

Self-Determination Theory (SDT) is a theory of human motivation and personality. Deci and Ryan (2008) state that SDT explains a person's motivation based on reasons that energize behavior. The questions referenced below are related to SDT in that they directly ask the participant how she feels about life, learning, and growth. These questions also indirectly ask the participant about her intrinsic motivation, which the literature states is the most internal and healthy form of motivation.

Self-determination (personal growth):

- I am not interested in activities that will expand my horizons.
- I live one day at a time and don't really think about the future.
- I don't want to try new ways of doing things—my life is fine the way it is.

- I think it is important to have new experiences that challenge how you think about yourself and the world.
- I have the sense that I have developed a lot as a person over time.
- For me, life has been a continuous process of learning, changing, and growth.
- Some people wander aimlessly through life, but I am not one of them.
- There is truth to the saying you can't teach an old dog new tricks.

Table 2 lists each question on the OAWSA and the corresponding factor for the purposes of this study.

Table 2

OAWSA Questions

Question	Factor
In reviewing your academic performance, to what degree have these obstacles negatively impacted your grades?	
Ineffective study skills	Academic Integration
Undeveloped self (time) management skills	Academic Integration
Unprepared for exams	Academic Integration
What worked in high school doesn't work anymore	Academic Integration
Difficulty concentrating/daydreaming	Academic Integration
Difficult classes/not prepared for course level	Academic Integration
Conflict with professor	Academic Integration
Unable to understand course content or find relevance in course material	Academic Integration
Registered for too many courses	Academic Integration
Did not attend/skipped classes	Academic Integration
Uncertain about current major	Academic Integration
Possible learning disability	Academic Integration
Changed major one or more times	Personal Adjustment
No clear career goals	Personal Adjustment
Not sure why I'm in school	Personal Adjustment
PSU may not be the place for me	Personal Adjustment
Financial difficulties	Personal Adjustment
Health problems	Personal Adjustment
Use or abuse of alcohol or other substance(s)	Personal Adjustment
Difficulty sleeping at night	Personal Adjustment
Working too much	Personal Adjustment

Excessive time spent online (Facebook, YouTube, Gaming, etc.)	Family and Social Adjustment
Over-involved with extra-curricular activities	Family and Social Adjustment
Roommate issues	Family and Social Adjustment
Personal relationship issues	Family and Social Adjustment
Family situation	Family and Social Adjustment
Moved away from home/homesick	Family and Social Adjustment
Difficulty adjusting to college life	Family and Social Adjustment
Hard to make friends/loneliness	Family and Social Adjustment
Lack of Motivation	Psychological Factors
Pressure, stress, anxiety or tension	Psychological Factors
I am interested in activities that expand my horizons.	Psychological Factors
I live life one day at a time and don't really think about the future.	Psychological Factors
I don't want to try new ways of doing things – my life is fine the way it is.	Psychological Factors
I tend to focus on the present, because the future nearly always brings me problems.	Psychological Factors
When I think about it, I haven't really improved much as a person over the years	Psychological Factors
I don't have a good sense of what it is I'm trying to accomplish in life.	Psychological Factors
I used to set goals for myself, but that now seems like a waste of time.	Psychological Factors
I do not enjoy being in new situations that require me to change my old familiar ways of doing things.	Psychological Factors
I gave up trying to make big improvements or changes in my life a long time ago.	Psychological Factors
I sometimes feel as if I've done all there is to do in life	Psychological Factors
There is truth to the saying you can't teach an old dog new tricks.	Psychological Factors
I think it is important to have new experiences that challenge how you think about yourself and the world.	Psychological Factors

I have the sense that I have developed a lot as a person over time.	Psychological Factors
I enjoy making plans for the future and working to make them a reality.	Psychological Factors
I am an active person in carrying out the plans I set for myself.	Psychological Factors
For me, life has been a continuous process of learning, changing and growth.	Psychological Factors
Some people wonder aimlessly through life, but I am not one of them.	Psychological Factors

Data Analysis

Quantitative data from the OAWSA were analyzed using SPSS 19 software to conduct both descriptive statistics and inferential statistics. Creswell (2005) defines descriptive statistics as “the general tendencies of the data” as well as “the spread of the scores” (p. 181). Inferential statistics are how the researcher analyzes the data to “draw conclusions on an unknown population” (p. 181). Inferential statistics are also useful in comparing two or more variables (Creswell, 2005).

Initially the researcher utilized classification variables to determine which group to assign to a student. The classification variable for this study is academic standing. The first group, academic good standing, included all first-generation students that raised their cumulative GPA above a 2.0 the term following academic warning. The academic good standing group is referred to as GS. The second group, academic probation (AP), included all first-generation students that were unable to raise their cumulative GPA above a 2.0 and failed to earn a minimum of 2.25 the term following academic warning. After the two groups were determined, the researcher performed the Pearson Chi-Square test.

Next, the researcher performed descriptive statistical analysis using SPSS 19 software. The descriptive statistics used in this study included the mean, standard deviation, and sample size for both groups as they relate to each of the questions on the OAWSA. These descriptive statistics enabled the researcher to examine the spread of scores for each of the questions in the study. These findings are reported in Chapter 4.

After assigning each student to the appropriate group, the researcher sought to answer each research subquestion using inferential statistics. The researcher opted to run parametric tests to compare means, even though Likert scale questions do not have a normal distribution. The researcher ran independent sample *t*-tests for each question on the OAWSA. This test was used to determine whether there was a statistically significant difference between the two groups (AP and GS) in this study using each question on the OAWSA as the independent variable. This level of analysis provided the researcher with statistics for both groups of participants for each question of the OAWSA, as well as a broad picture of the items that were significant within each of the four factors: 1) academic integration, 2) personal adjustment, 3) family and social support, and 4) psychological factors. This was particularly helpful in determining which of the items within the four factors have an impact on success as defined in this study. The results from the independent sample *t*-tests allowed the researcher to identify specific questions where these two groups differed and then analyze these questions into broad categories.

Lastly, the researcher calculated effect size for each question on the OAWSA to determine if the difference between groups is meaningful for each of the questions on the OAWSA. Cohen's (1998) effect size measure, referred to as Cohen's *d*, allows the

researcher to determine significance even in the event of a small sample size. Cohen's d can be calculated using the t -test value (t) and degrees of freedom (df). In accordance with Cohen's d (1998), the researcher will utilize the following to determine effect size:

Table 3

Cohen's d

d	Effect Size
.2	Small
.5	Moderate
.8	Large

Because this study produced a small sample size (114 total participants), examining the net effect provided the researcher the opportunity to rank order effect size to examine how meaningful each question on the OAWSA was on each of the groups in this study.

Limitations of the Study

There are a number of limitations that restricted the reach of the study.

- 1) The researcher was able to obtain a set of data that had already been collected, which limited the sample size. Additionally, this study included only participants from a single large, public university. Because of this, the study does not determine whether the findings can be applied to all first-generation students or just to first-generation students within this particular university.
- 2) Due to the short study period, the researcher does not know whether the participants persisted to graduation or not.

- 3) Due to the short study period, the researcher does not know if the university retained the participants beyond the two academic terms of the data collection.
- 4) Participants were asked to disclose first-generation college student status. If a student decided to not self-disclose first-generation college student status, then they were excluded from the study, limiting the number of participants in this study.
- 5) Participants were able to take the OAWSA at any point while on academic warning, meaning an entire term could pass before the participant filled out the survey. Therefore, the instrument may not have measured a participant's responses when they first found out they were on academic warning. In other words, a participant may have already put into action the necessary steps to be successful and to turn things around academically.
- 6) Not all students on academic warning filled out the OAWSA, thus limiting the number of participants in the study.
- 7) This study used an instrument that was already in use. Therefore, the researcher was unable to make any changes to the instrument for the purpose of this study.
- 8) Because the Bonferroni correction was not applied, it is unknown whether some of the statistical significance happened by chance or not.

Conclusion

The purpose of this quantitative study was to explore first-generation college students and factors that relate to their academic standing at a large, public, university in the Pacific Northwest. Specifically to better understand issues of academic integration, personal and social adjustment, family support, motivational theories and psychological

factors and how these may relate to academic achievement for first-generation students.

This study utilized data that had been collected from the OAWSA to answer the following research question: *what factors promote or inhibit first-generation college students to return to good standing after being on academic warning?* Based on the literature, this inquiry also investigated several sub-questions:

1. Is there a statistically significant difference in academic integration between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
2. Is there a statistically significant difference in personal adjustment between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
3. Is there a statistically significant difference in family and social adjustment between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
4. Is there a statistically significant difference in regards to psychological factors between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?

The data collected through the OAWSA was analyzed to determine if there are predictors for first-generation student success. The data analysis used quantitative statistics to compare the groups within the study.

The purpose of this study was to investigate differences between first-generation college students that were able to go back to academic good standing after being on academic warning and first-generation college students that went on academic probation after being on academic warning. The literature and research on both first-generation college students and probationary students is abundant. However, this study examined the intersection of a first-generation college student who was on academic warning, which was found to be missing in much of the literature. This intersection is important, relevant and timely in that colleges and universities are seeing an increase in first-generation college students on their campuses, and have been directed to increase retention and persistence rates. This study intended to increase the understanding of an academically struggling first-generation college student and the factors that inhibit success. Chapter 4 of this paper presents the findings from this study, utilizing the methods discussed in this chapter.

Chapter 4 - Results

Introduction

As stated in Chapter 1, the overall research question for this study is, *what factors promote or inhibit first-generation college students to return to good standing after being on academic warning?* The quantitative data for this study was intended to answer the research question and provide a basis for understanding the needs of academically struggling first-generation college students.

Based on a review of the literature and in order to answer the overall research question, several secondary questions are used in this study to explore potential factors of influence.

1. Is there a statistically significant difference in academic integration between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
2. Is there a statistically significant difference in personal adjustment between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?
3. Is there a statistically significant difference in family and social adjustment between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning

4. Is there a statistically significant difference in regards to psychological factors between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning?

This chapter reports sample demographics, an overview of statistical procedures, followed by the data analysis for each secondary research question.

Sample Population: Demographics

Data were collected from 114 first-generation college students at one urban, four-year university in the Pacific Northwest. These participants took the Online Academic Warning Self-Assessment (OAWSA), a questionnaire developed by the researcher (see Chapter 3 for survey development) to identify factors in which the two groups, students on academic probation and good standing, may differ.

The OAWSA contains 55 Likert-type scale questions (Appendix B), however only 49 questions were analyzed in this study. The six questions that were omitted were questions that did not relate to the overall research question in this study. Congruent with the research literature, there are 12 questions relating to academic integration, nine questions related to personal adjustment, eight questions related to family and social adjustment, and 20 questions related to psychological factors. All statistical procedures were conducted using SPSS 19 software.

The sample for this study included first-generation college students that went on academic warning after Winter 2011, Spring 2011, Summer 2011, or Fall 2011 term. For the purpose of this study, the participants were divided into two groups. The first group is

comprised of the students that went from academic warning to academic probation (AP) the term following warning, and the second group was comprised of the students that went from academic warning to good standing (GS) the term following warning.

Table 4 below represents the breakdown of the two groups in regards to ethnicity, gender, and class standing. Testing the distribution of ethnicity, gender, and class standing against the two groups showed that the distributions were not significantly different from each other. To determine the 2-sided significance, the researcher utilized the Pearson Chi-Square test. Although there was not a significant difference between the two groups, class standing within each group was 45.4% of the probationary group are lower classmen (freshmen or sophomores), and 54.5% are upper classmen (juniors and seniors). For the good standing group, 52.5% are lower classmen and 47.5% are upper classmen. Again, there was not a statistically significant difference between the two groups in regards to class standing, but it is important to note that the students in this study could be students that transferred to the institution, or students that started as freshmen.

Table 4

Sample population

		AP	GS	Sig. (2-sided)
Ethnicity	White	60%	50.8%	.321
	Non-White	40.0%	49.2%	
Gender	Female	50.9%	47.5%	.717
	Male	49.1%	52.5%	
Class Standing	Freshmen	32.7%	23%	.116
	Sophomore	12.7%	29.5%	
	Junior	40%	29.5%	
	Senior	14.5%	18%	

Data Analysis Procedures

The researcher selected parametric tests to compare means, even though Likert scale questions do not have a normal distribution. According to Norman (2010), the decision to run only nonparametric tests on Likert scale questions because the data are not normally distributed is not necessary. In fact, Norman contends that the notion that Likert scale data is not normally distributed is a myth. Norman asserts that although Likert scales do not have a sampling distribution, what is being compared is sample means of values being associated with responses. Therefore, it is appropriate to utilize parametric tests, such as independent samples t-test by the Central Limit Theorem, which states, “for samples sizes greater than 5 or 10 per group, the means are approximately normally distributed regardless of the original distribution (Norman, 2010, p.628).

Statistical significance. Independent samples t-tests are used to compare the means from two groups on a given variable. Typically a researcher will identify and set the p value for the test. For this exploratory study, the researcher opted to set the p value at less than .05. In addition, the researcher did not apply the Bonferroni correction in order to utilize all the data that was involved in this exploratory study. This method strays from traditional research methods, however it was important to fully understand the data for this nuanced student population.

In the case of a large number of independent sample t-tests, one could argue that is necessary to apply the Bonferroni correction to ensure that the researcher is finding actual statistical significance, rather than significance occurring by chance (Abdi, 2007). The Bonferroni method requires the researcher to divide the initial p value by the number

of independent sample t-tests, therefore creating a statistical significance level at $1/n$ of the p value, this is done in order to make adjustments for multiple tests.

In the case of this study, if the researcher performed the Bonferroni correction, the p value of .05 would need to be divided by 55 creating a p value of .001. Perneger (1998) argues that adjusting the statistical significance by the number of tests performed can create more problems than it actually solves. One weakness of this method is that the interpretation of the statistical finding depends on the number of other tests performed (Perneger, 1998). Since this study involved first-generation students, an at-risk population, it was critical to examine how each group actually responded to individual questions and the difference of the means between groups. The intent was to uncover detailed differences that may influence a student's movement from warning to probation.

Indeed, as highlighted in Chapter 2, the literature on first-generation college students points to the fact that this student population is academically vulnerable. Thus, even small changes in actions, behaviors, or attitudes may lead to academic success or jeopardy. Therefore, the intent of this exploratory study was to find the nuances for this population that can lead them to either academic success (academic good standing), or further academic despair (academic probation).

As such, given the small n in this exploratory study, the Bonferroni correction was not applied. Rather, while $p < .05$ is a liberal estimate, it allowed for the emergence of important, but subtle differences between the two groups in order to address the overarching research question of what factors contribute to the inability of first-generation college students to accomplish good standing.

Cohen's d and the Controversy of Effect Size

Effect size is a measurement of the strength of the relationship between two variables. Cohen's (1998) effect size measure (referred to as Cohen's d) allows the researcher to determine significance even in the event of a small sample size. Cohen's d is calculated using the t value and degrees of freedom found from the t -tests.

