BEYOND ACCESS TOWARDS SUCCESS FOR FIRST-GENERATION COLLEGE STUDENTS OF UNDERREPRESENTED ETHNIC BACKGROUNDS: THE ROLE OF COLLEGE ADJUSTMENT AND PERCEIVED STRESSORS ON ACADEMIC ACHIEVEMENT DURING THE FIRST YEAR

Shannon Williams
DePaul University, swilli54@depaul.edu

Follow this and additional works at: https://via.library.depaul.edu/csh_etd

Part of the Community Psychology Commons

Recommended Citation
https://via.library.depaul.edu/csh_etd/207

This Dissertation is brought to you for free and open access by the College of Science and Health at Digital Commons@DePaul. It has been accepted for inclusion in College of Science and Health Theses and Dissertations by an authorized administrator of Digital Commons@DePaul. For more information, please contact digitalservices@depaul.edu.
BEYOND ACCESS TOWARDS SUCCESS FOR FIRST-GENERATION COLLEGE STUDENTS OF UNDERREPRESENTED ETHNIC BACKGROUNDS:
THE ROLE OF COLLEGE ADJUSTMENT AND PERCEIVED STRESSORS ON ACADEMIC ACHIEVEMENT DURING THE FIRST YEAR

A Dissertation
Presented in Partial Fulfillment of the Degree of
Doctorate of Philosophy in Community Psychology

BY
SHANNON MARIE WILLIAMS

April 3, 2017

Department of Psychology
College of Science and Health
DePaul University
Chicago, IL
DISSENTATION COMMITTEE

Joseph R. Ferrari, Ph.D.

Chairperson

Luciano Berardi, Ph.D.

Bernadette Sanchez, Ph. D.

David Kalsbeek, Ph.D.

Marie Donovan, Ph.D.

Committee Members
ACKNOWLEDGMENTS

I am beyond appreciative for the guidance I have received from my advisor and dissertation chair, Dr. Joseph R. Ferrari. He has been supportive throughout my graduate career and has afforded me with a plethora of professional development opportunities that have steered me towards several of my accomplishments. Additionally, I am very grateful to my committee, Dr. Luciano Berardi, Dr. Bernadette Sanchez, Dr. David Kalsbeek, and Dr. Marie Donovan for their engaging dialogue, leadership and direction, especially in the focus on using our work and expertise to truly make a difference in the lives of those underserved. In addition, I thank the Center for Access & Attainment for their continued support, contributions, funding, and dedication to enriching research and experiences surrounding DePaul University’s values and community.

And last but certainly not least, I would like to thank my family, my baby sister Ariana, my mother Sheila, and my brother Richard, for being such a tremendous support system for me throughout my college career and understanding the rigors and necessity of the academic world. I also want to thank my close friends for their care and involvement in my many endeavors. And I express my gratitude to all of my classmates and colleagues who have added to my personal and professional growth.
VITA

The author was born in Chicago, Illinois, July 3, 1986. She graduated from Proviso West High School and received her Bachelor of Arts degree from DePaul University in 2009, as a low-income and first-generation college student from multiple ethnicities. Additionally, the author received her Masters of Arts degree in Community Psychology from DePaul University in 2012. She is currently pursuing her doctoral degree in Community Psychology at DePaul University where she had the opportunity to engage in the Global Growth Experience (GGE) in Dublin, Ireland in 2013, teaching and conducting research. Additionally, the author worked in various research labs, with the Center for Access & Attainment Lab, the TRiO McNair Scholars Program, and now the TRiO Student Support Services Program, assisting low-income, first-generation college students, and marginalized/underserved students succeed in college and beyond.
TABLE OF CONTENTS

Dissertation Committee ............................................................................................................. ii
Acknowledgements .................................................................................................................. iii
Vita ........................................................................................................................................ iv
Table of Contents .................................................................................................................... v
List of Tables ............................................................................................................................. ix
List of Figures ............................................................................................................................ x
CHAPTER I INTRODUCTION ........................................................................................................... 1
  The State of Higher Education for Underrepresented Student Populations ......................... 1
    First-Generation College Students ......................................................................................... 3
  Social and Academic Adjustment to College: Challenges to Predictors for Success .......... 4
    Tinto’s Model of College Integration and Retention ......................................................... 6
      Critiques of Tinto’s model ................................................................................................. 7
      Tinto’s Model Expanded/Revised ..................................................................................... 8
      Current use of Tinto’s Model ........................................................................................... 9
    First-Generation College Students: Factors Impacting Educational Success ................. 11
      Students’ Backgrounds/Pre-college characteristics ..................................................... 11
        Combination of First-Generation Status and Low-Income Status ............................ 12
        Combination of First-Generation Status and Ethnic Minority Background ................... 14
      Academic Adjustment ...................................................................................................... 15
      Pre-College Barriers ........................................................................................................ 15
      Obstacles during College ............................................................................................... 17
Social Adjustment........................................................................................................19
Campus Perceptions, Interactions, and Institutional Fit.......................................19
Social Involvement.................................................................................................21

Purpose of the Present Study..................................................................................22
Rationale..................................................................................................................24
Statement of Hypotheses.........................................................................................27
Hypothesis I: College Adjustment & GPA............................................................27
Hypothesis II: Social/Academic Adjustment & GPA.............................................27
Exploratory Research Question: Additional Academic Stressors.........................27

CHAPTER II. METHOD..........................................................................................29
Participants.............................................................................................................29
Psychometric Measures.........................................................................................30
College Adjustment...............................................................................................30
Academic Achievement..........................................................................................32
Perceptions of Academic Stressors.........................................................................32
Demographic & Educational Information...............................................................32
Procedure...............................................................................................................33

CHAPTER III. RESULTS.........................................................................................35
Preliminary Analyses..............................................................................................35
Hypothesis I.............................................................................................................38
Preliminary Analyses for Hypothesis 2.................................................................41
Hypothesis II..........................................................................................................42
Structural Equation Modeling (SEM).......................................................................43
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploratory Research Question</td>
<td>46</td>
</tr>
<tr>
<td>Qualitative Themes</td>
<td>47</td>
</tr>
<tr>
<td>Academic Stressors</td>
<td>47</td>
</tr>
<tr>
<td>Financial Stressors</td>
<td>48</td>
</tr>
<tr>
<td>Out of School Issues</td>
<td>49</td>
</tr>
<tr>
<td>Issues with Institutional Personnel/Understanding</td>
<td>50</td>
</tr>
<tr>
<td>CHAPTER IV. DISCUSSION</td>
<td>52</td>
</tr>
<tr>
<td>Longitudinal Data Results</td>
<td>53</td>
</tr>
<tr>
<td>Hypothesis I</td>
<td>53</td>
</tr>
<tr>
<td>Hypothesis II</td>
<td>57</td>
</tr>
<tr>
<td>Exploratory Qualitative Analyses: Additional Academic Stressors</td>
<td>61</td>
</tr>
<tr>
<td>Implications for Higher Education and Policy</td>
<td>65</td>
</tr>
<tr>
<td>Institutional Commitment and Inclusion</td>
<td>65</td>
</tr>
<tr>
<td>Implications for Community Psychology</td>
<td>68</td>
</tr>
<tr>
<td>Necessary Programming</td>
<td>68</td>
</tr>
<tr>
<td>Continual Assessments</td>
<td>69</td>
</tr>
<tr>
<td>Limitations in the Present Study</td>
<td>71</td>
</tr>
<tr>
<td>Future Research</td>
<td>73</td>
</tr>
<tr>
<td>Additional Qualitative Analyses in Appendix</td>
<td>74</td>
</tr>
<tr>
<td>CHAPTER V. SUMMARY</td>
<td>76</td>
</tr>
<tr>
<td>References</td>
<td>79</td>
</tr>
<tr>
<td>Appendix A. Students Adaptation to College Questionnaire</td>
<td>93</td>
</tr>
<tr>
<td>Appendix B. Perceptions of Academic Stressors</td>
<td>98</td>
</tr>
</tbody>
</table>
Appendix C. List of Demographic & Educational Variables........................................100
Appendix D. Additional Qualitative Analyses at T2..................................................104
Appendix E. Financial Support & Affordability..........................................................107
Appendix F. Institutional Tasks & Institutional Data Impacts.......................................112
Appendix G. Examples of Successful Programming/Services & TRIO Department of Education Programs .................................................................117
LIST OF TABLES

1) Table 1: Bivariate Pearson Correlations, Mean Scores & Standard Deviations for Variables included in the Study ................................................................. 36
2) Table 2: Mean Scores, Standard Deviations, & T-Test Scores for Variables by Gender ........................................................................................................... 37
3) Table 3: Main Effects for All Subscales by Ethnicity & College Generation Status .............................................................................................................. 39
4) Table 4: Main Effects for All Subscales by Ethnicity (White or Ethnic Minority) & College Generation Status (First-Generation College or Non) ............... 40
5) Table 5: Mean Scores, Standard Deviations, & T-Test Scores for GPA, Social Adjustment & Academic Adjustment at Time 1 by First-Generation College Status & Ethnicity ................................................................. 42
6) Table 6: Model 1: Goodness Indicators of Structural Model Comparisons .............................................................................................................. 45
7) Table 7: Outline of Exploratory Themes and Categories for Academic Stressors Qualitative Item ............................................................................................... 51
LIST OF FIGURES

1) Figure 1: Model 1: SEM Path Analysis between First-Generation College Status/Ethnic Background and GPA overtime, mediated by Social Adjustment at T1 (n = 87) .......................................................... 44
CHAPTER I

Introduction

The transition from high school to the first year in college is critical for students. During the first attendance at college, students make a choice to continue on in the following years, with particular regards to their social and academic integration (Johnson, Soldner, Leonard, Alvarez, Inkelas, Rowan-Kenyon, & Longerbeam, 2007). Research notes that the first year of college may often be the most difficult to maneuver and adjust to because of varying stressors related to social, academic, physical and psychological issues, along with emotional and personal development, leading to many failed degree completions (Hicks & Heastie, 2008; Thompson, 2008; Wintre & Yaffe, 2000). College integration and completion may be further deterred with additional challenges for varying student groups, including off-campus responsibilities, financial burdens, and attending college as the first one within a family (Engle & Tinto, 2008; Thompson, Orr, Thompson, & Grover, 2007). With percentage rates for college dropouts at 20-30% in the first year, it is important to determine which groups may struggle the most and why, and to define what aids in student retention (Thompson, 2008).