However, there are conflicting views in the higher education research community on how, when, and why to incorporate and report effect size. As outlined below, there appears to be two camps on this issue. The first argument asserts that effect size should only be interpreted in the event of statistical significance. While the second argument asserts that effect size should be reported, and thus interpreted, even when a variable is not statistically significant.

The first view of effect size claims that it should only be used in the case of statistical significance. Robinson and Levin (1997) argue that researchers should first report whether the observed effect is statistically probable and "only if so, then they should indicate how large and important it is" (p. 22). This view regards effect size as a measurement to determine the size and importance of the observed effect. Therefore, a researcher would only examine and report Cohen's d , or another effect size measurement, in the case of statistical significance.

On the other side of the argument is the view that effect size can determine and illustrate the importance of an effect on a variable regardless of statistical significance. Thompson (1998) argues that statistical testing is irrelevant and does not illustrate the magnitude of the observed effect. Moreover, Thompson contends that authors and

researchers should report effect sizes regardless of statistical significance since important practical differences may exist regardless of statistical significance.

Similarly, D. Pastor (personal communication, April, 20, 2012) contends that effect sizes for all effects, both significant and not significant, should be reported. The reason to do so is to capture a meaningful effect even in the event of non-significance, especially in the cases of a study involving a small n . Whenever a study has a small n it is probable that the researcher could fail to find significance, even in the case of a meaningful effect (D. Pastor, personal communication, April 20, 2012). Therefore, reporting and interpreting effect size is a valuable tool in capturing the meaningfulness of an observance.

Effect size has been debated for years. In the case of published articles on student development and learning, there is movement towards reporting effect size regardless of significance, but to only interpret the effect size in the case of significance (Robinson & Levin, 1999). However, one could argue that there is no point in reporting effect size for all items if one is only going to interpret the statistically significant items. Although, D. Sundre (personal communication, April 19, 2012) points out that she takes the middle ground and reports all effect sizes, but again only interprets the ones that are statistically significant.

T. Bodner (personal communication, April 17, 2012) argues that it is appropriate to use effect size in the case of non-significance. However, effect size should be used to inform power analyses for future studies. Bodner would only proceed with the interpretation of effect size in the case of statistical significance.

Based on both arguments, it appears that effect size can be a valuable tool in looking at the actual effect on a group, especially in the case of a low n . Additionally, it is common practice within Student Affairs to report effect size. Thus, while recognizing that it is important not to overgeneralize findings, and given the small population size effect sizes are reported in the data tables.

In accordance with Cohen's d (1998), where $d=.2$ is for a small effect size, $d=.5$ for a moderate effect size, and $d=.8$ for a large effect size. In addition, if the effect size is positive, this indicates that survey item may have had more of an effect on the probationary group than the good standing group. If the effect size is negative, then this indicates survey item may have had more of an effect on the good standing group than the probationary group. However, the tables indicate potential effect sizes only those items that indicated statistically significant differences between the two groups are interpreted and explained in this prose.

Factors that Influence Good Standing

In order to answer the primary research question, *what factors promote or inhibit first-generation college students to return to good standing after being on academic warning*, analyses were conducted to examine the link of the primary concepts of influence: academic integration, personal adjustment, family and social adjustment and psychological factors. The following data analysis is organized by each of these dimensions in the hopes of illuminating many of the issues plaguing academically struggling first-generation college students.

Academic Integration

The question “is there a statistically significant difference between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning in regards to academic integration” was addressed by conducting both an independent sample *t*-test and calculating effect size. Table 5 below summarizes the mean, *n*, and standard deviation for all of the academic integration questions for both the probationary and good standing groups.

Table 5

Descriptive Statistics for OAWSA – Academic Integration Questions

OAWSA Question	M		n		Std. Deviation	
	AP	GS	AP	GS	AP	GS
Ineffective study skills	3.00	2.7966	55	59	.9813	.9055
Undeveloped self (time) management skills	3.1636	2.9153	55	59	.9577	1.0220
Unprepared for exams	2.6909	2.6441	55	59	.9204	.9241
What worked in high school doesn't work anymore	2.8909	2.4237	55	59	1.3288	1.0700
Difficulty concentrating/daydreaming	2.800	2.4237	55	59	1.2678	1.1478
Difficult classes/not prepared for course level	2.1636	2.2881	55	59	1.0674	.8520
Conflict with professor	1.6364	1.8814	55	59	.82470	1.0015
Unable to understand course content or find relevance in course material	2.0727	2.2034	55	59	1.1057	.8863
Registered for too many classes	2.0364	2.1864	55	59	1.0535	1.1060
Did not attend/skipped class	2.6182	2.1017	55	59	1.1940	1.0454
Uncertain about current major	2.0909	2.1186	55	59	1.2061	1.0841
Changed major one or more times	1.5818	1.966	55	59	.9755	1.1441
Possible learning disability	1.6909	1.6949	55	59	1.0865	1.1181

Note: Each statement is asking the participant the following question; In reviewing your academic performance, to what degree have these obstacles negatively impacted your grades?

After running independent sample *t*-tests, the researcher found two questions within the academic integration section of the OAWSA to be statistically significant,

Table 6 below summarizes the independent sample *t*-test and Cohen's *d* for all academic integration questions on the OAWSA.

Table 6

Independent Samples Test and Effect Size for OAWSA – Academic Integration Questions

OAWSA Question	<i>t</i> -tests for Equality of Means					Effect Size
	<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean Difference	Std. Error Diff.	Cohen's <i>d</i>
Academic Integration						
What worked in high school doesn't work anymore	2.074	112	.040**	.4672	.2253	.3919
Did not attend/skipped class	2.461	112	.015**	.5165	.2098	.4651
Ineffective study skills	1.151	112	.252	.2034	.1767	.2175
Undeveloped self (time) management skills	1.337	112	.184	.2484	.1858	.2527
Unprepared for exams	.271	112	.787	.0468	.1729	.0512
Difficulty concentrating/daydreaming	1.663	112	.099	.3763	.2263	.3143
Difficult classes/not prepared for course level	-.691	112	.491	-.1245	.1803	.1306
Conflict with professor	-1.430	112	.158	-.2450	.1725	-.2684
Unable to understand course content or find relevance in course material	-.733	112	.465	-.1307	.1782	-.1385
Registered for too many classes	-.741	112	.460	-.1501	.2026	.1400
Uncertain about current major	-.129	112	.897	-.0277	.2145	.0244
Changed major one or more times	-1.923	112	.057	-.3843	.1998	-.3634
Possible learning disability	-.019	112	.985	-.0040	.2067	.0036

** Statistically significant at $p < 0.05$ level

High school approaches do not work. What worked in high school that doesn't work anymore, was found to be statistically significant between probation and good standing students (AP ($M=2.89$, $SD=1.33$) and GS ($M=2.42$, $SD=1.07$) conditions; $t(112)=2.07$, $p=.04$). This finding is consistent with the literature regarding first-generation college students. Collier and Morgan (2008) found that first-generation college students had few resources to help with the demands of the college level workload.

Thus, this finding can be interpreted to mean that these first-generation college students are trying to "do" school the way they have always done it, but there were not enough resources to help them adjust to the college environment, or they were not seeking out these resources. As the question suggests, old habits and skills do not work in the college context. For example, not studying enough, not asking for help, unable to handle the amount or level of reading required for class, and not understanding the importance of seeking out the professor during office hours.

Additionally, this finding is consistent with the concept of cultural capital. A first-generation college student is often lacking the cultural capital that gives her prior knowledge about expectations of the college experience. First-generation college students may not understand the necessity of visiting their professors, or how to register for classes, or how much time is needed outside of class to be successful in the college environment. Therefore the first-generation college student is trying to use her skills from high school which are not adequate for the rigor of the new experience of college (Deil-Amen & Tevis, 2010).

Apparently, those first-generation students who earned new skills were able to make the transition to good standing. Perhaps being on academic warning was a wake-up call while others did not, or could not, learn new skills.

Lack of class attendance. The second question of statistical significance was did not attend/skipped classes (AP ($M=2.62$, $SD=1.19$) and GS ($M=2.1$, $SD=1.05$) conditions; $t(112)=2.46$, $p=.015$). Indeed, 52.7% of the probationary group reported that they sometimes, most of the time, or always did not attend class. The implications of not attending class can be far reaching.

From a practitioner's perspective, attending class is key to being able to be successful in class. In fact, this is often the number one piece of advice that is given to students. If a student does not attend class, then it can be assumed that this in it of itself can create a negative impact on a student's grades. Beyond the implications of not attending class, this finding is consistent with the literature. In a recent study examining first-generation college students, the researchers found that first-generation college students reported more problems with time management and prioritization than their non-first-generation peers (Collier & Morgan, 2008). These problems with time management and prioritization could lead a student to not attend class more frequently than a non-first-generation college student.

Academic integration issues. Beyond examining the items within the OAWSA for statistical significance, the researcher examined the actual percentage of students agreeing with each of the statements. Two themes emerged from this data set are and discussed and reported below.

Overall study skills. Academic skills and skipping classes clearly emerged as differences for first-generation students in affecting academic success. Therefore, while not statistically significant, further examination of the descriptive percentages of responses provides more potential insight to academic integration issues, specifically study skills. Table 7 below lists the items from academic integration section of the OAWSA that are related to each other. Listed in the table are the items, whether or not they were statistically significant, as well descriptive percentages of the participants' responses.

Table 7

Academic Integration Factors – Overall Study Skills

Overall Study Skills	Effect Size	Percent	Agreeing
		Probation	Good Standing
What worked in high school doesn't work anymore***	Positive effect, $d = .3919$	38.2%	18.6%
Ineffective study skills		27.3%	18.7%
Undeveloped self (time) management skills		36.4%	25.4%
Difficulty concentrating/daydreaming		32.7%	17%

Note: Percent agreeing is marking either always or most of the time

*** Statistically significant at $p < .05$

The researcher categorized four questions from the academic integration section of the OAWSA as overall study skills. The four questions —ineffective study skills, what worked in high school doesn't work anymore, undeveloped self-management techniques,

and difficulty concentrating/daydreaming—can have far reaching implications for the academic success of a first-generation college student. The results from this study indicate that the probationary group was using the same skills they used in high school and that this was negatively impacting their grades in college. One item that is indeed connected with high school skills not working in the college environment is ineffective study skills of which over one-fourth (27.3%) indicated was a problem.

Similarly, nearly 40% of the probationary group noted that trying to utilize the same approaches that they used in high school were negatively impacting their grades in college. In fact, nearly two times as many students from the probationary group reported that what worked in high school was not working for them any more as compared to the good standing group (38.2% of the probationary group responded that using the approaches from high school was negatively impacting their grades versus 18.26% of the good standing group). This statement speaks to the fact that first-generation college students are struggling with adapting to the new educational environment of college, but that learning new skills is essential.

One further explanation for why what worked in high school for the probationary group is not working anymore is that they have ineffective study skills. Nearly one in three students (27.3%) in the probationary group noted that specifically ineffective study skills were negatively impacting their grades. The inability to study effectively can impact grades, motivation, and confidence. Therefore, having effective study skills is imperative for all college students, including both first-generation and non-first-generation college students. The overall study skills of first-generation college students

need to be addressed on college campuses to aid these students in being academically successful.

The findings from this study also indicate that difficulty concentrating and/or daydreaming negatively impacted the probationary students' grades nearly 33%. If a student is having issues concentrating in class it could be for several reasons. First, the student may be having a difficult time understanding the course content, or even finding relevance in the actual class. Secondly, a student may be having a difficult time paying attention in class because she does not want to be in the class in the first place. Difficulty concentrating is related to overall study skills because of the importance of being able to concentrate and fully submerge oneself in the course content is essential for academic success.

Lastly, if a student has undeveloped self-management skills, it can be assumed that they are more likely to miss class more than a student who feels as if they possess good time management skills. One facet of study skills is the ability to manage oneself given all of the commitments that are required of college students. Nearly one in three students in the probationary group (36.4%) reported that undeveloped self-management skills negatively impacted her grades. Even one in four students (25.4%) who were able to return to good standing reported that undeveloped time management skills were negatively impacting her grades.

Class management techniques – attendance. Related to study skills are class management techniques. Skipping class is clearly a problem and makes a significant difference between those students who got off probation. In addition, the descriptives

reflected in Table 8 indicates that even the first-generation college students that were able to return to good standing indicated that they are likely to have conflict with the professor.

Table 8

Academic Integration Factors – Class Management Techniques

Class Management Techniques/Class Choice	Effect Size	Percent	Agreeing*
		Probation	Good Standing
Did not attend/skipped class***	Positive effect, $d=.4651$	20%	10.2%
Conflict with professor		14.5%	27.1%

Note: Percent agreeing is marking either always or most of the time

*** Statistically significant at $p<.05$

The second item from the academic integration section of the OAWSA that was found to be statistically significant was the item related to not attending class. Not attending class, or skipping class, negatively impacted the probationary group's grades.

The item related to both not attending class and the overall theme of class management techniques is conflict with the professor. If a student is having a conflict with the professor this could influence her likelihood of going to class, as well as her concentration. While 14.5% of the probationary students reported that conflict with the professor was negatively impacting their grades, nearly twice the amount of students, 27.1% of the good standing group reported that conflict with the professor was a problem. This finding indicates that a significant number of first-generation students are having issues with their professors, regardless of academic standing.

Additionally, several studies within the literature suggest that struggling students often report difficulties with procrastination, difficult classes, attendance issues, and instructor issues (Thombs, 1995, Coleman & Freedman, 1996, Austin, Cherney, Crower & Hill, 1997, Trombley, 2000, Isaak et al., 2006). The studies within the literature are consistent with the findings in this research. For the academically struggling students in this study, it is evident that what is happening, or not happening, in the classroom has a major effect on the academic success of these students.

Personal Adjustment

The literature notes that in addition to academic integration, personal adjustment has an affect on student performance. Table 8 below summarizes the mean, *n*, and standard deviation for all of the personal adjustment questions for both the probationary and the good standing groups.

Table 9

Descriptive Statistics for OAWSA – Personal Adjustment Questions

OAWSA Question	M		n		Std. Deviation	
	AP	GS	AP	GS	AP	GS
No clear career goals	1.7091	1.8983	55	59	1.0659	1.0938
Not sure why I'm in school	1.5091	1.4915	55	59	.9403	.8382
PSU may not be the place for me	1.5455	1.5763	55	59	.9781	.8551
Financial difficulties	3.0909	2.6949	55	59	1.3914	1.2071
Health problems	2.4182	2.1017	55	59	1.3429	.9947
Use or abuse of alcohol or other substance(s)	1.3455	1.2034	55	59	.6997	.51794
Difficulty sleeping at night	2.9818	2.3390	55	59	1.2545	1.2403
Working too much	2.4182	2.5593	55	59	1.3837	1.1784

Note: Each statement is asking the participant the following question; In reviewing your academic performance, to what degree have these obstacles negatively impacted your grades?

After running independent sample *t*-tests, one question emerged within the personal adjustment section of the OAWSA to be statistically significant, difficulty sleeping. Table 9 below summarizes the independent samples *t*-tests and Cohen's *d* for all personal adjustment questions on the OAWSA.

Table 10

Independent Samples Test and Effect Size for OAWSA – Personal Adjustment Questions

OAWSA Question	t-tests for Equality of Means					Effect Size
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Diff.	Cohen's d
Personal Adjustment						
Difficulty sleeping at night	-.934	112	.352	-.1892	.2025	.1765
Not sure why I'm in school	.105	112	.916	.0176	.1666	.0198
PSU may not be the place for me	-.190	112	.850	-.0308	.1624	.0360
Financial difficulties	1.626	112	.107	.3960	.2435	.3073
Health problems	1.422	112	.158	.3165	.2203	.2714
Use or abuse of alcohol or other substance(s)	1.238	112	.223	.1421	.1148	.2340
Working too much	-.588	112	.588	-.1411	.2402	.1111

**Statistically significant at the $p < 0.05$ level

Difficulty sleeping at night. Difficulty sleeping at night was found to be statistically significant (AP (M=2.98, SD=1.25) and GS (M=2.34, SD=1.24) conditions; $t(112)=2.75$, $p=.007$).

Although it is hard to determine the exact reasoning why a student may be having difficulty sleeping there is evidence in the literature that sleep problems may impact academic performance. The findings in this study are consistent with Gaultney (2010) who examined 1,845 students at a large, public university. The researcher found that a significant number of students that were at risk for sleep disorders were also in academic jeopardy. Certainly, psychological factors (examined in detail later), such as stress, home sickness, and loneliness can affect sleep patterns. Lack of sleep may be a tell-tale sign of

more complex academic issues, such as skipping class. As an institution it is hard to determine how to help students with difficulty sleeping, however this does appear to be a significant contributor to the academic success of the students in this research study.

In examining the items within the personal adjustment section of the OAWSA, one theme presented itself from the data set – health-related issues. Indeed, health and financial issues may be causing sleep disruptions since one out of five probationary students (21.8%) reported health problems and nearly half (40%) reported financial difficulties.

Health-related issues. The third theme from this study is health-related issues.

Table 11 below lists the items from the personal adjustment section of the OAWSA that are related to each other and to the overall theme of health-related issues.

Table 11

Personal Adjustment - Health-related Issues

Health-related Issues	Effect Size	Percent	Agreeing
		Probation	Good Standing
Difficulty sleeping at night***	Positive effect, $d=.5197$	40%	17%
Health problems		21.8%	10.2%
Financial Difficulties		40%	23.8%

Note: Percent agreeing is marking either always or most of the time

***Statistically significant at $p<.05$

The researcher categorized three questions from the personal adjustment section of the OAWSA as health-related issues. The three questions—1) health problems, 2) difficulty sleeping and 3) financial difficulties—can all be detrimental to the success of

first-generation college students. In order for a student to have the mental capacity to be able to concentrate and focus on school, she needs to be free of health related stressors or be equipped with successful coping mechanisms.

Difficulty sleeping at night negatively impacted 40% of the participants in the probationary group's grades. Although, it is difficult to determine the exact reasoning why a student may be having trouble sleeping, it is evident that sleeping difficulties impact academic success.

Aside from sleeping difficulties, the 21.8% of the probationary group reported that health problems were negatively impacting their grades. According to Royster and Marshall (2008), college students with chronic health problems experience difficulty on traditional college campuses. This is due in part to the unpredictability of reoccurring symptoms and having to navigate the system between instructors, financial aid, other students and resources. Although many students with chronic health problems could register with the Disability Resource Center on campus, these students do not identify themselves as having a disability (Royster & Marshall, 2008). Many students with chronic health issues find it difficult to successfully complete courses, which can have an adverse effect on their ability to be successful at the university.

The probationary group reported that 40% of the time financial difficulties negatively impacted their grades. This finding is consistent with not only the literature on first-generation college students, but college students in general. Financial difficulties can be burdensome and lead students to work more hours (if possible), or spend a considerable amount of time under stress about how to pay for tuition, books, housing, and

other expenses. Beyond the effect of financial difficulties on the probationary group, it is evident that the good standing group is also struggling with this issue. Nearly a quarter of the good standing group reported that financial difficulties were negatively impacting their grades.

The literature on probationary students clearly illustrates that struggling students often report financial concerns (Thombs, 1995, Coleman & Freedman, 1996, Austin, Cherney, Crower & Hill, 1997, Trombley, 2000, Isaak et al., 2006). Additionally, it is clear that first-generation college students are more likely to work than their non-first-generation peers as well as commute to campus (Pascarella et al., 2004). These two circumstances could signify that paying for school is more of a challenge for first-generation college students than non-first-generation college students. Through the findings of this study, it is evident that financial difficulties for first-generation college students can diminish their academic standing.

Family and Social Adjustment

The question, “is there a statistically significant difference between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning in regards to family and social adjustment” was addressed by conducting an independent sample *t*-test and using effect size. Table 12 below summarizes the mean, *n*, and standard deviation for all of the academic integration questions for both the probationary and the good standing groups.

Table 12

Descriptive Statistics for OAWSA – Family and Social Adjustment Questions

OAWSA Question	M		N		Std. Deviation	
	AP	GS	AP	GS	AP	GS
Family and Social Adjustment						
Excessive time spent online (Facebook, YouTube, Gaming, etc.)	2.0545	2.0678	55	59	1.0438	1.1275
Over-involved in extra-curricular activities	1.7455	1.6949	55	59	.9471	.9871
Roommate issues	1.6364	1.5424	55	59	1.0067	.8968
Personal relationship issues	2.6545	2.1695	55	59	1.2505	1.1912
Family situation	2.7091	2.0351	55	59	1.4099	1.3032
Moved away from home/homesick	1.6182	1.4915	55	59	1.1137	.9354
Difficulty adjusting to college life	2.0727	2.0169	55	59	1.1996	1.1218
Hard to make friends/loneliness	1.800	1.7458	55	59	1.0955	.9394

Note: Each statement is asking the participant the following question; In reviewing your academic performance, to what degree have these obstacles negatively impacted your grades?

After running independent sample *t*-tests, the researcher found one question within the family and social adjustment section of the OAWSA to be statistically significant. Table 13 below summarizes the independent sample *t*-test and Cohen's *d* for all family and social adjustment sections on the OAWSA.

Table 13

Independent Samples Test and Effect Size for OAWSA – Family and Social Adjustment Questions

OAWSA Question	<i>t</i> -tests for Equality of Means					Effect Size
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Diff.	Cohen's d
Personal relationship issues	2.121	112	.036**	.4851	.2287	.4008
Excessive time spent online (Facebook, YouTube, Gaming, etc.)	-.065	112	.948	-.0133	.2039	.0123
Over-involved in extra-curricular activities	.279	112	.781	.0505	.1814	.0527
Roommate issues	.527	112	.599	.0940	.1783	.0996
Family situation	1.590	112	.115	.4040	.2541	.3005
Moved away from home/homesick	.659	112	.511	.1267	.1922	.1245
Difficulty adjusting to college life	.257	112	.798	.0558	.2174	.0486
Hard to make friends/loneliness	.284	112	.777	.0542	.1907	.0537

**Statistically significant at $p < 0.05$ level

Personal relationship issues. The one question with statistical significance asked students if personal relationship issues negatively impacted their grades. This question was found to be statistically significant using between probationary and good standing students (AP (M=2.65, SD=1.25) and GS (M=2.17, SD=1.19) conditions; $t(112)=2.12, p=.036$).

In this particular study, the researcher did not define what types of personal relationship issues were having a negative effect on a student's grades. However there is evidence that students in academic jeopardy are more often than successful students to report personal problems related to family obligation (Thombs, 1995, Coleman &

Freedman, 1996, Austin, Cherney, Crower & Hill, 1997, Trombley, 2000, Isaak et al., 2006).

Isaak et al., (2006) found that students that were academically struggling typically had lower social skills with weaker social networks than students that were in good standing. Additionally, Trombley (2000) asserted that students that were placed on academic probation often reported family obligations as an issue that led to their low academic standing. The literature on first-generation college students also supports the findings in this study in that first-generation college students are more likely to need support of family members in order to have a successful transition to the college environment (Wang & Castañeda-Sound, 2008).

Perhaps the personal problems that the students in this study refer to are issues with their families, or perhaps the issues arise from the fact that they have weaker social networks than students that are academically successful. Regardless of the source of the personal problems, the first-generation college students in this study that reported personal problems negatively impacting their grades were more likely to go on academic probation after academic warning.

The questions within the family and social adjustment section that appeared to be related to each other were family situation and personal relationship issues. These two items can be grouped together to form the fifth theme of personal issues. Table 14 below reports each of the items and the percentages of each group agreeing with the statement.

Table 14

Family and Social Adjustment – Personal Issues

Personal Issues	Effect Size	Percent	Agreeing
		Probation	Good Standing
Personal relationship issues***	Positive effect, $d=.4008$	27.3%	13.6%
Family situation		25.5%	22%

Note: Percent agreeing is marking either always or most of the time

***Statistically significant at $p<.05$

The students in this study that had more academic troubles also reported a larger percentage of family situations and personal relationship issues that negatively impacted their grades. Over a quarter of the participants in the probationary group reported that both personal relationship issues (27.3%) and family situations (25.5%) were negatively impacting their grades. Additionally, it is evident that even the students that were able to return to good standing reported 22% of the time that a family situation was negatively impacting their grades.

These findings are not unanticipated given the fact that the literature discusses the importance of family support for first-generation college students (Wang & Castañeda-Sound, 2008) and how detrimental personal relationship issues can be for students. In fact, academically struggling students reported difficulties or personal problems as a barrier to their success (Thombs, 1995, Coleman & Freedman, 1996, Austin, Cherney, Crower & Hill, 1997, Trombley, 2000, Isaak et al., 2006).

Psychological Factors

Based on the literature regarding academic success and psychological factors, the psychological factor questions from the OAWSA included questions regarding motivation and stress. Additionally, there were eighteen questions from the Scales of Psychological Well-Being, a tested survey tool used to examine psychological well-being. The two subscales used from the Scales of Psychological Well-Being were Purpose in Life and Personal Growth. These two subscales have been found to have a high reliability alpha and have been used in over 48 studies (see Chapter 3 for more information on the instrument).

The question “is there a statistically significant difference between first-generation college students that return to good standing after being on academic warning and first-generation college students that go onto academic probation from academic warning in regards to psychological factors” was addressed by conducting both an independent sample t-test and calculating effect size. Table 15 below summarizes the mean, *n*, and standard deviation for all of the academic integration questions for both the probationary and the good standing groups.

Table 15

Descriptive Statistics for OAWSA – Psychological Factors Questions

OAWSA Question	M		N		Std. Deviation	
	AP	GS	AP	GS	AP	GS
Pressure, stress, anxiety or tension	3.600	3.0508	55	59	1.1156	1.1660
Lack of Motivation	2.5818	2.4068	55	59	1.1171	1.2051
I am not interested in activities that will expand my horizons	5.0556	4.9649	54	57	1.3656	1.1644
I don't want to try new ways of doing things – my life is fine the way it is	4.9259	5.0702	54	57	1.3154	1.0833
I think it is important to have new experiences that challenge how you think about yourself and the world	5.5185	5.2456	54	57	1.0414	1.2995
When I think about it, I haven't really improved much as a person over the years	4.7778	5.0000	54	57	1.5861	1.3496
I have the sense that I have developed a lot as a person over time	5.2037	4.8596	54	57	1.2190	1.3815
I do not enjoy being in new situations that require me to change my old familiar ways of doing things	4.8519	4.7368	54	57	1.2945	1.2178
For me, life has been a continuous process of learning, changing, and growth	5.2037	4.9474	54	57	1.2496	1.3813
I gave up trying to make big improvements or changes in my life a long time ago	5.3519	5.4035	54	57	1.0843	.8836
There is truth to the saying you can't teach an old dog new tricks	5.4815	5.4035	54	57	.9856	1.1931

I live life one day at a time and don't really think about the future	4.7778	5.1228	54	57	1.4231	1.0868
I tend to focus on the present, because the future nearly always brings me problems	4.722	4.7368	54	57	1.3929	1.1730
My daily activities often seem trivial and unimportant to me	4.6481	4.7719	54	57	1.4686	1.3231
I don't have a good sense of what it is I'm trying to accomplish in life	4.5926	4.8421	54	57	1.6428	1.3468
I used to set goals for myself, but that now seems like a waste of time	5.0741	5.1228	54	57	1.2716	1.0702
I enjoy making plans for the future and working to make them a reality	4.9444	4.7895	54	57	1.3793	1.4484
I am an active person in carrying out the plans I set for myself	4.7593	4.6491	54	57	1.2276	1.3692
Some people wander through life, but I am not one of them	4.5556	4.5263	54	57	1.3412	1.4029
I sometimes feel as if I've done all there is to do in life	5.4815	5.3333	54	57	1.0594	1.0579

After running independent sample *t*-tests, the researcher found one item to be statistically significant within the psychological factor questions on the OAWSA. Table 16 below summarizes the independent sample *t*-tests and Cohen's *d* for all psychological factor questions on the OAWSA.