The State of Higher Education for Underrepresented Student Populations

A college education is crucial for future employment standards and challenges the lack of income equality, as seen by the link between educational level and occupation status (Korn, 2015; Loya, 2014; Engle & Tinto, 2008; Albertini, 2004), and improves personal development in terms of social, civic, and personal relationships (Spittle, 2011). Despite the importance of a college education, research suggests that in higher levels of education there are lower rates of participation and completion across the U.S. student population (Lewis, et al., 2008). While the U.S. has done well with students attending college, there has been a decline in college
completion, particularly compared with other countries (Engle & Tinto, 2008). Within six years, almost half of students who begin college do not complete their degree (U.S. Dept. of Ed., 2016). The lack of college participation and college outcomes has become a national dilemma, with goals to increase the rate of college completion to 60% by 2020 (Spittle, 2011).

Recent past U.S. President, Barack Obama, focused on prioritizing education, which included ensuring that the U.S. holds the rank for most college degrees (Minor, 2015). It is essential to note that the group of students transitioning from high school to college is changing considerably, and thus there is a particular focus on students underrepresented in higher education. National college attendance and completion goals however appear detached from the changes that are required for a progressively diverse world in terms of increasing access and attainment (Spittle, 2011). With the national rise of diversity, there is an ever increasing number of ethnic minority and low-income students at the university level, as well as those who are the first in their family to go to college, yet these groups are still underrepresented in higher education (Cardoza, 2016; Korn, 2015; Engle & Tinto, 2008; Tinto, 2006; Ancis, Sedlacek, & Mohr, 2000; Tierney, 1992). Even with the increase in diverse student groups (and despite their college ambitions: ACT, 2015), underrepresented youth struggle with obstacles to social mobility with a lack of high academic achievement and/or college drop-out rates (Fain, 2015; Irving & Hudley, 2005). Consistent with the diversity changes, it will be necessary to ensure that underrepresented student groups access and achieve a higher education in order for the U.S. to continue to strive towards a strong educational standard (COE, 2016). With the focus on increasing the number of underrepresented students attending and graduating from college, attention to understanding their challenges and improving their transition to college may be imperative to their success.
First-generation college-students. Terezini, Springer, Yaeger, Pascarella, and Nora (1996) claimed that there would continue to be an increase in the number of first-generation college students (FGC; students whose parents lack a postsecondary education allowing these students to be the first in the family to attend college) attending higher institutions of learning. In 1995-96, about 34% of the student population at four-year institutions (as well as 53% of two-year college students) were first-generation college students, and, in 2005, about a third of the U.S. college student population were FGC (Kuh, et al., 2006; Pascarella, Pierson, Wolniak, & Terenzini, 2004). Again over the past decade, about a third of students were FGC according to the National Center for Education Statistics (Cardoza, 2016; U.S. Department of Education, 2012). About 65% of the nation’s millennials (currently ages 18-34) are first-generation college students (COE, 2016b).

While it is important for colleges to note that there are high numbers of the first-generation college student population, FGC tend not to complete college degrees in a timely manner, have lower college retention rates in contrast to traditional students (Demetriou & Schmitz-Sciborski, 2011; Ishitani, 2006), and are less likely to attend graduate and professional schooling (Engle & Tinto, 2008; Pascarella et al., 2004). Only about a quarter of first-generation college students obtained college completion (Majer, 2009; Eitel & Martin, 2009). Currently, first-generation college students are dropping out of college at rates twice as much as students who are not first-generation, with only about eleven percent of first-generation, low-income students reaching 4-year college completion (Erbentraut, 2015). By the sixth year in college, while 55% of students who were not first-generation college students earned a college degree, in contrast, only 40% of first-generation college students by their sixth year earned a degree (Cardoza, 2016). First-generation college students have high attrition rates by the end of the first
year in college (Eitel & Martin, 2009), as they face multiple barriers to educational attainment (Garcia, 2010). These obstacles, before arriving and once on a college campus, include academic, social, family and financial aspects (Cardoza, 2016; Erbentraut, 2015). Access to and assistance with college, therefore, are necessary, not only to get students to college, but in staying and completing college (Spittle, 2011).

**Social and Academic Adjustment to College: Challenges to Predictors for Success**

College adjustment has a large influence on college grades and college persistence (Crede, & Niehorster, 2012). College adjustment is particularly important during the first year of college where academic achievement and retention may be obstructed (Katz & Somers, 2015). The authors of the College Adjustment measure (used in the current study) found that a higher percentage of students tended to drop-out of college if they were less well-adjusted early on in their college careers (Baker & Siryk, 1986). *College adjustment* is defined as being multifaceted including a plethora of aspects that students must deal with in various ways, consisting of academics, social and interpersonal relationships, emotional distress, and attachment to the institution (College Adjustment Scale; Baker & Siryk, 1986). Positive academic and social aspects of college adjustment are particularly crucial to student college success, as students become more committed to completing their degree with a better connection to the university (ACT, 2015; Thompson, et al., 2007; Bordes & Arredondo, 2005). Research shows that students with higher adjustment are more likely to persist in college, which includes more campus engagement, social interactions, and more positive university perceptions (Katz & Somers, 2016; Lewis, et al., 2008). The experiences students have at college, including expectations and interactions with faculty, staff and students, impact institutional commitment, academic development, and degree obtainment (Arbona & Nora, 2007).
First-generation college students, who tend to feel disempowered and marginalized, reported fewer role models, less campus involvement (Kuh, et al., 2006), lower college adjustment and higher rates of dropout, compared to traditional students (Aspelmeier, et al., 2012). Adjustment may also be more difficult for first-generation college students of ethnic groups differing from the prevalent campus culture (Kuh, et al., 2006), as first-generation college students from minority ethnic groups have lower academic achievement and retention compared to traditional students (Dennis, Phinney, & Chuateco, 2005). One study found that environmental factors, including lack of peer support, negatively influenced GPAs and college adjustment for first-generation college students from minority ethnic backgrounds (Dennis, et al., 2005). Adjustment is a challenge for students who might feel a sense of isolation, considered low social adjustment (Crede, & Niehorster, 2012), and is one of the reasons 40% of all students will not end up earning a college degree, and over 50% of college students who drop out do so before beginning their second year of college (Thompson, et al., 2007). This low social adjustment may be particularly impactful for those from underrepresented groups in higher education, with limited social and academic connections (e.g. few interactions with faculty, a lack of community), leading to high dropout and low retention rates (Engle & Tinto, 2008; Thompson, et al., 2007).

Two studies found that adjustment and retention rates increased with conveying information to students about college during their first year (Baker & Siryk, 1986). One of those studies noted how letting anxious first-year students know that academics get progressively better after the first year led to improved grades, self-belief, and college retention. The social belonging interventions by Walton and Cohen (2011) also had a targeted message in providing students with information that they are not alone in their struggles, particularly for
underrepresented student groups during their first year in college. Students would learn about the barriers that other students were dealing with in an effort to show them that obstacles do not have to keep them from reaching their academic goals, improving underrepresented students’ academic achievement and sense of belongingness (Walton & Cohen, 2011). In order for students to be more adjusted to college, and particularly in the academic realm, they may need to perceive that they have an ability to steer their way through and connect to this new academic and social atmosphere (Hurtado, Han, Saenz, Espinosa, Cabrera, & Cerna, 2007). Institutions may be able to facilitate adjustment, within academic as well as social structures for students, that ultimately impact college persistence.