Table 16

Independent Samples Test and Effect Size for OAWSA – Psychological Factors Questions

OAWSA Question	<i>t</i> -tests for Equality of Means					Effect Size
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Diff.	Cohen's d
Psychological Factors						
Pressure, stress, anxiety or tension	2.566	112	.012**	.5492	.2140	.4849
Lack of Motivation	.803	112	.424	.1750	.2181	.1518
I am not interested in activities that will expand my horizons	.377	109	.707	.096	.2405	.0722
I don't want to try new ways of doing things – my life is fine the way it is	-.632	109	.529	-.14425	.2282	-.1211
I think it is important to have new experiences that challenge how you think about yourself and the world	1.217	109	.226	.2729	.2243	.2331
When I think about it, I haven't really improved much as a person over the years	-.796	109	.428	-.2222	.2790	-.1525
I have the sense that I have developed a lot as a person over time	1.388	109	.168	.3441	.2478	.2659
I do not enjoy being in new situations that require me to change my old familiar ways of doing things	.482	109	.631	.1150	.2385	.0923
For me, life has been a continuous process of learning, changing, and growth	1.023	109	.308	.2563	.2505	.1960
I gave up trying to make big improvements or changes in my life a long time ago	-.276	109	.783	-.0517	.1873	.0529
There is truth to the saying you can't teach an old dog new tricks	.374	109	.709	.0780	.2083	.0716

I live life one day at a time and don't really think about the future	-1.440	109	.153	-.3450	.2396	-.2759
I tend to focus on the present, because the future nearly always brings me problems	-.060	109	.952	-.0146	.2440	.0115
My daily activities often seem trivial and unimportant to me	-.467	109	.641	-.1238	.2651	.0895
I don't have a good sense of what it is I'm trying to accomplish in life	-.877	109	.382	-.2495	.2845	-.1680
I used to set goals for myself, but that now seems like a waste of time	-.219	109	.827	-.0487	.2227	.0420
I enjoy making plans for the future and working to make them a reality	.577	109	.565	.1550	.2688	.1105
I am an active person in carrying out the plans I set for myself	.445	109	.657	.1101	.2473	.0852
Some people wander through life, but I am not one of them	.112	109	.911	.0292	.2608	.0215
I sometimes feel as if I've done all there is to do in life	.737	109	.463	.1482	.2010	.1412
Personal Growth	.544	109	.588	.0821	.1509	
Purpose in Life	-.220	109	.826	-.0377	.1714	

**Statistically significant at $p < 0.05$ level

Pressure, stress, anxiety or tension. The one question with statistical significance within the psychological factors was pressure, stress, anxiety or tension negatively impacted the participants' grades (AP ($M=3.60$, $SD=1.12$) and GS ($M=3.05$, $SD=1.17$) conditions; $t(112)=2.57$, $p=.012$). Pressure, stress, anxiety and tension are all physiological symptoms.

Physiological stress symptoms. The question within the psychological factors section that stood out not only because it was statistically significant, but also because over 50% of the probationary group agreed that pressure, stress, anxiety and tension negatively impacted their grades. These items can be grouped together to form the sixth emerging theme from this study, physiological symptoms. Table 17 below reports this item and the percentages of each group agreeing with the statement.

Table 17

Psychological Factor – Physiological Symptoms

Physiological Symptoms	Effect Size	Percent	Agreeing
		Probation	Good Standing
Pressure, stress, anxiety or tension negatively impacted grades***	Positive effect, $d=.4849$	52.8%	33.9%

Note: Percent agreeing is marking either always or most of the time

***Statistically significant at $p<.05$

Participants in this study were asked if pressure, stress, anxiety or tension negatively impacted their grades. What this means is that 52.8% of the probationary students agreed that these physiological symptoms were negatively impacting their grades. Not only did one in two students from the probationary group report that pressure, stress, anxiety or tension negatively impacted their grades, but one in three good standing students reported that these physiological symptoms impacted them as well.

The literature about students on academic probation clearly points out that these students tend to have higher reported difficulties with stress management (Thombs, 1995, Coleman & Freedman, 1996, Austin, Cherney, Crower & Hill, 1997, Trombley, 2000,

Isaak et al., 2006). Additionally, these finding are consistent with the fact that first-generation college students have more personal commitments (i.e., working more, commuting, family commitments, financial difficulties, etc.) than their non-first-generation peers, perhaps adding to the stress and anxiety they are dealing with in the academic realm. In fact, it is clear that physiological symptoms not only impacted the probationary group, but also the good standing group. This finding suggests that first-generation college students as a whole are facing enormous amounts of physiological symptoms and these symptoms are negatively impacted their grades.

Summary of Themes

Based on a thorough literature review and a careful analysis of the data provided through the OAWSA, six themes contribute to the inability of first-generation college students to return to academic good standing after being on academic warning. Each of these themes connects with one of the conceptual dimensions of the OAWSA and is based on the literature, as well as the data. Listed below are the six themes and its respective conceptual dimension from the OAWSA:

1. verall study skills – Academic Integration
2. Class attendance – Academic Integration
3. Health-related issues – Personal Adjustment
4. Financial difficulties – Personal Adjustment
5. Family and personal issues – Family and Social Adjustment
6. Physiological stress – Psychological Factors

These themes appear to have an affect on academic standing regardless of statistical significance. In order to determine if the relationship between the themes that presented themselves and the two groups in this study, it was necessary to conduct a post-hoc analysis. This post-hoc analysis was used to determine if other statistical analyses would confirm possible effects and important differences on the academic standing of the participants.

Post-Hoc Factor Analysis

After analyzing each item on the OAWSA and examining the statistical significance, effect size, and cross tabulations, the researcher was interested in determining if the items within each section of the OAWSA were related. Meaning, did the questions within each section relate to each other and have a strong correlation? Additionally, the researcher explored whether the factors themselves were statistically significant between the probationary and good standing groups.

Cronbach's alpha – OAWSA reliability testing. One measurement to determine scale reliability is Cronbach's alpha. Cronbach's alpha "provides a coefficient to estimate consistency scores of an instrument" (Creswell, 2005, p. 164). In order to describe the reliability of the alpha coefficient, it is necessary to examine the internal consistency of factors (see Table 18).

Table 18

Cronbach's Alpha and Internal Consistency Measurements

Cronbach's alpha	Internal consistency
$\alpha \geq .9$	Excellent
$.9 > \alpha \geq .8$	Good
$.8 > \alpha \geq .7$	Acceptable
$.7 > \alpha \geq .6$	Questionable
$.6 > \alpha \geq .5$	Poor
$.5 > \alpha$	Unacceptable

Based on the conceptual literature dimensions (e.g., academic integration, personal adjustment, family and social adjustment, and psychological factors) and the statistical findings noted earlier, the overall survey reliability and individual factors were tested for internal consistency. The OAWSA consisted of 49 items ($\alpha=.735$), thereby having an acceptable internal consistency. The majority of the subscales within the OAWSA had at least an acceptable or good internal consistency measurement, with the personal adjustment and family and social adjustment subscales being poor and questionable respectively. Each subscale of the OAWSA is discussed in further detail below.

Academic integration subscale alpha. The academic integration subscale consisted of 12 items ($\alpha=.747$), therefore this subscale has an acceptable internal consistency. Table 19 below reports the overall alpha for the academic integration subscale, as well as for the scale if the item was deleted.

Table 19

Cronbach's Alpha – Academic Integration Subscale

Academic Integration Subscale ($\alpha=.747$)	Alpha if deleted
What worked in high school doesn't work anymore	.710
Difficulty concentrating/daydreaming	.713
Unprepared for exams	.716
Difficult classes/not prepared for course level	.718
Ineffective study skills	.720
Undeveloped self (time) management skills	.728
Unable to understand course content or find relevance in course material	.728
Uncertain about current major	.735
Possible learning disability	.737
Registered for too many courses	.747
Conflict with professor	.749
Did not attend/skipped classes	.758

As evidenced in the alpha scale, the items within the academic adjustment section of the OAWSA had a high degree of correlation between the variables. Therefore, there is a potential additive, or multiplier effect for first-generation college students. Certainly, using high school skills in college and skipping class were significant issues for the participants in this study, but learning disabilities may be a hidden issue.

Personal adjustment subscale alpha. The personal adjustment subscale consisted of 9 items ($\alpha=.576$), therefore having a poor internal consistency. Table 20 below reports

the overall alpha for the personal adjustment subscale, as well as for the scale if the item was deleted.

Table 20

Cronbach's Alpha – Personal Adjustment Subscale

Personal Adjustment Subscale ($\alpha=.576$)	Alpha if deleted
Not sure why I'm in school	.518
PSU may not be the place for me	.518
Financial difficulties	.533
Health problems	.543
Changed major one or more times	.544
No clear career goals	.546
Difficulty sleeping at night	.556
Use or abuse of alcohol or other substance(s)	.56
Working too much	.602

Based on the reliability testing for the personal adjustment section of the OAWSA, it is clear that these items do not have a strong correlation. In fact, although these items were related to the literature regarding personal adjustment for first-generation college students, it is evident that questions are not connected enough to each other to elicit a good internal reliability.

Family and social adjustment subscale alpha. The family and social adjustment subscale consisted of 8 items ($\alpha=.614$), having a questionable internal consistency. Table

21 below reports the overall alpha for the family and social adjustment subscale, as well as for the scale if the item was deleted.

Table 21

Cronbach's Alpha – Family and Social Adjustment Subscale

Family and Social Adjustment Subscale ($\alpha=.614$)	Alpha if deleted
Difficulty adjusting to college life	.526
Personal relationship issues	.541
Hard to make friends/loneliness	.543
Moved away from home/homesick	.566
Roommate issues	.590
Family situation	.613
Over-involved in extra-curricular activities	.624
Excessive time spent online (Facebook, YouTube, Gaming, etc.)	.629

The items within the family and social adjustment section of the OAWSA had an overall alpha of .614, meaning that there enough correlation between the variables for the internal reliability to be questionable, rather than poor. The questions within this section of the OAWSA are more closely related to each other than the items within the personal adjustment section, however the internal reliability is not as strong as the literature on the family and social adjustment suggests. Although the item related to difficulty adjusting to college did not appear to be statistically significant, it could be an underlying cause of academic distress for first-generation college students.

Psychological factors alpha. The researcher grouped the questions within the psychological subscale into three groups to illuminate the reliability of each of the different constructs. The three groupings were 1) all psychological questions, 2) Purpose in Life subscale from the Scales of Psychological Well-Being, and 3) Personal Growth subscale from the Scales of Psychological Well-being.

The overall psychological factor subscale consisted of 20 items ($\alpha=.877$), having a good internal consistency. The overall psychological factor subscale was the largest of all factors. The Purpose in Life subscale consisted of 9 items ($\alpha=.858$), having a good internal consistency. The additional subscale from the Scales of Psychological Well-Being, Personal Growth, consisted of 9 items ($\alpha=.814$), therefore having a good internal consistency. Table 22 below reports the overall alpha for the psychological factors subscale, the overall alpha for Purpose in Life and Personal Growth, as well as for the scale if the item was deleted.

Table 22

Cronbach's Alpha – Psychological Factors Subscale

Psychological Factors ($\alpha=.877$)	Alpha if deleted
Lack of motivation	.887
Pressure, stress, tension, or anxiety	.898
Purpose in Life ($\alpha=.858$)	
I don't have a good sense of what it is I'm trying to accomplish in life.	.832
My daily activities often seem trivial and unimportant to me.	.837
I used to set goals for myself, but that now seems like a waste of time.	.837
Some people wander aimlessly through life, but I am not one of them.	.837
I tend to focus on the present, because the future always brings me problems.	.842
I enjoy making plans for the future and working to make them a reality.	.843
I am an active person in carrying out the plans I set for myself.	.844
I live my life one day at a time and don't really think about the future.	.854
I sometimes feel as if I've done all there is to do in life.	.855
Personal Growth ($\alpha=.814$)	
I gave up trying to make big improvements or changes	.776

in my life a long time ago.

For me, life has been a continuous process of learning, .783
changing, and growth.

I have the sense that I have developed a lot as a person .784
over time.

I think it is important to have new experiences that .789
challenge how you think about yourself and the world.

I don't want to try new ways of doing things – my life .796
is fine the way it is.

There is truth to the saying you can't teach an old dog .800
new tricks.

I am not interested in activities that will expand my .806
horizons.

When I think about it, I haven't really improved much .808
as a person over the years.

I do not enjoy being in new situations that require me .812
to change my old familiar ways of doing things.

Note: The alpha reported for each of the items within Purpose in Life subscale and Personal Growth subscale is for the nine items within the subscale, not the overall Psychological Factors subscale.

After performing Cronbach's alpha it is evident that the psychological factors subscale had the highest internal correlation of all of the subscales from the OAWSA. Additionally, each of the two subscales from the Scales of Psychological Well-Being tested with a high correlation, which was expected as this scale has been tested and used in over 48 studies.

Summary of Cronbach's alpha. Table 23 below summarizes Cronbach's alpha for each of the sections on the OAWSA, as well as for the entire instrument.

Table 23

OAWSA Subscale, Cronbach's Alpha, and Internal Consistency Measurements

OAWSA Subscale	Number of Items	Cronbach's Alpha	Internal Consistency
Academic Integration	12	$\alpha=.747$	Acceptable
Personal Adjustment	9	$\alpha=.576$	Poor
Family and Social Adjustment	8	$\alpha=.614$	Questionable
Psychological Factors	20	$\alpha=.877$	Good
Purpose in Life	9	$\alpha=.858$	Good
Personal Growth	9	$\alpha=.814$	Good
All items	49	$\alpha=.735$	Acceptable

There were several subscales of the OAWSA that had a high degree of correlation. In fact, only the personal adjustment subscale had a poor internal consistency measurement. Based on the literature on the dimensions of first-generation student success that were discussed previously, it is clear that there are factors within academic integration, personal adjustment, family and social adjustment, and psychological factors that contribute to the academic standing of a first-generation college student.

What factors influence success. To answer the overall research question of *what factors promote or inhibit first-generation college students to return to good standing after being on academic warning*, an ANOVA was performed. After testing the

reliability of each subscale of the OAWSA, it was necessary to determine if there was statistical significance between the probationary and good standing groups. Table 24 below summarizes the ANOVA for each subscale on the OAWSA.

Table 24

ANOVA – Academic Integration, Personal Adjustment, Family and Social Adjustment and Psychological Factors

OAWSA Subscale	Sum of Squares	Df	Mean Square	F	Sig.
Academic	39.405	1	39.405	1.011	.317
Integration					
Personal	16.855	1	16.855	.797	.374
Adjustment					
Family and Social Adjustment	44.977	1	44.977	2.377	.126
Psychological	38.695	1	38.695	.195	.659
Factors					
Personal Growth	.187	1	.187	.296	.588
Purpose in Life	.039	1	.048	.048	.826

After running one-way ANOVAs for each of the subscales on the OAWSA, it is evident that none of the subscales as a whole have statistical significance between the probationary and good standing groups. This finding is not surprising given the combination of the reliability alpha scores and the independent sample *t*-tests performed on each of the items within the subscales. Based on the non-significance of the subscales as factors, it is not possible to answer the research question based on the factors.

However, after close examination of the individual items, including statistical significance and descriptive statistics, the researcher will provide implications and recommendations based on the individual items of the OAWSA rather than the subscales.

Summary

Chapter 4 provided an in depth analysis of the data collected in this study. The findings of this study contribute to the literature on both first-generation college students and students on academic probation. More importantly, this study contributes to the overall population of academically struggling first-generation college students.

After the initial independent sample *t*-tests for each of the items on the OAWSA, it was clear that the following items negatively impacted the probationary group's grades at a statistically significant rate:

- What worked in high school doesn't work anymore
- Did not attend/skipped class
- Difficulty sleeping at night
- Personal relationship issues
- Pressure, stress, tension and anxiety

These items clearly impacted the probationary group more so than the students those were able to return to academic good standing. The above mentioned five items are areas in which colleges and universities can provide programming and resources to first-generation college students in order to help them be successful in their educational endeavors.

Due to the nuances of this particular population of students, the researcher delved further into the data to examine the percentages of the responses from the participants. In reviewing these percentages, several more items from the OAWSA stood out as potentially important contributors to the inability of a first-generation college student to return to academic good standing after being placed on academic warning. These additional items are as follows:

- Ineffective study skills
- Conflict with the professor
- Undeveloped self (time) management skills
- Difficulty concentrating/daydreaming
- Health problems
- Financial difficulties
- Family situation

Based on the literature and the data, six themes emerged that have critical implications for practitioners. These themes and implications will be discussed in the next chapter. The six themes are as follows:

1. Overall study skills
2. Class attendance
3. Health-related issues
4. Financial difficulties
5. Family and personal issues
6. Physiological symptoms

These themes can provide colleges and universities a framework for working with first-generation college students, but more specifically these themes provide the backdrop for creating and implementing programs that have the ability to retain first-generation college students and foster their academic success.

Additionally, this study provided insight into some of the issues that affect all academically struggling first-generation college students regardless of whether or not they are able to return to academic good standing after being placed on academic warning. It is evident that a majority of the participants in this study, regardless of academic standing, faced issues related to time management, conflict with the professor, financial difficulties, family situations, and physiological symptoms. The implications of these findings will be discussed at greater length in the following chapter.

Chapter 5 - Discussion

Introduction

As an aid to the reader, this final chapter of the dissertation will provide a brief restatement of the problem and purpose of the study and a discussion of the results. This chapter will also include implications of this research study, practitioner's perspective recommendations, and suggestions for further research.

Restatement of the Problem

Colleges and universities face unique problems when it comes to retaining first-generation college students. First of all, first-generation college students are often more diverse, work more hours, and commute more than their non-first-generation peers. Secondly, according to Horwedel (2008), first-generation college students are less academically prepared than their non-first-generation college peers. Some would argue that universities have an obligation to provide resources for underprepared, admitted first-generation college students.

For example, at one large, urban, public university in the Pacific Northwest approximately 500 students go on academic warning each term. Academic warning at this particular institution is a student having below a 2.0 cumulative GPA. Additionally, there are between 200 – 250 students that go on academic probation each term. Academic probation occurs when the student is unable to raise her cumulative GPA above a 2.0 and earns less than a 2.25 term GPA the term following academic warning. Lastly, 70-100 students get academically dismissed each term from this institution. Academic dismissal occurs when a student who is on academic probation is unable to raise her cumulative GPA above a 2.0 and earns less than a 2.25 term GPA. (A visual representation of the

academic standing policy is available in Appendix A). Although these numbers are not a large percentage, approximately three percent, of the total student population, they do represent students that may leave the institution, either voluntarily or involuntarily, which leads to reduced tuition dollars and lower retention and persistence rates. In order to reach President Obama's goal of being a leader in higher education by 2020, it is imperative to look at this subpopulation and implement programs designed to increase their retention.

Purpose of the Study

The purpose of this quantitative study was to explore first-generation college students and factors that relate to their academic success at a large, public, university in the Pacific Northwest. Specifically, the goal was to better understand how issues of academic integration, personal adjustment, social and family adjustment, motivational theories, and psychological factors may relate to academic achievement and academic standing for first-generation students more generally.

Summary and Discussion of Results

The primary research question guiding this study was, *what factors promote or inhibit first-generation college students to return to good standing after being on academic warning?* Of the original factors – 1) academic integration, 2) personal adjustment, 3) family and social adjustment, and 4) psychological factors, six themes emerged: overall study skills, class attendance, health-related issues, financial difficulties, family and personal issues and physiological symptoms (see Table 25).

Table 25

Themes and Associated Factor

Theme	Factor
Overall study skills	Academic Integration
Class attendance	Academic Integration
Health related issues	Personal Adjustment
Financial difficulties	Personal Adjustment
Family and personal issues	Family and Social Adjustment
Physiological issues	Psychological Factors

The six themes demonstrate potentially important differences between first-generation college students who go on academic probation following academic warning versus first-generation college students who return to academic good standing. These findings have important implications for working with academically struggling first-generation college students and suggest recommendations for faculty and student support services who work with these students. These implications and recommendations are discussed below and organized by each factor in the OAWSA.

Academic integration. The responses from the participants in this study showed a clear discrepancy between first-generation college students who went on academic probation after being on academic warning versus first-generation college students who returned to academic good standing following academic warning. The probationary students clearly attributed their academic struggles to ineffective study skills, conflict

with the professor, undeveloped self-management skills, difficulty concentrating, not having the appropriate skills for college work, and not attending class.

While a university does not have the ability to control all aspects of a student's life, there are practices that can be put into place to help retain students and give them access to resources that they need. These two themes – overall study skills and class attendance – are areas that can be addressed through student support services and other faculty on a university campus. The results of this study suggest it is the responsibility of the university to ensure that first-generation college students are able to flourish in the college environment.

One clear finding from this study is that first-generation college students at the university in the study were not taking the appropriate steps to be academically successful. While it remains to be seen why these students did not pick the appropriate classes, manage themselves appropriately, or even go to class, these are life lessons that do not necessarily need to be learned the hard way. Even the good standing group, which was able to correct some of these academic deficiencies, did not need to struggle in the first place.

Colleges and universities have the ability to work with incoming first-generation students to ensure that they are aware of the skills that are necessary to be successful in this new and challenging environment. For the participants in this study, however, there were clearly not enough resources to ensure that they would gain these skills, or they were not presented in a way that the students felt the need to utilize the available resources.

Academic Integration – Overall study skills. As mentioned in Chapter 4, the first theme from this study was overall study skills. The item related to high school skills was statistically significant and over a quarter of the probationary group reported that ineffective study skills negatively impacted their grades. Additionally, nearly one in five students that were able to return to academic good standing reported that what worked in high school and ineffective study skills were both negatively impacting their grades.

Academic integration: class management techniques including course/class choice. The second theme to emerge from this study is class management techniques including course/class choice. The second item from the academic integration section of the OAWSA to be found statistically significant was not attending class. In addition to skipping class, it was evident through the participants' responses that conflict with professor, undeveloped self (time) management skills, and difficulty concentrating were all negatively impacting their grades. First-generation college students need to understand what is involved in picking appropriate classes, the necessity of attending each and every class, and how to manage themselves given their new and taxing responsibilities.

Recommendations – academic integration. The literature is clear on both the academic adjustment struggles of first-generation college students as well as of students on academic probation. Okun, Benin and Brandt-Williams (1996) and Trombley (2000) argue that the number of courses taken, course grade, intent to persist, and connection with the adviser are all indicators of student success in the university environment. These indicators of student success, as well as the studies focusing on probationary student have

yet to point out first-generation college student status as having any bearing on student success.

The fact that this study found that overall study skills and class management techniques, including course choice negatively impacted grades is a new finding because it clearly illustrates that these indicators were more likely to be found in first-generation probationary students. In fact, undeveloped self-management skills appeared to be a problem for both the probationary and the good standing groups. Additionally, more students that were able to return to good standing reported that conflict with professor negatively impacted their grades. Consequently, these indicators must be addressed when working with first-generation college students on academic warning to help prevent the further demise of their academic standing.

It is evident, both in the literature and in the results of this study, that academically struggling first-generation college students report ineffective study skills, class management techniques, and course selection, all of which negatively impact grades. Although the lack of these academic skills can prove disastrous for students, these are all areas in which the university can provide programming and resources to help first-generation college students avoid these potential pitfalls.

Recommendation #1 - mandatory advising. According to the National Academic Advising Association (NACADA), student learning outcomes for academic advising are based on the institution's mission, values, and core beliefs. NACADA recommends that colleges and universities clearly develop and articulate student learning outcomes and

methods to assess these outcomes. The following is a representative sample of student learning outcomes as they relate to academic advising from the NACADA webpage:

- Students will craft a coherent education plan based on assessment of abilities, aspirations, interests and values.
- Students will use complex information from various sources to set goals, reach decisions, and achieve those goals.
- Students will assume responsibility for meeting academic program requirements.
- Students will articulate the meaning of higher education and the intent of the institution's curriculum.
- Students will behave as citizens who engage in the wider world around them.

One recommendation to mitigate some of the dangers of choosing the wrong courses or not fully understanding the commitment that certain courses require is to mandate academic advising for all first-generation college students prior to term registration. Beyond just having students meet with their adviser, it is necessary to clearly articulate the purpose and intent of advising so that students are aware of their responsibilities in the academic advising process.

More often than not, students wait until they are towards the end of their degree, are in academic trouble, or have taken unnecessary classes before they go and see an academic adviser. The institution that participated in this study does indeed have mandatory advising, however advising is only required for students when they register for their fourth term on campus. While this is a step in the right direction, meeting only

once within a full academic year does not mitigate many of the registration mistakes that students can make when they register without meeting with their adviser. By requiring students to meet with their appropriate adviser prior to term registration, universities can hope to alleviate some of the detrimental decisions that first-generation college students make because they are unfamiliar with the expectations and processes of the university.

Additionally, the literature illustrates how important student-faculty interactions are for first-generation college students. The last several decades of research on student success in a college environment shows that intentional formal and informal student-faculty interactions lead to better academic integration for the student (Pascarella & Terenzini, 2005). Having students meet with their academic adviser prior to term registration would not only help the student in regards to class choice, but it would also provide an opportunity for student-faculty interactions that may not have occurred for the student if they were left to their own devices.

Recommendation #2 – stronger orientation programs. Aside from recommending required academic advising, there is strong evidence in this study of the importance of making sure that students understand what is expected of them in the classroom. Students in the probationary group reported that their classroom management techniques negatively impacted their grades. Because parents of first-generation college students have not earned a four-year degree, it is possible to assume that many of these first-generation college students come to campus with unclear and unrealistic classroom expectations. Kuh et al, (2005) assert that if first-generation college students' perceptions and expectations are not realistic, then it will be more difficult for them to

perform well academically. One arena to in which to address these expectations is orientation.

Many colleges and universities require students to attend new student orientation. These programs vary from campus to campus and the purpose of orientation can range from welcoming new students to registering for courses with many other options as well. Orientation programs can be a place for both students and parents to gain a better understanding of academic expectations. This is particularly helpful for first-generation college students. While it may be hard to offer orientation programs that cover everything a student and her family will need to know, it is important to not overwhelm a student at orientation.

One way to address the needs of new students and their families would be to provide several orientation-type programs. These programs can be spaced throughout the summer or the term and deliver important information in manageable portions. The initial orientation program can provide an overview to both the new students and their families on the differences between high school and college, as well as on general graduation requirements. The follow-up orientations could cover topics related to professor expectations, how to communicate with professors, how many hours of outside school work are expected per credit hour, and information about long-term academic planning. Due to budget and time constraints, these follow-up orientations could be available to students and their families online, which would allow students to take as much time as needed to work through the information.

By creating an orientation program that is more in-depth, but is spread out over several weeks or months, universities can avoid overwhelming new students with more information than they can digest. Additionally, by providing more programming for the families, first-generation college students' parents will feel like they are more a part of the process and will inevitably have a better understanding of what their children will go through when they are at college.

The findings from this study strongly suggest that academically struggling first-generation college students are deficient in areas relating to study skills and classroom management techniques. As educators, it is not possible to change the pre-college characteristics of students, however, it is possible to address the academic adjustment areas that are known to negatively impact students grades. By mandating academic advising and creating stronger, more in-depth orientation programs, universities are able to help students have a better understanding of class choice, the importance of going to class, professor expectations and the differences between high school and college.

Personal adjustment. Another major difference between the probationary and the good standing groups in this study was how health-related issues and financial difficulties impacted their grades. The probationary group reported almost twice as often as the good standing group that the following items negatively impacted their grades; 1) health problems, 2) financial difficulties, and 3) difficulty sleeping at night. Conversely, these results could be viewed from the perspective of the good standing group. This group reports fewer health-related issues and financial difficulties as issues that

negatively impact their grades. The impact of health and financial difficulties on a student can be far reaching, not just in their academic lives, but also their personal lives.

Personal adjustment – health-related issues. The finding that health-related issues have a negative effect on a student's grades is not surprising. The literature illustrates some of the negative consequences that a students with chronic health issues face. According to Royster and Marshall (2008), many students with chronic health issues not only have to deal with the unpredictability of their symptoms and their overall health, but that this unpredictability makes it extremely difficult for students to be successful in the academic realm.

When students suffer from chronic health issues they are dealing with uncertainty, ambiguity, inability to maintain continuous employment, and most importantly they are often unable to complete college courses. Colleges and universities provide resources for students with documented disabilities, however Royster and Marshall (2008) argue that many students with chronic health issues do not view themselves as having a disability. One reason that students do not seek out resources with disabilities offices is the fact that they do not want to disclose their personal health history. Another important phenomenon of students with chronic health issues is that they feel as if college administrators do not fully understand their needs or illnesses (Royster & Marshall, 2008). Chronically ill students want to be as successful in college as healthy students, however, it is necessary for colleges and universities to erase the stigma of chronic health issues and provide resources to aid these students.

Another important finding from this study is that sleeping difficulties have a detrimental effect on a first-generation college student's ability to be academically successful. According to Gaultney (2010), sleep disorders occur at approximately the same frequency in college students as they do in adults. In a recent study examining college students at a large state university, the researcher found that students who were not at risk for a sleep disorder had higher GPAs at a statistically significant level than students who were at risk for a sleep disorder (Gaultney, 2010). This finding shows a distinct link between sleep disorders and academic performance as defined by GPA.

Health-related issues are prevalent on college campuses. Chronic health issues and the inability to sleep have been shown to have a negative impact on a student's grades. The predicament that colleges and universities face is that it is evident how important it is for students to be healthy and live healthy lifestyle's, however, this is one arena where the university may have limited impact. In regards to health-related issues, colleges and universities are stuck between being able to provide resources to specifically help these issues and having students make healthy decisions for their own benefit.

Recommendation #3 – healthy campus initiatives. Based on the findings in this study, it is apparent that the students who are able to correct their academic standing report fewer instances of health-related issues. Based on these findings, colleges and universities would be well advised to create healthy campus initiatives. These initiatives should be designed around healthy living habits, including diet, exercise, sleep regimen, refraining from excessive drinking, and abstaining from illegal drugs.

These initiatives should include educational programs to help students identify and achieve these healthy living habits in the unique surroundings of a college campus. In order to encourage students to participate in these initiatives, universities can provide incentives such as t-shirts, water bottles, and personal training sessions at the recreation center. Although it is a challenge for universities to try to control the habits of its students, they can try to create a culture and climate that embraces healthy lifestyles and encourages everyone to make healthy choices.

Providing education and programming to encourage students to make healthy choices will benefit not only each individual student, but also the university campus at-large. Although universities are not in control of the health-related decisions that each and every student makes, the campus can create a student culture that embodies healthy lifestyle choices, including healthy eating, regular exercise and responsible drinking for those students that choose to drink alcohol.