**Tinto’s Model of College Integration and Retention**

According to Tinto’s *college integration/retention model* (1975, 1982, 1988), student precollege and background characteristics along with institutional integration inform student drop out and development. This framework suggests that institutional factors along with students’ preexisting attributes impact the transition to and completion of college. Tinto’s model, emphasizing the first year of college, theorized that social and academic integration were particularly relevant for students, for their college experience and engagement, and for whether they persist on a campus (Tinto, 1975; 1982; 1988; 2006). While students enter college with certain individual characteristics that impact their expectations, goals and commitment, the academic system on campus and social interactions with other students and faculty ultimately help influence those goals, and eventually the choice to stay in college (Tinto, 1975). Tinto highlighted that the college environment, including campus connections, perceptions, and perceived barriers, impact students’ choice and ability to stay (Upcraft, et al., 2005).
Critiques of Tinto’s model. Tinto’s longitudinal integration model, while still one of the most widely used and referred to student retention models (Tierney & Sablan, 2014; Braxton, et. al., 2013; Palmer, et al., 2011; Demetriou & Schmitz-Sciborski, 2011; Kuh, et al., 2006; Tierney, 1992, 1997; Bean & Metzner, 1985; McCubbins, 2003; Metz, 2002), has dealt with considerable criticisms (Tierney, 1992, 1997, 1999; Palmer, et al., 2011; McCubbins, 2003; Metz, 2002; Braxton, et al., 2013; Braxton, Sullivan, & Johnson, 1997). Tinto incorporated Durkheim’s suicide and Van Gennep’s rites of passage approaches to suggest that students need to adapt to the mainstream college society in order to find educational success, including the need to leave behind their cultures and communities (Tierney, 1992, 1997, 1999; Palmer, Davis, & Maramba, 2011; Kuh, et al., 2006; McCubbins, 2003; Metz, 2002). Essentially, Tinto proposed that it is up to individuals, where the blame lies if not done so successfully, to fit within the dominant traditional culture regardless of identities and historical contexts.

Even though Tinto maintained that he wanted to move away from earlier research that focused on “blaming the victim” (Tinto, 2006), researchers noted that Tinto’s use of the dominant cultural framework incorporated determining problem groups and did not shift focus over to the institutions (Tierney, 1992, 1999). Many scholars have worried about Tinto’s focus on assimilating to the campus majority cultures (Tierney & Sablan, 2014; Tierney, 1992, 1997, 1999; Palmer, et al., 2011), views that align with setting up a continued structure that may work for some but not others, particularly for underrepresented student groups (Tierney, 1992, 1997, 1999; Palmer, et al., 2011; Kuh, et al., 2006; Braxton, et al., 1997).

Some of the first research studies on college persistence of minority populations were in the 1990s, where they had been a limited focus on diverse populations with a push to continue to explore retention models, especially given the changing demographics (Demetriou & Schmitz-
Researchers (including Tinto himself) noted, that the aforementioned theory, and other traditional models of student persistence, did not account for varying views of diverse student groups, with a focus on overarching views rather than separate groups (Tierney, 1992; Tinto, 1975, 1982, 2006; Palmer, et al., 2011; Kuh, et al., 2006; Upcraft, et al., 2005; McCubbins, 2003). Tinto’s retention work, however, prompted researchers to look at the disparities that exist for underrepresented groups in higher education (first-generation college students, low-income, and students of color) in terms of access, engagement, and achievement (Tierney & Sablan, 2014). With the ever increasing diversity of the student population yet lack of success rates (including low college persistence), Tinto later acknowledged the limited research that speaks to clarifying why these gaps exist, particularly with the intersection of underrepresented groups who may struggle even more (Tinto, 1975; 2006). Tinto noted that it was imperative that institutions better understand underrepresented students’ experiences along with what impacts their retention rates (Tinto, 2006), yet some of his latest work still has not focused on the variances of first-generation college students (Loya, 2014).

**Tinto’s model expanded/revised.** Some research focused less on the social aspects of Tinto’s model and more on environmental and academic variables for underrepresented student groups in terms of academic outcomes impacting persistence (e.g. Bean & Metzner, 1985). While Tinto maintained that college persistence is influenced by the connections between the student and the institution, he eventually took crucial environment aspects into account, though originally with more of a focus on students separating from their communities via the rites of passage viewpoint (Metz, 2002; Tinto, 2006). The environmental factors, which Tinto’s model was critiqued for omitting, included work and family responsibilities, shortage of time for
school, a lack of financial resources, external supports, transfer plans/options, external stress, and even college time demands (Bean & Metzner, 1985; Palmer, et al., 2011; McCubbins, 2003; Metz, 2002; Braxton, et al., 1997). Additional research included financial aid, student involvement, other institutional aspects, and faculty interactions in expanding and assessing the model (Palmer, et al., 2011; McCubbins, 2003; Metz, 2002). Tinto also revised his model to expand academic integration options (McCubbins, 2003; Metz, 2002), goal commitments, (Demetriou & Schmitz-Sciborski, 2011) and financial resources (Braxton, et al., 2013).

Despite the drawbacks of Tinto’s original model and mixed study results, many researchers noted that social and academic integration were necessary for educational success and have continued to test the model in varying aspects, stressing the need for assessing underrepresented groups (Tierney, 1992; Braxton, et. al, 2013; Palmer, et. al., 2011; McCubbins, 2003; Metz, 2002). Researchers highlighted the importance of breaking down analyses into subcategories of students regarding Tinto’s model and determining whether both social and academic aspects, and in what capacity, are necessary for underrepresented student groups (Palmer, et al., 2011; McCubbins, 2003; Bean & Metzner, 1985). Tinto later recognized that looking into diverse groups would be necessary (Demetriou & Schmitz-Sciborski, 2011), particularly given that students who dropout are more likely to be from small isolated, non-status quo groups, who may go unnoticed (Tinto, 1975; 1982).

**Current use of Tinto’s model.** The current study focused on the intersectionality of first-generation college students with particular emphasis on ethnic minority backgrounds along with their academic and social adjustment perceptions and potential needs. This study explored whether the first year in college included difficult transitions for underrepresented students compared to traditional students, which may impact retention. More specifically, the current
study compared background characteristics (generation college status and ethnic background) on college adjustment (social, academic, emotional, and attachment to institution), and academic achievement (college GPA) by the end of the first year in college, controlling for the beginning of the 1st year in college, to determine differences in perceptions of campus adjustment over-time. Research notes how adjustment to college and GPA scores at the end of the first year in college strongly reflect college persistence (Aspelmeier, Love, McGill, Eliot, & Pierce, 2012; Upcraft, et al., 2005). The longitudinal design allowed for an over-time comparison to better understand the transition phase that may impact diverse student groups differently.

Tinto denoted that social adjustment and academic development, along with GPA scores, are important factors in determining student college integration and retention (Tinto, 1975). In this sense, college adjustment and GPA scores are crucial to target to get an understanding of future rates of college departure. The current study also examined Tinto’s model to determine whether large social or academic adjustment differences accounted for lower GPA scores at Time 2, which may impact retention, for underrepresented background characteristics (first-generation college students across ethnic backgrounds: minority ethnic backgrounds and White). While Tinto did not focus on underrepresented groups, researchers indicated that it is important to recognize that experiences differ for varying groups of students (Demetriou & Schmitz-Sciborski, 2011). First-generation college students, who are also from minority ethnic backgrounds, might deal with additional stressors that warrant attention and exploration for better understanding (Kuh, et al., 2006).

The present use of Tinto’s retention model may help us capture whether the combination of first-generation college students and ethnic minority students, who may also be low-income, impacts adjustment to college and academics differently compared to majority student groups,
but it will not help us understand why. A qualitative component was added to the present study to gather and explore student perspectives, in their own voices, of key stressors that were overlooked by Tinto’s integration model. Qualitative research was designated as important by researchers to better understand the experience of underrepresented students in higher education, particularly as retention decisions are impacted by students’ perceptions of their college experiences (Palmer, et al., 2011; Walton & Cohen, 2011; McCubbins, 2003; Tinto, 1997; Braxton, et al., 1997; Tierney, 1994). These students, (i.e. students with a combination of underrepresented background characteristics: first-generation college status and minority ethnic backgrounds), may be struggling in multiple ways not captured in the current model, as it does not account for other barriers outside of institutional academic and social adjustment.

**First-Generation College Students: Factors Impacting Educational Success**

While there are many variables that were found across research in over 30 years that impact student retention, the top factors include demographic characteristics, financing college, and academic and social engagement (Demetriou & Schmitz-Sciborski, 2011). These factors will be incorporated and framed here around the first-generation college student experience.

**Students’ backgrounds/Pre-college characteristics.** There are pre-college characteristics (characteristics prior to college entry) which may deter first-generation students from continuing college and lead to higher college attrition compared to other students (Ishitani, 2006; Pascarella et al., 2003), even above and beyond academic abilities (Kuh, et al., 2006). Background characteristics and pre-college experiences, including family income, ethnicity, family educational levels, previous high school training and achievement, and lower academic expectations are thus important to assess when determining retention (Ishitani, 2006; Pascarella, et al., 2003; Braxton, Milem, & Sullivan, 2000). First-generation college students differ from
their non-first-generation counterparts in terms of ethnicity, gender, age, socioeconomic status (Aspelmeier, et al., 2012; Eitel & Martin, 2009). For instance, first-generation college students tend to be older than traditional students, female, and more likely from a lower-income family (Garcia, 2010; Engle & Tinto, 2008; Kuh, et al., 2006; Pascarella, Wolniak, Pierson, & Terenzini 2003). For low-income students, parental education and ethnic background are crucial characteristics in terms of college, where they tend to be from ethnic minority backgrounds and the first in their family to go to college (Engle & Tinto, 2008; Kuh, et al., 2006). First-generation college students are also highly and disproportionately represented by minority ethnic groups, particularly African-American and Latino (recently over 40% combined) (Cardoza, 2016; Erbentraut, 2015; NCES, 2012; Engle & Tinto, 2008; Kuh, et al., 2006), and therefore may face even more challenges.