Personal adjustment – financial difficulties. The true cost of attending college is more than just tuition. Students must pay for textbooks, fees, housing, food, clothing, and other incidentals along the way. With the rising cost of tuition and textbooks, it is becoming increasingly harder for students to afford college without burdening themselves or their families with large amounts of debt. Students whose financial need is not met through family members seek financial assistance through the federal government, private lenders, credit cards, and personal sources of income such as part-time or even full-time work. The burden of paying for school or the burden of working and going to

school can create financial stress in a student's life, specifically within the academic realm.

The findings from this study show a strong correlation between financial difficulties and negative academic standing. The participants in the probationary group reported that financial difficulties negatively impacted their academic success more so than the good standing group. However, nearly a quarter of the good standing students reported that financial difficulties were negatively impacting their grades.

Financial stress has been linked to a number of negative consequences including decreased academic performance. Beyond adverse academic consequences of financial stress, students also experience mental health symptoms as well as physical health concerns (Northern, O'Brien & Goetz, 2010). As higher education practitioners, it may be hard to stop the rising costs of tuition and fees, however, there may be ways to decrease financial difficulties for students.

Recommendation #4 – student food pantry and textbook loan program. Students with unmet financial needs often have to figure out not just how to pay for tuition, but also how to pay for housing, textbooks, food, and clothing. As higher education practitioners, it is unlikely that we can have a meaningful effect on rising tuition costs, however we can work with other students to create programs on campus that help meet some of the needs of our financially struggling students. Based on the findings from this study, it is recommended that in order to address student's financial concerns universities create student-run food pantries and text book loan programs designed to help student meet some of their basic needs.

The first recommendation would be the creation of a food pantry for students. Many colleges and university have food pantries for their students. This type of service can help diminish some of the financial difficulties for students by providing them with food. The creation of a food pantry would require university-wide support as well as outside partners such as the local food bank. Most current models of student run food banks include using student organizations to band together as partners in creating a food pantry. Being able to eat and put food on the table is a basic need for human beings. Students should not have to decide between buying books or food, and having a student-run food pantry can provide basic assistance for students who are hungry and need food.

The second recommendation would be the creation of a textbook loan program through the university. Textbooks are a major expense for students and they are an integral part of being academically successful. Many students wait to purchase their books until they have received their financial aid. If there is any delay in the disbursement of aid, students may spend several weeks in class without their textbooks, which can be detrimental to their academic success. The creation of a textbook loan program could provide students with a way to rent textbooks for the term without having to incur the high prices of actually purchasing the textbook. In order to ensure that the neediest of students are able to participate in this program, the student would need to show that they have unmet need between financial aid and her actual cost of attendance.

It would be next to impossible to provide a program that has all of the textbooks that are in use, however it could provide the more expensive and more widely used textbooks on campus. Because faculty members are responsible for choosing the

textbooks for their courses, it would be imperative to work closely with faculty members to ensure that the program is providing the appropriate edition of each textbook in use. Faculty members could also determine if older editions of the textbooks would be adequate for a student to use. Funding for this project would need to come from outside sources, such as grants and alumni contributions, as well as fundraisers on campus. Perhaps current and former students also could donate old textbooks rather than selling them back to the bookstore to help the greater good of the student body.

A textbook loan program is a new approach to helping students with financial difficulties. This program could not only help students financially, but it could also help them academically. Many students purchase their textbooks after the beginning of the term due to monetary problems. By having an opportunity for students to borrow their textbooks before the term begins, colleges and universities would be helping to set up these students for a successful term, rather than a term in which the student is constantly running to catch up.

Having financial difficulties is nothing new for students, however these financial difficulties could result in negative consequences for their academics. Providing students with additional resources such as food and textbooks could help eliminate some of the stress related to the financial burden of attending college. Until the state and federal governments increase funding for higher education, the burden of being able to afford to go to college falls squarely on the shoulders of the students. As supporters of higher education, it is extremely important to find new and creative ways to help our students in financial distress.

Family and social adjustment. The findings from this study indicate that the participants who were more likely to report personal and family issues were the students who were part of the probationary group. This means that these problems impacted the student's ability to successfully return to academic good standing. Although it is hard to determine exactly what types of personal and family problems the students in this study were dealing with, it is clear that there is a link between students having to handle personal and family issues and the decline in their academic standing.

Family and social adjustment – personal and family issues. Family support is especially important for first-generation college students. It is evident that family support is not only important once a first-generation college student is on campus, but that family support plays a large role in a first-generation college student's intent to enroll (Wang & Castañeda-Sound, 2008). Wang and Castañeda-Sound (2008) argue that first-generation college students are able to handle larger amounts of stress when there is an increased level of family support.

Beyond the importance of family support for first-generation college students, it is evident that first-generation college students are more likely to enroll in fewer credits, work more, and live off campus than their non-first-generation peers. These factors can explain the likelihood for a first-generation college student to be less involved in extracurricular activities and non-course interactions with peers. However, research indicates that extracurricular activities and non-course interactions are known to support student academic success (Pascarella et al., 2004). Additionally, first-generation college students are also less likely to have strong social networks within the campus community.

The literature on probationary students shows a strong correlation between family obligations and students in academic jeopardy (Trombley, 2000). Probationary students also report weaker social networks than students in good academic standing (Coleman & Freedman, 1996). The findings from this study illuminate how impactful family and personal problems can be for first-generation college students. These findings are consistent with the literature on both first-generation students and probationary students. This study is unique in that it examined first-generation college students on academic warning, thereby adding to the list of characteristics of both first-generation college students and probationary students, but most importantly this study illustrated the characteristics of probationary first-generation college students.

Again, family and social support is integral to the academic success of first-generation college students. This is also an area where it is a challenge as an institution to make a meaningful impact in a student's life. However, there are ways in which colleges and universities can reach out to their students who are experiencing personal and family problems.

Recommendation #5 – counseling services and in-hall conflict resolution support programs. While not every student who is going through a personal or family problem will be willing to seek out counseling services, it is important that these services are widely available. For some students the stigma of seeing a counselor can be enough to deter them from utilizing counseling services. Based on the findings of this study as well as the importance for students to utilize counseling services, it is recommended for there to be an anonymous, informal option for students who are seeking short-term counseling.

Furthermore, a university could provide group counseling sessions that handle a variety of topics, such as interpersonal violence, family problems, roommate issues, and life/school balance.

Another option for students with personal or family problems is for college campuses to provide support and workshops dedicated to conflict resolution in the residence halls. Although many first-generation college students do not live on campus, these support services would be aimed at helping students understand the complexity of living with a roommate and how to create an environment that is conducive to academic work. This support could provide the framework for students who choose to live on campus to successfully handle their own personal problems and be competent in mitigating conflict with fellow roommates, classmates and friends. While many universities provide in-hall support, this program would be unique in that it would provide a framework based in conflict resolution. This program is another area of proactive, rather than reactive measures that a university can take. If students are equipped with strategies for handling conflict, they will have better coping skills, which can result in few personal relationship problems.

Students in this study who reported experiencing personal and family issues were more likely to be on academic probation after academic warning than academic good standing. Whenever possible it is important for colleges and universities to provide resources to help students reach their educational goals. While the university may not be able to find a concrete way to help each student with her personal and family issues, there is a need for resources on campus for students that are willing to seek them out.

Psychological factors. This study's findings clearly show a difference between first-generation college students who are able to return to good academic standing after being on academic warning and first-generation college students who go on to academic probation after being on academic warning in regards to pressure, stress, tension and anxiety.

Psychological factors – physiological symptoms. One finding related to psychological factors was the presence of negative physiological states and how these states negatively impacted the participants' grades. Over half of the probationary group reported that pressure, stress, anxiety or tension negatively impacted their grades. These findings are consistent with both the literature on first-generation college students and students on academic probation. Probationary students are more likely to report difficulties with stress management than students that are in good academic standing (Thombs, 1995, Coleman & Freedman, 1996, Austin, Cherney, Crower & Hill, 1997, Trombley, 2000, Isaak et al., 2006). The ability and skill to manage stress in a healthy way is a key to being academically successful. Physiological symptoms, including stress, tension and anxiety, can impact more than just students' academics. These symptoms can impact students' personal and family relationships, which in turn can have a negative effect on students' ability to be academically successful.

Recommendation #6 – stress management workshops. Students are pulled in so many directions that it is inevitable that at some point the stress from school, work, and personal life can take its toll on their academic work. Colleges and universities need to provide education on stress management techniques for their students. These services can

be provided through workshops, videos posted on a website, and group sessions. Colleges and universities could also offer meditation classes as a way to help ease some of the stress that students feel.

It is clear that anxiety and other mental health problems can impact a student's ability to be academically successful. In fact, at the research site for this study, psychological diagnoses account for 51% of all registered users with the Disability Resource Center (DRC). The next largest group of students that utilize the DRC are students that have ADD/ADHD with that accounting for 48% of the total registered students. The DRC reports that the students who struggle the most academically are students who have both psychological and ADD/ADHD diagnoses (D. Kramer, personal communication, March 12, 2012). Whether this is a new trend in colleges and universities, or the stigma of seeking support for students suffering from mental health issues is diminishing, anxiety and other physiological symptoms do indeed cause major problems for many students. Aside from working with the DRC, the university can promote other mental wellness activities, such as regular exercise, healthy life choices, and outdoor activities.

The importance of school-work-life balance should be stressed from the beginning. A new student, especially a first-generation college student, may not fully understand the demands of a university, so it is imperative to give students a realistic perspective of what to expect when classes begin. When new students attend orientation, it is in the best interests of both the university and the students to help them understand the study demands of each credit that they sign up for. This can be done by providing

new students with detailed information regarding the differences between high school and college, including professor expectations, the amount of time one should study outside of class per credit hour, how the academic term is structured and the importance of utilizing as many resources on campus as possible. The transition to college can be stressful and difficult for students, especially first-generation college students. Many students, and their parents, look to the university to aid in this transition and provide resources related to stress management and other physiological factors that can inhibit their academic success.

Final/overall recommendation: mandated college success course. Based on all of the findings from this study, as well as the literature on first-generation college students and probationary students, the researcher recommends a college success course for first-generation college students once they have been placed on academic warning. This course would be designed to introduce a student to the university, its resources and its procedures, including intentional activities, such as meeting with an academic adviser, visiting on campus resource locations, and in-depth coverage of study skills. Additionally, this course would utilize empowerment strategies to increase a student's sense of self-worth and motivation, which would further lead a student to seek out various study strategies.

Utilizing learning theories in the creation of this college success class allows the university to maximize the effect of this class on students. Situated cognitive theory states that human beings are social and that knowing is doing and participating (Driscoll, 2000). A large portion of the college success course would be participatory and would have

students physically seek out the resources that the campus has to offer the students.

Social constructivism utilizes the metaphor of persons in conversation. Cognition occurs through an individual's experience with others (Ernst, 1994). This class would be designed to create intentional student-student and student-faculty interactions both inside and outside of the class.

Beyond creating intentional interactions for students, this course would be designed to ensure that students do many of the things that the university expects them to do (e.g. seeing an adviser prior to registration, visiting the tutoring center, working on a long-term academic plan, recognizing the relationship between major and career, and understanding the importance of a liberal arts education). This course would be designed using the textbook *On Course* by Skip Downing. Downing (2011) uses the following learning objectives in his textbook: accepting personal responsibility, mastering self-management, gaining self-awareness, adopting lifelong learning, developing interdependence, increasing self-motivation and adopting lifelong learning. Additionally, this course is designed to help students improve their writing skills, critical and creative thinking, master effective study skills and access resources.

The literature on the effects of mandating a class is mixed. On the one hand, research regarding a student's perception of a required class, through course evaluations, indicates that students often have lower satisfaction with a required class versus a class they opted to take (Abrami, d'Appollonia, & Cohen, 1990; Cashin, 1995). On the other hand, research indicates that oftentimes students do not opt into a class if it is not

required (Abrami et al., 1995). Therefore, the students that could benefit the most from a particular class do not take it if it is not mandatory.

Because college success courses are designed to solve a myriad of issues for students, this class is a way to address many of the problems that students face in a comprehensive and holistic approach. The six emerging themes that presented themselves in this study - 1) overall study skills, 2) class management techniques including course/class choice, 3) health related issues, 4) financial difficulties, 5) family and personal issues, and 6) physiological symptoms - are all areas that can be addressed in a college success course.

Additionally, there were several areas in which many of the participants struggled regardless of academic standing. These areas – 1) self-management, 2) conflict with professor, 3) financial difficulties, 4) family situations, and 5) physiological symptoms – appear to negatively impact many of the academically struggling first-generation college students. If the college success course was mandated the term following being placed on academic warning, then it would address not only the issues facing the probationary students, but also could assist all academically struggling first-generation college students.

As indicated above and in the literature, college success classes offer students connections to resources on campus, study skills instruction, and a safe space to discuss personal issues. Many college success classes now offer lectures on financial budgeting and stress management options.

Perhaps there is not just one catch-all to help academically struggling, first-generation college students, however a mandated college success course can provide a place to help these students and to address their needs. A mandated college success course can provide a holistic approach to helping struggling students. College success courses offer students much more than just study skills information. Most college success courses are filled with opportunities for students to connect with various resources across campus, as well as work on their inner motivation for why they are attending college in the first-place. Lastly, a college success course is an excellent opportunity for students to set realistic goals for what it is that they hope to accomplish while in college.

Future Research

The findings of this study contribute to the body of knowledge on first-generation college and probationary students, but more specifically this study examined the intersection of first-generation college students and students on academic probation. The literature up to this point has discussed the characteristics, strengths, and needs of both of these groups of students, but this study has taken these two student populations one step further. This exploratory study found several themes that can contribute to the inability of a first-generation college student to return to academic good standing after being placed on academic warning. Additionally, this study made several recommendations to help ensure the academic success of first-generation college students.

Measurement development. One area of future research is developing the OAWSA further into a measurement tool that could be available for other practitioners to utilize. The findings from this exploratory study illuminated areas within academic

integration, personal adjustment, family and social adjustment, and psychological factors that might affect first-generation college students' ability to return to good academic standing. There were several areas within the OAWSA that were grouped together conceptually based on the literature provided in Chapter 2. However, analyses of the internal consistencies of these item sets revealed that several of them were not unidimensional or homogeneous.

Nevertheless, findings from the current study could be used as a springboard for next steps in developing measures that are both conceptually rich and psychometrically sound. First, the items that showed differences between groups could be used as "prototypes" or markers of potentially important areas upon which to focus scale development. Examination of the inter-item correlations involving these marker items could be used to identify other items that are correlated with them, and the internal consistencies of these subsets of items could be tested. Second, building on the literatures described in Chapter 2, a finer-grained conceptual analysis could be used to generate hypotheses about the nature of these subsets and the concepts they might be tapping. Finally, additional items could be generated that cover the conceptual breadth of these concepts, and these could be combined with the surviving items from the original OAWSA in future studies.

Additional research suggestions. The findings of this study illustrate the nuances of academically struggling first-generation college students. However, this study is only a start on the research that is needed. Beyond developing the OAWSA as a measurement tool, there are several suggestions for future research:

- 1) Replicating this study with a larger sample size. Including more students in the sample size would be one way of gaining further insight into the factors that impact first-generation college students' academic standing.
- 2) Replicating this study at other institutions. Multi-institutional studies have the ability to provide a broader perspective. By including other institutions in further research, it can be determined if the factors that impact first-generation college students' academic standing are different on various campuses, or if these factors are universal.
- 3) Comparing first-generation college students to non-first-generation college students. By replicating this study and comparing first-generation college students and their non-first-generation peers, it could be determined if the factors that impact academic standing are truly different for these two groups, or if the factors that impact academic standing are the same for all students regardless of parents' education levels.
- 4) Examining what happened to the students in each group several terms after the initial term on academic warning in terms of their academic standing. It would be of interest to examine the academic standing of all of the participants in this research study beyond the term following academic warning. This would illustrate if the participants in either group were able to return, or stay, on academic good standing. By examining the students' academic standing several terms after the initial term on academic warning, perhaps a trend in academic standing would be evident as it relates to the four factors in this study.
- 5) Long-term longitudinal studies should be conducted to understand the impact of a college success course for first-generation college students. If a university was to mandate a college success course for first-generation college students that go on

academic warning, it would be beneficial to assess the impact of this course by examining academic standing, GPA, and retention of these students until graduation.

Conclusion

In order for colleges and universities to meet President Obama's goal of making the U.S. a leader in higher education by 2020, universities must make a more concerted effort to retain and graduate their students. College students face a myriad of issues that may impact their academic success at a university ranging from transition issues to financial difficulties to health related problems. These issues, among others, can impact all students, but for first-generation college students these issues can be the difference between remaining in academic good standing and being in danger of being academically dismissed. With the population of first-generation college students on the rise on college campuses in the United States and the demands on these students ever increasing, universities need to provide resources to aid these students in reaching their academic and educational potential.

This research study set out to determine if there were items related to the following four factors that impacted academic standing for first-generation college students – 1) academic integration, 2) personal adjustment, 3) family and social adjustment, and 4) psychological factors. The intent of this exploratory study was to provide a range of factors that were shown to either impede or increase a student's likelihood to return to academic good standing the term following being on academic warning.

The literature on first-generation college students provides colleges and universities with an understanding of the challenges that these students face. Because first-generation college students have had neither parent graduate from a four-year university, they are often unfamiliar with university processes and lingo (Cho, Hudley, Lee, Barry & Kelly, 2008). This unfamiliarity, coupled with fact that first-generation students are often academically underprepared for college, gives these students a disadvantage in comparison to their non-first-generation peers.

There have been several studies examining probationary students and students in academic jeopardy. Previous studies have shown that probationary students report difficulties with procrastination, time management, motivation, stress management, personal problems related to family obligations and financial concerns, difficult classes, attendance issues, and instructor issues (Thombs, 1995, Coleman & Freedman, 1996, Austin, Cherney, Crower & Hill, 1997, Trombley, 2000, Isaak et al., 2006). Throughout the literature on probationary students there are several discussions of the need for an intervention for these students and that interventions can lead to an increase in GPA and academic standing (Austin et al., 1997, Coleman & Freedman, 1996, Isaak et al., 2006).

This study was able to replicate many of the findings in the literature on first-generation college students and probationary students. More importantly, this study was able to determine six themes that impact first-generation college students' academic standing. These themes – 1) overall study skills, 2) class management techniques including course/class choice, 3) health related issues, 4) financial difficulties, 5) family

and personal issues, and 6) physiological factors – are related to the four factors that were tested within this research study.

The findings of this study have broad implications and exciting possibilities regarding the ability to improve retention and persistence rates on college campuses if practitioners and administrators provide specific resources related to these findings. Academically struggling first-generation college students that find themselves on academic warning are able to return to academic good standing when given the appropriate tools and resources from the university community. Although it is not always the responsibility of the university to help students in all facets of their life, it is apparent that there are many contributors of academic success, or failure, and that the university is the quite possibly the most appropriate venue to help students reach their academic potential.

References

- Abdi, H (2007). "Bonferroni and Šidák corrections for multiple comparisons". In N.J. Salkind (ed.). *Encyclopedia of Measurement and Statistics*. Thousand Oaks, CA: Sage.
- Abrami, P., d'Apollonia, S., & Cohen, P. (1990). Validity of student ratings of instruction: What we know and what we do not. *Journal of Educational Psychology*, 82(2), 219-231.
- Allen, D. (1999). Desire to finish college: An empirical link between motivation and persistence. *Research in Higher Education*, 40, 461-485.
- Austin, M, Cherney, E, Crowner, J, & Hill, A. (1997). The forum: Intrusive group advising for the probationary student. *NACADA Journal*, 17(2), 45-47.
- Bandura, A. (1994). Self-efficacy. In V.S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).
- Bean, J. (1983). The application of a model of turnover in work organizations to the student attrition process. *The Review of Higher Education*, 6(2), 129-148.
- Chickering, A. U.S. Department of Health, Education and Welfare, Office of Education (1976). *The young adult - a conceptual framework*. Plainfield, VT.
- Chickering, A. & Reisser, L. (1993). *Education and identity*. San Francisco: Jossey-Bass.
- Clark, M. (2006). Succeeding in the city: Challenges and best practices on urban commuter campuses. *About Campus*, July-August, 2-8.

- Cho, S., Hudley, C., Lee, S., Barry, L., & Kelly, M. (2008). Roles of gender, race, and SES in college choice process among first-generation and nonfirst-generation students. *Journal of Diversity in Higher Education, 1*(2), 95-107.
- Coalition of Urban Serving Universities. (2010). *Urban universities: Anchors generating prosperity for America's cities*. Washington, DC.
- Cohen, J. (1998). *Statistical power analysis for the behavioral sciences*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Coleman, H., & Freedman, A. (1996). Effects of a structured group intervention on the achievement of academically at-risk undergraduates. *Journal of College Student Development, 37*, 631-636.
- Collier, P., Morgan, D. (2008). "Is that paper really due today?": Differences in first-generation and traditional college students' understandings of faculty expectation. *Higher Education, 55*, 425-446.
- Covington, M. (2000). Goal theory, motivation, and school achievement: An integrative review. *Annual Review of Psychology, 51*, 171-200.
- Cress, C. (2008). Creating inclusive learning communities: The role of student-faculty relationships in mitigating negative campus climate. *Learning Inquiry, 2*, 95-111.
- de Bilde, J., Vansteenkiste, M., & Lens, W. (2011). Understanding the association between future time perspective and self-regulated learning through the lens of self-determination theory. *Learning and Instruction, 21*, 332-344.

- Deci, E., & Ryan, R. (2000). The “what” and “why” of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268.
- Deci, E., & Ryan, R. (2008). Self-determination theory: a macrotheory of motivation, human development, and health. *Canadian Psychology, 49*, 182-185.
- Deil-Amen, R., & Tevis, T. (2010). Circumscribed agency: The relevance of standardized college entrance exams for low SES high school students. *The Review of Higher Education, 33*(2), 141-175.
- Driscoll, M. (2000). Situated Cognition. In *Psychology of Learning* (pp 152-180). Boston: Allyn & Bacon.
- Dumais, S. (2002). Cultural capital, gender, and school success: The role of habitus. *Sociology of Education, 75*(1), 44-68.
- Dweck, C. (1999). *Self-theories: Their role in motivation, personality, and development*. Philadelphia: Taylor & Francis.
- Downing, S. (2011). *On course*. Boston: Cengage Learning.
- Eccles, J., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology, 53*, 109-132.
- Elias, H., Noordin, N., & Mahyuddun, R. H. (2010). Achievement motivation and self-efficacy Relation to Adjustment among University Studetns. *Journal of Social Science , 6*, 333-339.
- Elias, R. (2008). Anti-intellectual attitudes and academic self-efficacy among business students. *Journal of Education for Business, 84*(2), 110-116.
- Elliott, P. (1994). *The urban campus: Educating the new majority for the new century*. Phoenix: Oryx Press.

- Ernst, P. (1994). Varieties of constructivism: Their metaphors, epistemologies and pedagogical implications. *Hiroshima Journal of Mathematics Education*, 2, 1-14.
- Friedman, B., & Mandel, R. (2009). The prediction of college student academic performance and retention: Application of expectancy and goal setting theories. *Journal of College Student Retention*, 11(2), 227-246.
- Garn, A., Mathews, M., & Jolly, J. (2010). Parental influences on the academic motivation of gifted students: a self-determination theory perspective. *Gifted Child Quarterly*, 54(4), 263-272.
- Garnett, D. (1990). *Retention strategies for high-risk students at a four-year university*. NACADA Journal, 10(1), 22-25.
- Gaultney, J. (2010). The prevalence of sleep disorders in college students: Impact on academic performance. *Journal Of American College Health*, 59(2), 91-97.
- Goodman, K., Pascarella, E. (2006). First-year seminars increase persistence and retention: A summary of the evidence from how college affects students. *Peer Review*, 8(3), 26-28.
- Goodwin, G. & Markham, W. (1996). First encounters of the bureaucratic kind: Early freshmen experiences with a campus bureaucracy. *Journal of Higher Education*, 67, 660-691.
- Harackiewicz, J., Barron, K., Tauer, J., Carter, S., & Elliot, A. (2000). Short-term and long-term consequences of achievement goals: Predicting interest and performance overtime. *Journal of Educational Psychology*, 92, 316-330.

- Harackiewicz, J., Barron, K., Tauer, J., & Elliot, A. (2002). Predicting success in college: a longitudinal study of achievement goals and ability measures as predictors of interest and performance from freshman year through graduation. *Journal of Educational Psychology, 94*, 562-575.
- Heisserer, D. & Parette, P. (2002). *Advising at-risk students in college and university settings*. College Student Journal, 36, 69-83.
- Hossler, D. (2006). Preparing for college: nine elements of effective outreach. *Journal of Higher Education, 77*, 553-557.
- Horwedel, D. (2008). Putting first-generation students first. *Diverse Issues in Higher Education, 25*(5), 10-12.
- Isaak, M, Graves, K, & Mayers, B. (2006). Academic, motivational, and emotional problems identified by college students in academic jeopardy. *Journal of College Student Retention, 8*(2), 171-183.
- Ishanti, T. (2003). A longitudinal approach to assessing attrition behavior among first-generation students: Time-varying effects of pre-college characteristics. *Research in Higher Education, 44*, 433-449.
- Jackson, T., Fritch, A., Nagasaka, T., & Pope, L. (2003). Procrastination and perceptions of past, present, and future. *Individual Differences Research, 1*, 17-18.
- Jamelske, E. (2009). Measuring the impact of a university first-year experience program on student GPA and retention. *Higher Education, 57*, 373-391.

Jones, S. (2011). Freedom to fail? The board's role in reducing college dropout rates.

Trusteeship, 2-5.

Kelley, K. (1996). Causes, reactions, and consequences of academic probation: a theoretical model. *NACADA Journal*, 16(1), 28-34.

Kitsantas, A., Winsler, A., & Huie, F. (2008). Self-regulation and ability predictors of academic success in college: A predictive validity study. *Journal of Advanced Academics*, 20(1), 42-68.

Kuh, G., & Hu, S (2001). The effects of student-faculty interaction in the 1990's. *The Review of Higher Education*, 24, 309-332.

Lent, R. (2004). Toward a unifying theoretical and practical perspective on well-being and psychosocial adjustment. *Journal of Counseling Psychology*, 51, 482-509.

Lent, R., Taveira, M., Sheu, H., & Singley, D. (2009). Social cognitive predictors of academic adjustment and life satisfaction in Portuguese college students: A longitudinal analysis. *Journal of Vocational Behavior*, 17, 190-198.

Lipskey, S, & Ender, S. (1990). Impact of a study skills course on probationary students' academic performance. *Journal of the Freshman Year Experience*, 2(1), 7-15.

Lumina Foundation for Education. (2010). A stronger nation through higher education. Retrieved from http://www.luminafoundation.org/goal_2025/goal2.html.

Malgwi, C., Howe, M., & Burnaby, P. (2005). Influences on students' choice of college major. *Journal of Education for Business*, 80, 275-282.

- McKay, V., & Estrella, J. (2008). First-generation college student success: The role of faculty interaction in service learning courses. *Communication Education*, 57, 356-372.
- Miller, B. (2010). Charts you can trust. More is less: Extra time does little to boost college grad rates. Retrieved from <http://www.educationsector.org/publications/more-less-extra-time-does-little-boost-college-grad-rates>.
- National Academic Advising Association. Retrieved from <http://www.nacada.ksu.edu/Clearinghouse/AdvisingIssues/Concept-advising-introduction.htm>
- National Center for Educational Statistics. (2010). *Digest of educational statistics*. Retrieved from <http://nces.ed.gov/programs/digest/d10/figures.asp>.
- National Survey of Student Engagement (NSSE). (2005). *Student engagement: Exploring different dimensions of student engagement*. Bloomington, IN: Indiana University Center for Postsecondary Research.
- National Survey of Student Engagement (NSSE). (2010). *Major differences: Examining student engagement by field of study*. Bloomington, IN: Indiana University Center for Postsecondary Research.
- Nora, A. (1987). Determinants of retention among Chicano college students: A structural model. *Research in Higher Education*, 26, 31-58.
- Norman, G. (2008). Likert scales, levels of measurement and the “laws” of statistics. *Advances in Health Sciences Education Theory and Practice*, 15, 625-632.

- Northern, J., O'Brien, W., & Goetz, P. (2010). The development, evaluation, and validation of a financial stress scale for undergraduate students. *Journal of College Student Development, 51*(1), 79-92.
- Pascarella, E., Pierson, C., Wolniak, G., & Terenzini, P. (2004). First-generation college students. Additional evidence on college experiences and outcomes. *The Journal of Higher Education, 75*, 249-284.
- Pascarella, E., & Terenzini, P. (2005). *How college affects students: Volume 2: A third decade of research*. San Francisco: Jossey-Bass.
- Perneger, Thomas V. (1998). What's wrong with Bonferroni adjustments, *British Medical Journal, 316*, 1236-1238.
- Perry, W. (1981). Cognitive and ethical growth: The making of meaning. *The modern American college*. San Francisco: Jossey-Bass.
- Petersen, I., Louw, J. & Dumont, K. (2009). Adjustment to university and academic performance using disadvantaged students in South Africa. *Educational Psychology, 29*(1), 99-115.
- Phinney, J., Dennis, J., & Osorio, S. (2006). Reasons to attend college among ethnically diverse college students. *Cultural Diversity and Ethnic Minority Psychology, 12*, 347-366.
- Reisser, L. (1995). Revisiting the seven vectors. *Journal of College Student Development, 36*, 505-511.