**Combination of first-generation status and low-income status.** High achievement gaps and dropout rates between the low- and high-income student groups have continued to skyrocket (Brookings Institution, 2016; Guidry, 2015). According to a report from the University of Pennsylvania and the Pell Institute for Study of Opportunity in Higher Education, 77% of students from the highest income bracket received at least a bachelor’s degree by age 24, whereas only 9% of students from the lowest income bracket reached degree completion by 2013 (Korn, 2015). Recent trends show that less than half of students from the lowest income bracket enrolled in college with a 20% completion rate, whereas 81% of students from the highest income bracket enrolled with a 99% college completion rate (Korn, 2015).

First-generation college students tend to be from low-income families with great financial need, where financial aid does not cover enough of the college cost (Demetriou & Schmitz-Sciborski, 2011). The Council for Opportunity in Education found that first-generation college
students noted financial aid as their highest concern, along with 4 of their other main distresses involving college costs and expenses (COE, 2016c). There may be a lack of awareness of the funds necessary to attend college which may be another factor that deters first-generation college students from continuing to further their education (Garcia, 2010). Educational policies also appear to deter low-income students, particularly those with high academic needs (Tinto, 2006). Issues that have added to the access problem for underrepresented groups include high tuition costs, decreases in adequate/affordable financial aid availability, and high debt even when students drop out (U.S. Dept. of Ed., 2016; Korn, 2015; Jaschik, 2015; Holtschneider, 2014).

High student loan fees and tuition costs often make college unaffordable, inaccessible, and unattainable for low-income students, as there is seven times less of a chance that low-income students will complete a college degree compared to higher-income students (Jaschik, 2015; U.S. Dept. of Ed., 2016).

According to the Federal Reserve Board data, while poor students struggle with tuition costs through various jobs, loans, and scholarships, students from rich families (about 61% of college students) are able to have a portion or all of their school paid for (White, 2015). Research notes that while most low-income students work to support themselves through college, over 20 hours of work each week is correlated with lower grades and graduation rates (New, 2016b). First-generation college students who are also low-income tend to work over 20 hours a week, impacting study time, campus interactions, and college persistence (Engle & Tinto, 2008). Whereas students from wealthier families are able to get financial resources from their parents to help pay tuition and other costs, other students struggle with debt for years to come, and may not be able to complete their college degrees (White, 2015).
Compared to traditional students, with the noted age and economic differences, first-generation students have numerous responsibilities outside of the classroom that may add to their existing stress and often cause them to leave school before finishing their degree (Minor, 2015; Ishitani, 2006). Even with first-generation students’ motivation to pursue an education to impact their future and families, they often find themselves with a lack of time to delegate to school tasks and with variety of life demands that interfere with their success. These additional stressors include working too many hours, caring for family members, issues related to poverty and homelessness, struggling to pay for college, taking out many loans, and often a lack of available support from family and community members (New, 2016b; Noce, 2015; Davis, 2010).

*Combination of first-generation status and ethnic minority background.* Graduation rates are highly tied not only to income status and college generation status, but to ethnic background as well (U.S. Dept. of Ed, 2016; Demetriou & Schmitz-Sciborski, 2011). There tends to be an intermingling of underrepresented background characteristics. For instance, students from minority ethnic groups tend to be first-generation college students (Demetriou & Schmitz-Sciborski, 2011), and are more likely to be of a lower socioeconomic status, where research noted that that financial aid is important for this combination group (Tierney, 1999). More Black and Hispanic children in 2013 were also living in poverty than White students (NCES, 2016), which may have an impact on many of the aspiring and current college students.

Significant gaps exist across ethnic groups in terms of college enrollment rates (Strayhorn, 2009), where ethnicity also predicts persistence and educational attainment (Brookings Institution, 2016; Lewis, Frierson, Strayhorn, Yang, & Tademy, 2008). While about 70% of public, 4-year colleges have found increased graduation rates overall in the last decade, rates for students of color have dropped or remained the same at over half of four-year public
institutions, increasing the gap between majority and minority ethnic groups (New, 2016). For instance, bachelor degree or higher attainment rates by at least age 25 were lower for Black (19%) and Hispanic populations (14%) in 2013 in comparison to White students (33%) (NCES, 2016). Total college enrollment rates were lower for Hispanic and Black students (34% for both groups) compared to White students (42%) in 2013 (NCES, 2016). Barriers to employment also become more of an issue for disadvantaged students with low graduation rates (Heinrich & Holzer, 2011). With educational disparities in student groups across ethnicity, income status, and college generation, further research is necessary amongst these populations (Kuh, et al., 2006), particularly given that challenges related to social, academic, and financial issues make college retention and graduation difficult.

**Academic Adjustment.**

**Pre-college barriers.** There are barriers before reaching the college level that may detour underrepresented students from entering college and from being prepared to take on the new academic arena. In some cases, students from underrepresented populations may often be overlooked by top colleges when coming from under-resourced schools despite their high levels of talent (New, 2016). For instance, many high-achieving students coming from underrepresented groups lack in college enrollment or tend to go to less rigorous universities or community college, whereas high-ranked universities have a tendency towards social and economic homogeny (Spittle, 2011). Only three percent of low-income students are enrolled in the best schools, whereas seventy-two percent of students in those institutions are from wealthy families (U.S. Dept. of Ed., 2016). Under 10 percent of educational institutions enroll over forty-percent of low-income students and also ensure that completion rates are high (U.S. Dept. of Ed., 2016). While these students might benefit from a variety of college experiences, many
underrepresented student groups are not reaching college level, or when they do so their attainment rates are not reflective of the majority population. The poor distribution among higher education institutions serving historically underrepresented groups in higher education (i.e. low-income, ethnic minorities and first-generation college students) shows the lack of access to college for these groups of students. The enrollment statistic may showcase the need for additional efforts by higher education institutions to provide campus supports for underrepresented student groups but also the necessity of better programming at the high school level to ensure preparation for college.

Many low-income and first-generation college students come to college with less of a rigorous pre-college academic training than traditional students that interferes with college success (Cardoza, 2016; Holtschneider, 2014). Schools in lower-economic communities that many first-generation college students attend, for instance, do not have many opportunities for advanced classes, nor even in helping students understand the college admissions process or in preparing for entrance exams (Garcia, 2010; Pascarella et al., 2004). First-generation college students also report they are less prepared for college level academic responsibilities (Garcia, 2010; Terezini et al., 1996), and may not feel that they ready for college while overcoming hurdles during the application process and then again with trying to manage their college coursework. Students in low-income areas as well as first-generation college students may not be aware of the rigor of colleges and may become disillusioned with the daunting tasks related to the academic requirements of universities.

First-generation college students also had less access to college knowledge and were less aware of college dynamics, which may impact their college attendance (Demetriou & Schmitz-Sciborski, 2011; Pascarella et al., 2004). With the limited knowledge of college before attending,
often times first-generation college students have not planned beyond the first year in college, including costs, leading to further struggles in transitioning to the second year of college and dropout (Minor, 2015). Research shows that students are not only more likely to attend college if their parents graduated from college (Garcia, 2010; Terezini et al., 1996), but non-first-generation college students have the added benefit of exposure to college knowledge early along with financial support from their parents, adding to stronger academic, social and cultural resources for this group (Minor, 2015). With more awareness of the collegiate environment, traditional students’ college experiences tend to be more positive, as compared to first-generation college students, in terms of academics and student involvement (Pascarella et al., 2004).

Additionally, students who have mentors or family members that have attained high levels of education tend to have more positive academic outcomes along with more optimistic educational expectations (Sanchez, Esparza, & Colon, 2008). First-generation college students, on the other hand, tend to find it difficult to connect with campus personnel, particularly when the college atmosphere may seem strange and new to them (Garcia, 2010). These students then often focus more on outside family and friendship ties, who may provide other forms of supportive relationships for college (Palmer, et al., 2008), that may assist in keeping them from acclimating to college life. Underrepresented students may therefore have additional barriers to college success through navigating and trying to understand the college culture while also balancing the new academic arena.

**Obstacles during college.** Along with college enrollment and access issues, there are other barriers underrepresented students may face once they reach the academic arena. Barriers to college persistence not only include precollege characteristics, such as family educational levels, prior academic experiences and achievements, but also financial issues, along with family
contexts and work responsibilities (Arbona & Nora, 2007; Fry, 2002). Socioeconomic status, financial aid, and responsibilities may complicate the lives of first-generation college students with a negative impact on social integration and academics (Ishitani, 2006). Social and academic engagement and retention may be deterred for first-generation college students even when they have a strong focus on academics, especially for those who are also low-income and often are not able to live on campus due to high costs (Noce, 2015; New, 2016b; Demetriou & Schmitz-Sciborski, 2011; Engle & Tinto, 2008). Financial aid assistance may also be necessary to continue with taking courses, but a lack of financial aid and low income status are not the only barriers that may play a role in first-generation college student success (Holtschneider, 2014). They also struggle with full-time enrollment and higher level coursework with a limited time for studying because of work and family obligations that may interfere with the opportunity to be fully immersed in the academic and social atmosphere on campus (Arbona & Nora, 2007; Ishitani, 2006; Pascarella et al., 2003).

Even after taking demographic characteristics and academic preparation into account, there are factors during the college experience that impact underrepresented students’ college persistence (Engle & Tinto, 2008). Additional factors that play a role in student and campus engagement, besides precollege features, include social support, encouragement, and school and community environments (Arbona & Nora, 2007; Fry, 2002). While academic achievement and test scores continue to be worse for minority ethnic groups in comparison to majority students (Brookings Institution, 2016), Fry (2004) noted that prior preparations and student background may not be the leading issues but how well schools integrate students and motivate them to succeed. Academic integration incorporates student perceptions of their academic development and connections along with concerns they receive from faculty in the classroom (Braxton, et al.,
One study found that traditional students with more positive faculty perceptions had better grades in school, whereas first-generation college students tended to feel less faculty concern and interest towards their student development and less encouragement from friends (Engle & Tinto, 2008; Terezini et al., 1996). High expectations and available resources, conversely, have been shown to be a protective factor, or safeguard, for academic attainment regarding underrepresented populations (Sanchez, et al., 2008; Acs & Loprest, 2005; Warburton et al., 2001). Research indicated nevertheless that ethnic minority students struggle with achieving academically because of low self-esteem, worrying about failure, and lack of encouragement (Cardoza, 2016; Reid & Radhakrishnan, 2003; Terrell, Terrell, & Miller, 1993). Another study found that self-esteem declines for ethnic minority groups when they perceive negative peer interactions and limited faculty expectations related to their academics (Strayhorn, 2009). Minority students may also have low expectations of their personal abilities and success when they perceive insurmountable barriers (Irving & Hudley, 2005), an additional issue for underrepresented populations with limited resources before entering college. Besides the anxieties faced by all college students, first-generation college students not only face more difficult cultural and academic transitions, but also social transitions (Pascarella et al., 2004; Terezini et al., 1996).

Social Adjustment.

Campus perceptions, interactions, and institutional fit. First-generation college students, ethnic minorities, and low-income students struggle with fitting in on college campuses and feeling that they belong (Minor, 2015; Tough, 2014). When first-generation college students attend an unfamiliar place such as college on their own, they often feel a lack of belonging, a lack of association and few similar people to connect with, and believe that they are not meant to
be a part of the college and social atmosphere (Minor, 2015). Even when first-generation college students feel prepared for college and the environment, they often express feelings of not fitting in, having no one to turn to, and a lack of campus support (Guerra, 2015). These dynamics help to prevent gaining a sense of belonging on campus. Often times first-generation college students feel that there is a lack of connection with the students and the faculty that they can relate to once they start college, and thus some of such students end up leaving or transferring (Guerra, 2015). Research showed that support from mentor relationships assists in guiding students to have stronger ties to the institution (Sanchez, et al., 2008). In order for students to believe in their abilities and continue to work towards their goals, social support and guidance are beneficial (Zimmerman et al., 1992). Without the necessary mentorship and links to resources, students may be faced with inadequate preparation and knowledge for moving forward and feeling that they belong. College institutions may benefit from being aware of the perceptions and connections of first-generation college students to structure them towards gaining a sense of belonging, and building their knowledge and understanding of college resources.

Research showed, however, that when a variety of other variables are taken into account (e.g. pre-college characteristics and aspirations), first-generation students still tend to attend less selective institutions in comparison to other students (Pascarella et al., 2004). The lack of familiarity with the university system, for instance, leads many first-generation college students to attend two-year colleges and often on a part-time basis (Garcia, 2010). While many first-generation students do not start nor complete college degrees, when they do attend college it is often with less selective schools that may seem more comforting and welcoming. Research noted that two-year colleges may appear more accommodating for first-generation status students with less threatening environments, cheaper prices, and better accessibility (Engle & Tinto, 2008;
Pascarella, et al., 2003). It is important to note how the decisions related to attending and completing a college degree may leave these students more at risk in terms of academic levels, and economic and social ties that may impact their future career and job opportunities.

Students decide to continue attending schools based on their interactions and connections with the campus environment (Ishitani, 2006), as the connection between the social aspects of a university and a student impacts their social integration (Braxton, et al., 2013). First-generation college students tend to have varying social experiences and perceive their institutions in a different light as compared to traditional students (Terezini et al., 1996). First-generation college, for instance, students not only feel as though they do not belong on campus, but they also report feeling unwelcomed and isolated (Guerra, 2015; Engle & Tinto, 2008). Students who are the first in their families to go to college typically reported discrimination related to gender and to ethnic identities (Engle & Tinto, 2008; Terezini et al., 1996). Ethnic minority students may also feel unwelcomed, particularly when they do not see how they fit in on a campus, which may lead to negative interactions with school life and impede them from fully benefiting from college experiences (Strayhorn, 2009; Kuh, et al., 2006). With their varying family and institutional cultures, students from diverse backgrounds struggle with trying to separate from one culture and assimilate into the other, yet not feeling that they fit in (Engle & Tinto, 2008). When students have a lack of campus interactions and negative experiences related to college, they may eventually no longer attend college, whereas more positive interactions may allow students to be further committed to school (Garcia, 2010).

**Social involvement.** Research suggests school involvement may have a positive impact on school related endeavors (Garcia, 2010; Ishitani, 2006; Pascarella et al., 2004). The student involvement theory denotes that being actively involved on campus and socially integrated is
important for continuing on in college and leads to learning and personal development benefits (Garcia, 2010; Pascarella et al., 2004). Higher involvement for first-generation college students leads to positive academic outcomes from year to year (Pascarella et al., 2004). Social and peer network engagement from first-generation college students has been shown to not only be beneficial academically but also lends to a greater sense of control over their college lives (Pascarella et al., 2004). Extracurricular involvement, for example, allows these students the chance to be exposed to more aspects of college life, including meeting other students and becoming more familiar with college culture that may have otherwise been unknown.

Even though first-generation students can be enriched considerably from being more engaged in school life, literature recognizes that this group of students has fewer avenues to be involved with other duties and barriers (Pascarella et al., 2004) where they may focus more on academics than social engagement (Engle & Tinto, 2008). First-generation college and low-income students, therefore, may not have as much of an option to be involved on campus, as other commitments lead to less time for school involvement or even attending college full-time. Higher institutions of learning may benefit from making connections with students to facilitate academic and social integration by providing more suitable opportunities of involvement. Doing so would allow underrepresented student groups to have a deeper sense of institutional inclusion, including campus involvement and connections to necessary supports (Minor, 2015; Terenzini et al., 1996), which may positively impact their college environment engagement and retention.

**Purpose of the Present Study**

The current study examined factors affecting *first-generation college students* (FGC) who tend to have lower academic achievement and finish college at lower rates, compared to non-first-generation college students (NFGC). The current study explored whether first-generation
college students, particularly of *ethnic minority groups* in higher education, felt less adjusted to college and reported lower GPA scores (at the end of their 1st year in college) compared to NFGC students, of any ethnic group. The current study proposed that the combination of FGC/ethnic minority students would report lower GPAs, and would perceive a lower adjustment to college (in terms of social and academic adjustment, but also including attachment to institution and emotional adjustment) overtime (6-8 months between measurement waves) than NFGC students of any ethnic background (Caucasian or ethnic minority), and compared to FGC/ethnic majority students (Caucasian).

Decades and decades of research promote the importance of social and academic college integration in terms of college retention (Minor, 2015). While social and academic integration have been deemed crucial by Tinto for traditional students in terms of academic achievement and retention, the current study examined whether *social or academic adjustment* differences would make an impact in *GPA* overtime for underrepresented students. It was proposed that any difference in social or academic adjustment at T1 between student groups would not be a significant factor for first-generation college students of traditional ethnic minority groups comparative to their FGC counterparts of the majority ethnic group (Caucasian) in *GPA* overtime. More specifically, it was expected that social or academic adjustment at Time 1 would not mediate the association between first-generation college status/ethnic background and students’ GPA score differences at the end of the first year in college. The lack of mediation was determined and based on the literature that specified that Tinto’s retention model may not be relevant for underrepresented student groups (Tierney, 1992, 1997, 1999; Palmer, et al., 2011; Kuh, et al., 2006; Braxton, et al., 1997), and therefore there may be other factors that impact these students’ (particularly those with the intersection of multiple underrepresented
backgrounds) GPA more so than social or academic adjustment as noted for the traditional student groups. Additional qualitative analyses were included to determine other factors that may be beneficial in understanding the perceptions, retention, and achievement of underrepresented student groups, specifically first-generation college students from ethnic minority backgrounds in higher education from their vantage point.