- Ringwalt, C. L., Paschall, M. J., & Gitelman, A. M. (2011). Alcohol Prevention Strategies on College Campuses and Student Alcohol Abuse and Related Problems. *Journal Of Drug Education, 41*(1), 99-118.
- Robbins, S, Lauver, K, Le, H, Davis, D, Langley, R. & Carlstrom, A. (2004). Do psychosocial and study skills factors predict college outcomes? A meta-analysis. *Psycholgoical Bulletin, 130*, 261-288.
- Royster, L., & Marshall, O. (2008). The chronic illness initiative: Supporting college students with chronic illness needs at DePaul University. *Journal Of Postsecondary Education And Disability, 20*(2), 120-125.
- Ryan, R., & Deci, E. (2002). An overview of self-determination theory. In E. Deci & R. Ryan (Eds.), *Handbook of self-determination research: Theoretical and applied* (pp. 3-36). Rochester, NY: Rochester Press.
- Schneider, M. (2010). Finishing the first lap: The cost of first-year student attrition in America's four-year colleges and universities. Washington, DC: American Institute for Research.
- Terenzini, P., Rendon, L., Upcraft, M., Millar, S., Allison, K., Gregg, P., & Jalomo, R. (1994). The transition to college: Diverse students, diverse stories. *Research in Higher Education, 35*(1), 57-73.
- Thombs, D. (1995). Problem behavior and academic achievement among first-semester college freshmen. *Journal of College Student Development, 36*, 280-288.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: University of Chicago Press.

Tinto, V. (1996). Reconstructing the first year of college. *Planning for Higher Education*, 25(1), 1-6.

Tobolowsky, B. (2005). *The national survey on first-year seminars: Continuing innovations in the collegiate curriculum*. Columbia, SC: University of South Carolina, National Resource Center for The First-Year Experience and Students in Transition.

Trombley, C. (2000). Evaluating students on probation and determining intervention strategies: a comparison of probation and good standing students. *Journal of College Student retention*, 2, 239-251.

U.S. Department of Education, National Center for Education Statistics. (2010). *The condition of education*. Retrieved from <http://nces.ed.gov/programs/coe/>.

Vuong, M., Brown-Welty, S., & Tracz, S. (2010). The effects of self-efficacy on academic success of first-generation college sophomore students. *Journal of College Student Development*, 51(1), 50-64.

Wang, C., & Castañeda-Sound, C. (2008). The role of generational status, self-esteem, academic self-efficacy, and perceived social support in college students' psychological well-being. *Journal of College Counseling*, 11, 101-118.

The White House (2010). Education. Retrieved from the White House web site:

<http://www.whitehouse.gov/issues/education>

White, W., Scotter, W., Hartoonian, H., & Davis, J. (2007). The problem: Democracy at risk. *The Social Studies*, 98, 228-230.

Zimbardo, P. & Boyd, J. (1999). Putting time in perspective: a valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77, 1271-1288.

Appendix A: Online Academic Warning Self-Assessment

Complete this assessment and be prepared to discuss these topics with the academic advisor. The goals of the meeting with the adviser include, or the workshop, include:

Evaluating current class schedule and making changes as needed,
 Explaining the Academic Standing policy at PSU,
 Identifying obstacles from the previous term that impacted your academic success,
 Discussing pertinent resources at PSU.

Required answers: 0 Allowed answers: 0

Q1 Please enter the following information:

Name:[Code = 1] [TextBox]

E-mail:[Code = 2] [TextBox]

Phone (cell number appreciated):[Code = 3] [TextBox]

Major:[Code = 4] [TextBox]

Academic advisor:[Code = 5] [TextBox]

PSU ID #:[Code = 6] [TextBox]

Required answers: 0 Allowed answers: 6

Q2 Campus involvement (clubs/orgs, Greek Life, Learning Communities, etc.):

[Code = 1] [TextBox]

Required answers: 0 Allowed answers: 1

Q3 Are you a first-generation college student (i.e., neither parent graduated from a college or university)?

Yes[Code = 1]

No[Code = 2]

Required answers: 1 Allowed answers: 1

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Academic

In reviewing your academic performance, to what degree have these obstacles negatively impacted your grades?

Q4 Ineffective study skills

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Q5 Undeveloped self (time) management skills

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Always[Code = 5]	
	Required answers: 1 Allowed answers: 1

Q6 Unprepared for exams	
Never[Code = 1]	
Rarely[Code = 2]	
Sometimes[Code = 3]	
Most of the time[Code = 4]	
Always[Code = 5]	
	Required answers: 1 Allowed answers: 1

Q7 What worked in high school doesn't work anymore	
Never[Code = 1]	
Rarely[Code = 2]	
Sometimes[Code = 3]	
Most of the time[Code = 4]	
Always[Code = 5]	
	Required answers: 1 Allowed answers: 1

Q8 Difficulty concentrating/daydreaming	
Never[Code = 1]	
Rarely[Code = 2]	
Sometimes[Code = 3]	
Most of the time[Code = 4]	
Always[Code = 5]	
	Required answers: 1 Allowed answers: 1

Q9 Difficult classes/not prepared for course level	
Never[Code = 1]	
Rarely[Code = 2]	
Sometimes[Code = 3]	
Most of the time[Code = 4]	
Always[Code = 5]	
	Required answers: 1 Allowed answers: 1

Q10 Conflict with professor	
Never[Code = 1]	
Rarely[Code = 2]	
Sometimes[Code = 3]	
Most of the time[Code = 4]	
Always[Code = 5]	
	Required answers: 1 Allowed answers: 1

Q11 Unable to understand course content or find relevance in course material	
Never[Code = 1]	
Rarely[Code = 2]	
Sometimes[Code = 3]	
Most of the time[Code = 4]	
Always[Code = 5]	
	Required answers: 1 Allowed answers: 1

Q12 Registered for too many classes

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Q13 Did not attend/skipped class

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Q14 Uncomfortable/oppressive classroom climate

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Major/Career

In reviewing your academic performance, to what degree have these obstacles negatively impacted your grades?

Q15 Uncertain about current major

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Q16 Changed major one or more times

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Q17 Unsure what jobs are associated with major

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Q18 No clear career goals

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1

Allowed answers: 1

Q19 Not sure why I'm in school

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1

Allowed answers: 1

Q20 PSU may not be the place for me

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1

Allowed answers: 1

Personal/Other

In reviewing your academic performance, to what degree have these obstacles negatively impacted your grades?

Q21 Financial difficulties

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1

Allowed answers: 1

Q22 Health problems

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1

Allowed answers: 1

Q23 Difficulty getting out of bed in the morning

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

		Required answers: 1	Allowed answers: 1
Q24 Use or abuse of alcohol or other substance(s)			
Never[Code = 1]			
Rarely[Code = 2]			
Sometimes[Code = 3]			
Most of the time[Code = 4]			
Always[Code = 5]			
		Required answers: 1	Allowed answers: 1
Q25 Possible learning disability			
Never[Code = 1]			
Rarely[Code = 2]			
Sometimes[Code = 3]			
Most of the time[Code = 4]			
Always[Code = 5]			
		Required answers: 1	Allowed answers: 1
Q26 Difficulty sleeping at night			
Never[Code = 1]			
Rarely[Code = 2]			
Sometimes[Code = 3]			
Most of the time[Code = 4]			
Always[Code = 5]			
		Required answers: 1	Allowed answers: 1
Q27 Pressure, stress, anxiety or tension			
Never[Code = 1]			
Rarely[Code = 2]			
Sometimes[Code = 3]			
Most of the time[Code = 4]			
Always[Code = 5]			
		Required answers: 1	Allowed answers: 1
Q28 Excessive time spent online (Facebook, YouTube, Gaming, etc.)			
Never[Code = 1]			
Rarely[Code = 2]			
Sometimes[Code = 3]			
Most of the time[Code = 4]			
Always[Code = 5]			
		Required answers: 1	Allowed answers: 1
Q29 Over-involved with extra-curricular activities			
Never[Code = 1]			
Rarely[Code = 2]			
Sometimes[Code = 3]			
Most of the time[Code = 4]			
Always[Code = 5]			
		Required answers: 1	Allowed answers: 1
Q30 Lack of motivation			

Never[Code = 1]
Rarely[Code = 2]
Sometimes[Code = 3]
Most of the time[Code = 4]
Always[Code = 5]
Required answers: 1 Allowed answers: 1

Q31 Working too much
Never[Code = 1]
Rarely[Code = 2]
Sometimes[Code = 3]
Most of the time[Code = 4]
Always[Code = 5]
Required answers: 1 Allowed answers: 1

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Q32 How many hours per week do you work? (Please enter numerals and decimals only)

[Code = 1] [TextBox - Numeric]

Required answers: 0 Allowed answers: 1

Display if Q31='Sometimes' OR Q31='Most of the time' OR Q31='Always'

Family/Social Adjustment

In reviewing your academic performance, to what degree have these obstacles negatively impacted your grades?

Q33 Roommate issues
Never[Code = 1]
Rarely[Code = 2]
Sometimes[Code = 3]
Most of the time[Code = 4]
Always[Code = 5]
Required answers: 1 Allowed answers: 1

Q34 Personal relationship issues
Never[Code = 1]
Rarely[Code = 2]
Sometimes[Code = 3]
Most of the time[Code = 4]
Always[Code = 5]
Required answers: 1 Allowed answers: 1

Q35 Interpersonal violence
Never[Code = 1]
Rarely[Code = 2]
Sometimes[Code = 3]
Most of the time[Code = 4]
Always[Code = 5]
Required answers: 1 Allowed answers: 1

Q36 Family situation

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Q37 Moved away from home/homesick

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Q38 Difficulty adjusting to college life

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

Q39 Hard to make friends/loneliness

Never[Code = 1]

Rarely[Code = 2]

Sometimes[Code = 3]

Most of the time[Code = 4]

Always[Code = 5]

Required answers: 1 Allowed answers: 1

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Q40 Please explain why you selected "interpersonal violence" as an obstacle:

[Code = 1] [TextBox]

Required answers: 0 Allowed answers: 1

Display if Q35='Sometimes' OR Q35='Most of the time' OR Q35='Always'

Q41 Please explain why you selected "family situation" an obstacle:

[Code = 1] [TextBox]

Required answers: 0 Allowed answers: 1

Display if Q36='Sometimes' OR Q36='Most of the time' OR Q36='Always'

Q42 What **academic resources, campus connections, or networks** have you utilized at PSU (e.g., Peer Tutoring and Learning Center, Disability Resource Center, Counseling and Psychological Services, Writing Center)? (Check all that apply)

Peer Tutoring and Learning Center[Code = 1]

Disability Resource Center [Code = 2]

Undergraduate Advising and Support Center[Code = 3]

Writing Center[Code = 4]

Math Lab[Code = 5]	
Counseling and Psychological Services[Code = 6]	
Health Services[Code = 7]	
Testing Services[Code = 8]	
Financial Aid[Code = 9]	
Orientation[Code = 10]	
Library[Code = 11]	
Student Support Services[Code = 12]	
Diversity and Multicultural Student Services[Code = 13]	
Multicultural Center[Code = 14]	
Education Abroad[Code = 15]	
National Student Exchange Program[Code = 16]	
Native American Student Services[Code = 17]	
Child Development and Family Services[Code = 18]	
Housing[Code = 19]	
Career Center[Code = 20]	
Ombuds Office[Code = 21]	
Student Government[Code = 22]	
Student Activity and Leadership Programs (please specify in which program(s) you participate)[Code = 23] [TextBox]	
Veterans Services[Code = 24]	
Queer Resource Center[Code = 25]	
Women's Resource Center[Code = 26]	
Legal Services[Code = 27]	
College of Liberal Arts and Sciences Advising[Code = 28]	
International Student Services[Code = 29]	
Admissions Registration and Records[Code = 30]	
Campus Recreation[Code = 31]	
Academic Department(s) (please list with which department(s) you have connected)[Code = 32] [TextBox]	
Other (please specify)[Code = 33] [TextBox]	
I have not used any academic resources, campus connections, or networks.[Code = 34]	
Required answers: 1	Allowed answers: 33

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Please indicate your level of agreement with the following statements:

Q43 I am not interested in activities that will expand my horizons.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1

Allowed answers: 1

Q44 I live life one day at a time and don't really think about the future.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q45 I don't want to try new ways of doing things--my life is fine the way it is.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q46 I tend to focus on the present, because the future nearly always brings me problems.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q47 My daily activities often seem trivial and unimportant to me.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q48 When I think about it, I haven't really improved much as a person over the years.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q49 I don't have a good sense of what it is I'm trying to accomplish in life.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q50 I used to set goals for myself, but that now seems like a waste of time.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q51 I do not enjoy being in new situations that require me to change my old familiar ways of doing things.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q52 I gave up trying to make big improvements or changes in my life a long time ago.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q53 I sometimes feel as if I've done all there is to do in life.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Q54 There is truth to the saying you can't teach an old dog new tricks.

Strongly disagree[Code = 6]

Moderately disagree[Code = 5]

Slightly disagree[Code = 4]

Slightly agree[Code = 3]

Moderately agree[Code = 2]

Strongly agree [Code = 1]

Required answers: 1 Allowed answers: 1

Please indicate your level of agreement with the following statements:

Q55 I think it is important to have new experiences that challenge how you think about yourself and the world.

Strongly agree[Code = 6]

Moderately agree[Code = 5]

Slightly agree[Code = 4]

Slightly disagree[Code = 3]

Moderately disagree[Code = 2]

Strongly disagree[Code = 1]

Moderately disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 1 Allowed answers: 1

Q56 I have the sense that I have developed a lot as a person over time.

Strongly agree[Code = 6]

Moderately agree[Code = 5]

Slightly agree[Code = 4]

Slightly disagree[Code = 3]

Moderately disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 1 Allowed answers: 1

Q57 I enjoy making plans for the future and working to make them a reality.

Strongly agree[Code = 6]

Moderately agree[Code = 5]

Slightly agree[Code = 4]

Slightly disagree[Code = 3]

Moderately disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 1 Allowed answers: 1

Q58 I am an active person in carrying out the plans I set for myself.

Strongly agree[Code = 6]

Moderately agree[Code = 5]

Slightly agree[Code = 4]

Slightly disagree[Code = 3]

Moderately disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 1 Allowed answers: 1

Q59 For me, life has been a continuous process of learning, changing, and growth.

Strongly agree[Code = 6]

Moderately agree[Code = 5]

Slightly agree[Code = 4]

Slightly disagree[Code = 3]

Moderately disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 1 Allowed answers: 1

Q60 Some people wander aimlessly through life, but I am not one of them.

Strongly agree[Code = 6]

Moderately agree[Code = 5]

Slightly agree[Code = 4]

Slightly disagree[Code = 3]

Moderately disagree[Code = 2]

Strongly disagree[Code = 1]

Required answers: 1 Allowed answers: 1