**Rationale**

Educational attainment disparities by economic status, ethnicity, and varying levels of parental education are continuing to increase. Underrepresented student populations, who may not be as familiar or feel as welcomed on a college campus, may encounter less of a college adjustment that may in turn lead to lower GPAs. Students’ GPA scores at the end of their first year in college may provide insight into further academic achievement and retention and is thus necessary to assess and better understand. While previous research showed that a lower college adjustment may lead to lower academic achievement and educational attainment (e.g. Lewis, et al., 2008), it will be helpful to determine whether social or academic adjustment are some of the main factors that impact GPA scores during the first year of study, particularly for underrepresented groups, which were the focus of the current study. The present study explored GPA and *college adjustment* (*CA*; Baker & Siryk, 1986), namely academic and social adjustment, among first-generation and non-first-generation college students between majority and minority ethnic groups (utilizing the combination of these demographic background variables) enrolled at an urban university campus. While much research looked at demographic characteristics separately, the present study assessed the combination of students from underrepresented groups to determine college impacts and potentially lead to further research (Engle & Tinto, 2008).
After several critiques (particularly from Tierney), Tinto recognized that his model had too broad of a scope to incorporate multiple viewpoints and that focusing on one institution would be necessary to determine specific institutional information, impacting future research studies (Metz, 2002). While dropout rates are highest during the first year in college, the setting where the present study took place is important in exploring four-year universities, where research has found the highest rates of dropout for underrepresented students compared to traditional student groups in the first year (Engle & Tinto, 2008). There is also plenty of research that speaks to underrepresented students’ low educational rates on predominately traditional and ethnic majority (Caucasian) campuses (New, 2016; Upcraft, et al., 2005), but the current study hopes to add to the literature in determining if there are similar issues of college adjustment and achievement on a more diverse and urban campus setting, where research has been limited (Tinto, 1975; 1982). A study of over 1,000 4-year public or private non-profit institutions were included in a study by The Education Trust to take a closer look at retention and graduation rates. The study found that campuses with a similar makeup of minority students found varying graduation rates, and that ethnicity is a large factor in terms of educational attainment, even when they compare students of similar income level status (Smith, 2015). The current study therefore explored whether first-generation college students from minority ethnic backgrounds indeed perceived additional barriers than students from the majority ethnic group of either college generation status, even at a diverse campus.

The current study further pursued potential factors that may have not been assessed in the Tinto model using qualitative data to gather preliminary themes from the sample at T2. Such exploration builds on a mixed-methods approach and lends to a deeper understanding directly from the students that have a dual intersection of underrepresented backgrounds in higher
education (first-generation college student, and from a minority ethnic background). The qualitative portion of the present study explored additional factors that students identified that may impact their academic performance based on perceived stressors. Themes were uncovered from the responses that may help to better understand other aspects that influence student transition directly from the voices of students from underrepresented groups. While the responses were targeted to capture academic stressors, the student responses may focus on overlooked barriers that ultimately lead to a lack of academic achievement and college completion. The present study may provide a better understanding as to why first-generation college students from ethnic minority groups, who have not been studied enough separately from first-generation college students yet may have additional barriers, persist at lower rates and have lower academic achievement compared to other students groups (Dennis, et al., 2005).

Lastly, it will be necessary to further determine what programming may be successful in working with such student groups, through using related findings to implement programming and direct action for underrepresented student groups (Tinto, 1988, 2006, 2013). Many institutions have not provided necessary programming for the first year transitions, particularly for underrepresented student groups, including an integration of efforts and priorities, that impact student success (Upcraft, Gardner, Barefoot, 2005). Study findings may provide suggestions for beneficial programming for students from underrepresented groups in higher education along with ideas included in the discussion section and appendices based on recent and relevant literature and practices.
Statement of Hypotheses

Hypothesis 1:

*College Adjustment and GPA*

*It was expected that FGC students (more specifically, FGC students of a minority ethnic background) would report significantly lower social adjustment, lower emotional adjustment, lower attachment to institution, lower academic adjustment, and a lower GPA compared to non-FGC students of either ethnic background and even White FGC students, at T2.*

Hypothesis 2:

*Social/Academic Adjustment and GPA*

*It was expected that social and academic adjustment scores at T1 would not significantly mediate the relationship between 1st-generation college student status/ethnic background and GPA at T2, such that lower social and academic adjustment scores at T1 by 1st-generation college students from an underrepresented minority ethnic background in higher education would not significantly lead to lower reported GPA scores at T2, compared to White 1st-generation college students.*

**Exploratory Research Question:**

What themes emerge from FGC ethnic minority students at T2?

*Additional Academic Stressors*
The present study assessed a qualitative item regarding students’ perceptions of their Academic Stressors impacting their academic performance. The qualitative item was used to explore additional factors that may impact underrepresented students’ academic achievement in higher education (focusing on the intersection and dual focus of FGC from an ethnic minority background).
CHAPTER II

Method

Participants

Participants in the current study were part of a larger longitudinal study about the first-year college experience at a large, urban, and Catholic university during the 2011-2012 academic year. In the Fall of 2011, 2,458 freshmen were enrolled at the institution, in which the majority were female (57%), 36% of the students were first-generation college students (i.e. a student whose parents have not received a college degree), and 32% were from a minority ethnic background (i.e. 16% Latino, 7% African-American, 5% Asian, 4% Multi-ethnic, and less than 1% for Pacific Islander and Native American). About 20% of the enrolled freshmen class, a total of 500 students (67% women; \( n = 335 \); men: \( n = 161 \); \( M \) age = 18.34, \( SD = 0.97 \)), participated in the larger study at the beginning of the 2011 academic year. Most participants (63%) self-identified as European-American (as opposed to 37% ethnic minorities; 14% Latino, 10% Asian, 8% Black/African American, or 5% Mix/Multiple). The majority (71%) of the participants lived on campus in student housing (21% lived off-campus with parents/guardians while 7% lived off-campus without parents/guardians).

Participants in the current study included a total of 233 students (women: \( n = 181 \); men: \( n = 51 \); \( M \) age = 18.31, \( SD = 2.24 \)), who responded in the Fall and then again in the Spring quarter (about 6-8 months apart) during the 2011-2012 academic year. Most participants (55%) self-identified as European-American and the rest identified as 16% Latino, 11% Asian, 10% Black/African American, or 7% Mix/Multiple. The majority of participants (61%) lived On campus in student housing (30% lived off-campus with parents/guardians while 9% lived off-campus without parents/guardians). Over 50% of the first year sample reported a 3.6 or higher
GPA at the end of their first year of college. 40% of the students other than European-American reported a 3.6 or higher GPA during the end of their first year of college.

Furthermore, the majority of study participants (62%) stated that at least one of their parents attended college. More of the students’ mothers (30%) and fathers (27%) obtained a bachelor’s degree than any other degree. In addition, the non-first-generation college group self-identified as 63% Caucasian, 13% Asian, 11% Black/African American, 7% Mix/Multiple, and 6% Hispanic. Among study participants, 87 (69 women; 17 men; M age = 18.55, SD = 3.56) students stated they were first-generation college students, compared to 143 (110 women; 33 men; M age = 18.18, SD = 0.66) who were not the first in their family to attend college. Moreover, the first-generation college group self-identified as 43% Caucasian, 33% Hispanic, 10% Asian, 7% Mix/Multiple, and 7% Black/African American.

Psychometric Measures

**College adjustment.** Study participants completed the *Students Adaptation to College Questionnaire* (SACQ; Baker & Siryk, 1989), a 67-item multi-dimensional scale measuring students’ adjustment to college. The SACQ, rated on an 9-point scale (1 = doesn’t apply to me at all; 9 = applies very closely to me), is comprised of four subscales, namely: Personal-Emotional Adjustment (PA; 16 items; author M scores for two administrations = 74.83 to 106.65; author alpha range for two administrations = 0.82 and 0.79) that measures student physical and psychological health (sample item: “I am experiencing a lot of difficulty coping with the stressors imposed upon me in college”), Social Adjustment (SA; 20 items; summed author M scores for two administrations = 103.43 to 144.79; author alpha range for two administrations = 0.88 and 0.88) which emphasizes the social life of students (sample item: “I have several close social ties at college”), Attachment to Institution (AI; 7 items; author M scores for two administrations =
82.83 to 114.72; author alpha range for two administrations = 0.89 and 0.86) which measures the students’ connection and belongingness to the campus (sample item: “I am pleased now about my decision to go to college”), and Academic Adjustment (AA; 24 items; author M scores for two administrations = 127.26 to 163.04; author alpha range for two administrations = 0.82 and 0.87) that centers on the adjustment of students’ academic work via their reported attitudes and behaviors (sample item: “I am enjoying my academic work”). In terms of standard deviations, authors listed SDs as: greater than or equal to -1 SD on at least one subscale and greater than or equal to +1 SD on none; or greater than or equal to +1 SD on at least one subscale and greater than or equal to -1 SD on none. Some items in the SACQ were reverse scored so that higher scores indicate better college adjustment. Then all items of the SACQ were summed to create an overall College Adjustment score for each participant. For the overall College Adjustment score, the current sample’s Cronbach’s α was 0.95 (M score = 370.33; SD = 65.25) for study participants.

The SACQ is based on a measure created by Baker and Siryk (1984), originally with 52 items (Baker & Siryk, 1986). The newer version with 67-items (items added to increase reliability for some of the subscales and to encompass the varying adjustment aspects) was sampled at two colleges across three different groups, yielding higher subscale alphas ranging from 0.80 to 0.95. The authors then sampled students during two semesters, comparing students with lower versus higher adjustment and whether or not they were interviewed. The range for coefficient alphas for this sample’s subscales was high, including from 0.91 to 0.92 for the total college adjustment scale, 0.89 to 0.86 for the attachment subscale, 0.88 and 0.88 for the social subscale, 0.82-0.87 for the academic subscale, and finally 0.82-0.79 for the personal-emotional adjustment subscale (Baker & Siryk, 1986). The summed authors’ mean scores for the academic
subscale, social subscale, personal-emotional subscale, attachment to institution subscale, and the full scale ranged from 127.26 to 163.04, 103.43 to 144.79, 74.83 to 106.65, 82.83 to 114.72, and 353.70 to 475.19, respectively. Additionally, the authors reported construct validity and high correlations among the subscales. Baker and Siryk (1986) found significant relationships between criterion variables and the SACQ subscales, including GPA, social activity involvement, and attrition.

**Academic Achievement.** Students reported their cumulative high school GPA, with the item “What was your cumulative high school GPA?” Self-reported college GPA was also measured at the end of the first academic year in college in the study (“What is your most recent cumulative GPA at DePaul?”) as a categorical variable (1 = 3.6 - 4.0, 2 = 3.1 – 3.5, 3 = 2.6 – 3.0, 4 = 2.1 – 2.5, and 5 = 2.0 or below). Students’ reported high school GPAs were reverted to the same categorical variable values as the college GPA, where a lower number reflected a higher GPA range.

**Perceptions of academic stressors.** In addition, participants completed an open-ended item regarding their perceptions of stressors impacting their academics. The qualitative item read:

“We are interested in understanding what academic stressors college students experience. By academic stressors, we mean stressors that are directly related to school, but not personal life stressors that may have affected your academic performance. Based on this definition, what would you say has been stressful about your undergraduate experience? (If many things were very stressful or different times were stressful for different reasons, please list all.) In your response, please do not include personal, identifying information, such as your name or the names of your friends or professors.”

Responses were assessed for preliminary themes.

**Demographic and educational information.** In addition to the psychometric scales used in both studies, all participants completed various descriptive questions, including year in
college, gender, college-generation status, age, and ethnicity. College-generation status was created as a categorical variable (0 = non-first-generation college student, 1 = first-generation college student), depending on whether either parent obtained at least a college degree from two separate questions regarding mothers’ and fathers’ educational attainment (1 = less than a high school graduate, 2 = high school graduate, 3 = technical school or 2-year college (associate’s degree), 4 = 4-year college (bachelor’s degree), 5 = Master’s degree, 6 = Ph.D. or professional degree, 7 = I don’t know).

Procedure

Participants were recruited in the larger study through an online administration of the questionnaire through email by campus enrollment staff and by flyer recruitment during Fall 2011 (Time 1). All first year students (a total of 2,458 first-year students) at the large, urban university were invited via email to participate in the study early in the Fall of the 2011 (Time 1) academic school year. 97% (n = 786) of the students who started the survey (n = 809) consented to participate in the study. From those students who consented, 733 (93%) completed the relevant survey measures at Time 1, also omitting any duplicate participants, about 30% of the freshman class during the academic school year. Only students who completed the Time 1 survey (733 students) and consented to participate were then emailed during the Spring of 2012 for the Time 2 survey. The same procedure was followed for Time 2 data, where 322 (44%) of the Time 1 participants began the Time 2 survey, while only yielding a total number of 233 (32%) participants who completed the survey at both time points, consented to participate, and were not duplicate participants, about 9% of the 2011 freshmen class. For the current study, only the participants who completed both a Time 1 and Time 2 survey (n = 233) were included in the sample for study analyses.
Flyers were distributed around the campus, which described the study and an email was sent out to all first-year students that included the study purpose along with the link to the online survey. Informed consent was completed online and students completed the anonymous survey in 20-30 minutes, during their first year in college during the Fall quarter (October/November, 2011). In order to link responses to wave 1 and wave 2 surveys, students only listed the last 4 digits of their student IDs. No other identifiable information was collected. To promote participation, $10 gift card incentives were given to the first 100 students who completed the survey via a separate link, where students were able to enter their email addresses once they completed the survey. Students were later contacted to participate in the second wave of the survey in Spring 2012 (Time 2; at the end of students’ first year in college, May/June 2012). Those individuals who completed both wave 1 and wave 2 were included in the current study, with similar recruitment, consent, and incentive procedures where students were able to provide their emails separately.
CHAPTER III

Results

Preliminary Analyses: Longitudinal dataset

Descriptive statistics and bivariate Pearson correlations for all of the variables included in the study at both time 1 and time 2 are provided in Table 1. A higher GPA at Time 2 was significantly related to a more positive academic adjustment at both time points, a more positive social adjustment at time 2, and a more positive high school GPA. All of the college adjustment subscales at both time points were significantly correlated with each other.
Table 1

Bivariate Pearson Correlations, Mean Scores & Standard Deviations for Variables included in the Study

|                                 | M (SD) | HGPA | GPA   | SA    | SAT2  | AA    | AAT2  | EA    | EAT2  | AI    | AIT2  |
|--------------------------------|--------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| High School GPA (HGPA)         | 1.41(0.57) | --   |       |       |       |       |       |       |       |       |       |       |
| GPA T2                         | 1.67(0.84) | .32**| --    |       |       |       |       |       |       |       |       |       |
| Social Adjustment (SA)         | 5.45(1.28) | .10  | .02   | --    |       |       |       |       |       |       |       |       |
| SA T2                          | 5.35(1.24) | .04  | -.14* | .68** | --    |       |       |       |       |       |       |       |
| Academic Adjustment (AA)       | 5.76(0.95) | .09  | -.19**| .54** | .42** | --    |       |       |       |       |       |       |
| AA T2                          | 5.50(0.98) | -.05 | -.33**| .33** | .51** | .60** | --    |       |       |       |       |       |
| Emotional Adjustment (EA)      | 5.18(1.30) | .09  | -.04  | .48** | .39** | .66** | .46** | --    |       |       |       |       |
| EA T2                          | 5.13(1.25) | .04  | -.08  | .39** | .47** | .53** | .60** | .69** | --    |       |       |       |
| Attachment to Institution (AI) | 6.1/(1.15) | .12  | -.02  | .87** | .60** | .62** | .42** | .52** | .43** | --    |       |       |
| AI T2                          | 5.91(1.24) | .05  | -.11  | .54** | .86** | .43** | .58** | .40** | .50** | .60** | --    |       |

n = 233  **p<.01  *p<.05

Note. Higher scores for GPA mean a lower GPA range.
GPA Range: (1 = 3.6 - 4.0, 2 = 3.1 - 3.5, 3 = 2.6 - 3.0, 4 = 2.1 - 2.5, and 5 = 2.0 or below)
In order to determine whether gender should be used as a covariate in the analyses, results of an independent samples *t*-test along with mean scores for the outcome measures by gender (Female and Male) are reported in Table 2. There were no significant gender differences; thus, gender was not controlled for in any of the analyses.

All College Adjustment subscales at T1 were significantly correlated (*p* < .01) with the same subscales at T2, and were therefore controlled for in the following analyses. High school GPA was significantly correlated (*p* < .01) with GPA at the end of the first year in college and was therefore also controlled for in all analyses.

Table 2

*Mean Scores, Standard Deviations, & T-Test Scores for Variables by Gender*

<table>
<thead>
<tr>
<th></th>
<th>Female Students</th>
<th>Male Students</th>
<th><em>t</em>-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>(n = 181)</em></td>
<td><em>(n = 51)</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>M (SD)</em></td>
<td><em>M (SD)</em></td>
<td></td>
</tr>
<tr>
<td>GPA at T2</td>
<td>1.73 (0.98)</td>
<td>1.66 (0.81)</td>
<td><em>t</em>(230) = 0.51, <em>p</em> = .613</td>
</tr>
<tr>
<td>Social Adjustment T2 (SA)</td>
<td>5.34 (1.24)</td>
<td>5.37 (1.29)</td>
<td><em>t</em>(230) = 0.14, <em>p</em> = .888</td>
</tr>
<tr>
<td>Academic Adjustment T2 (AA)</td>
<td>5.55 (0.95)</td>
<td>5.35 (1.07)</td>
<td><em>t</em>(230) = -1.30, <em>p</em> = .194</td>
</tr>
<tr>
<td>Emotional Adjustment T2 (EA)</td>
<td>5.10 (1.18)</td>
<td>5.32 (1.39)</td>
<td><em>t</em>(230) = 1.11, <em>p</em> = .269</td>
</tr>
<tr>
<td>Attachment to Institution T2 (AI)</td>
<td>5.93 (1.23)</td>
<td>5.86 (1.29)</td>
<td><em>t</em>(230) = -0.32, <em>p</em> = .750</td>
</tr>
</tbody>
</table>

*Note.* Higher scores for GPA mean a lower GPA range.

GPA Range: (1 = 3.6 - 4.0, 2 = 3.1 – 3.5, 3 = 2.6 – 3.0, 4 = 2.1 – 2.5, and 5 = 2.0 or below)
Hypothesis 1:

**College Adjustment and GPA**

*It was expected that FGC student (more specifically, FGC students of a minority ethnic background) would report significantly lower social adjustment, lower emotional adjustment, lower attachment to institution, lower academic adjustment, and a lower GPA compared to non-FGC students of either ethnic background and even White FGC students, at T2.*

A one-way factorial *multivariate analysis of covariance (MANCOVA)*, controlling for the college adjustment subscales at T1 and high school GPA, compared mean scores at T2 on the following *College Adjustment* subscales: *Social adjustment, Emotional adjustment, Attachment to Institution, and Emotional Adjustment*, and on GPA at T2, between students from combined college generational status/ethnic backgrounds (*FGC/ethnic minority students = 1; FGC/White students = 2; Non-FGC/ethnic minority students = 3; and Non-FGC/White students = 4).*

The one-way *MANCOVA* revealed a significant multivariate main effect for college generation status/ethnic background, Wilks’ $\lambda = .667$, $F (15, 596.682) = 6.273$, $p < .001$, partial eta squared = .126. Power to detect the effect was 1.000. Based on the significant overall test, the univariate main effects then were examined. A significant univariate main effect was found for GPA at T2, $F (3, 225) = 32.995$, $p < .001$, partial eta squared = .310, power = 1.00. Two other univariate results approached significance: Social Adjustment at T2, $F (3, 225) = 2.308$, $p = .077$, partial eta squared = .031, power = .576; and Academic Adjustment at T2, $F (3, 225) = 2.297$, $p = .078$, partial eta squared = .030, power = .574. There were no univariate effects found for any of the other college adjustment subscales (Main Effects found in Table 3).
Table 3

Main Effects for All Subscales by Ethnicity (White or Ethnic Minority) & College Generation Status (First-Generation College or Non)

<table>
<thead>
<tr>
<th>Variables</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA T2</td>
<td>32.995</td>
<td>.000**</td>
</tr>
<tr>
<td>SA T2</td>
<td>2.308</td>
<td>.077</td>
</tr>
<tr>
<td>AA T2</td>
<td>2.297</td>
<td>.078</td>
</tr>
<tr>
<td>EA T2</td>
<td>0.186</td>
<td>.906</td>
</tr>
<tr>
<td>AI T2</td>
<td>1.128</td>
<td>.339</td>
</tr>
</tbody>
</table>

n = 225; ** = p < .01.

Note. Higher scores for GPA mean a lower GPA range. SA = Social Adjustment; AA = Academic Adjustment; EA = Emotional Adjustment; AI = Attachment to Institution.

Pairwise differences, based on the significant univariate main effect for GPA, were found within the sample. Significant college generation status/ethnic background pairwise differences for GPA indicated that within the entire sample, First-Generation College students (FGC) of an ethnic minority background (M = 2.18, SD = 0.99) reported significantly lower GPAs at Time 2 compared to all other combined groups (N-FGC/White: M = 1.40, SD = 0.65; FGC/White: M = 1.49, SD = 0.61; N-FGC/ethnic minority: M = 1.75, SD = 0.92). Furthermore, Non-First-Generation College students (N-FGC) of a White ethnic background (M = 1.40, SD = 0.65) reported significantly higher GPAs at Time 2 compared to all other combined groups (Mean scores found in Table 4).

Although the univariate results for Academic Adjustment and Social Adjustment only approached significance, and were non-significant for Attachment to Institution, there were further pairwise differences found for these subscales, particularly for the first-generation college.
students of ethnic minority backgrounds in comparison to the other groups. In terms of Academic Adjustment, pairwise differences found that FGC/ethnic minority students reported significantly lower scores at Time 2 compared to White students of either generation status (Mean scores found in Table 4). In terms of Social Adjustment, FGC/ethnic minority students reported significantly lower scores at Time 2 compared to both non-first-generation groups of either ethnicity, and approached significant differences with the FGC/White group (Mean scores found in Table 4). In terms of Attachment to Institution, FGC/ethnic minority students approached significantly lower scores at Time 2 compared to FGC/White students (Mean scores and differences found in Table 4). Hypothesis 1 was partially confirmed.

Table 4

*Mean Scores for All Subscales by Ethnicity & College Generation Status*

<table>
<thead>
<tr>
<th>Subscales</th>
<th>1st-Gen Col</th>
<th>Non-1st-Gen Col</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White (n = 37)</td>
<td>Ethnic Minority (n = 49)</td>
</tr>
<tr>
<td>GPA T2</td>
<td>1.49(0.61) 2,4</td>
<td>2.18(0.99) 1,2,3</td>
</tr>
<tr>
<td>SA T2</td>
<td>5.32(1.26) a</td>
<td>4.88(1.24) 1,2, a</td>
</tr>
<tr>
<td>AA T2</td>
<td>5.60(0.93) 1</td>
<td>5.26(0.88) 1,2</td>
</tr>
<tr>
<td>EA T2</td>
<td>4.98(1.34)</td>
<td>4.98(1.33)</td>
</tr>
<tr>
<td>AI T2</td>
<td>5.95(1.38) a</td>
<td>5.57(1.16) a</td>
</tr>
</tbody>
</table>

*Note.* Higher scores for GPA mean a lower GPA range. Values in parentheses are standard deviations; Similar superscript numerals indicate significant mean differences; Similar superscript letters indicate approaching significant mean differences; Abbreviations are: SA = Social Adjustment; AA = Academic Adjustment; EA = Emotional Adjustment; AI = Attachment to Institution; 1st-Gen Col = First-generation college student.
Preliminary Analyses for Hypothesis 2

Results from Hypothesis 1 show that the combination of college generational status/ethnic background is important in terms of GPA differences, as well as some social and academic adjustment variances (although not significant). In order to determine whether academic and social adjustment (based on Tinto’s framework) mediate the relationship between first-college generation students of varying ethnic backgrounds and GPA, preliminary analyses were run. Mean scores for high school GPA, academic adjustment, and social adjustment scales at T1 by first-generation college status and either ethnic background (White and ethnic minority) are reported in Table 5, along with the results of independent samples t-tests to determine any significant differences across groups at time 1. There were no significant differences between groups for high school GPA, Academic Adjustment, or Social Adjustment (Results in Table 5).

The related results showed that both student groups start out with similar Academic Adjustment (AA) scores and GPA scores at T1 (Results in Table 5). As the scores at T1 were similar across both groups, they would thus would not account for any differences in GPA scores at T2, and as such no structural equation modeling (SEM) was used to determine whether academic adjustment at T1 would mediate the relationship between generation status/ethnic background and academic achievement. While not significant, the results also showed that the Social Adjustment scores start out lower at T1 for the FGC/ethnic minority students in comparison to FGC/White students (Results in Table 5). Therefore, hypothesis 2 utilized SEM to determine whether social adjustment scores at T1 account for differences in GPA at T2 between first-generation college students of White and ethnic minority backgrounds.
Table 5

Mean Scores, Standard Deviations, & T-Test Scores for GPA, Social Adjustment & Academic Adjustment Scores at Time 1 by First-Generation College Status & Ethnicity

<table>
<thead>
<tr>
<th></th>
<th>FGC/Ethnic minority (n = 49)</th>
<th>FGC/White (n = 37)</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School GPA:</td>
<td>1.04 (0.20)</td>
<td>1.05 (0.23)</td>
<td>t(84) = -0.29, p = .776</td>
</tr>
<tr>
<td>Academic Adjustment T1 (AA):</td>
<td>5.50 (0.90)</td>
<td>5.52 (0.98)</td>
<td>t(85) = -0.11, p = .915</td>
</tr>
<tr>
<td>Social Adjustment T1 (SA):</td>
<td>5.05 (1.16)</td>
<td>5.31 (1.39)</td>
<td>t(85) = -0.94, p = .350</td>
</tr>
</tbody>
</table>

Note. Higher scores for high school GPA mean a lower high school GPA range. GPA Range: (1 = 3.6 - 4.0, 2 = 3.1 – 3.5, 3 = 2.6 – 3.0, 4 = 2.1 – 2.5, and 5 = 2.0 or below). Values in parentheses are standard deviations; Abbreviations are: SA = Social Adjustment; AA = Academic Adjustment; FGC = First-generation college student.

Hypothesis 2:

Social/Academic Adjustment and GPA

It was expected that social and academic adjustment scores at T1 would not significantly mediate the relationship between 1st-generation college student status/ethnic background and GPA at T2, such that lower social and academic adjustment scores at T1 by 1st-generation college students from an underrepresented minority ethnic background in higher education would not significantly lead to lower reported GPA scores at T2, compared to White 1st-generation college students.
Structural Equation Modeling (SEM)

SEM was used to analyze the models of the proposed hypotheses, which were tested using AMOS 7.0 software (Joreskog & Sorbom, 1993). The maximum likelihood estimation model was used to test the pathways and structural models. Fit statistics were then checked in order to make sure that the models were a good fit to the data. Indicators of goodness of fit, including chi-square, the Tucker-Lewis Index (TLI), a root-mean-square error of approximation (RMSEA), and a comparative fit index (CFI), were assessed (Byrne, 2010; Shumacker & Lomax, 2004). Only first-generation college students were included in the SEM analyses, and thus Ethnic Background was examined as the categorical variable in the model (Ethnic Minority = 1; White = 2).

An SEM model was run to determine if there was an association between first-generation college students’ ethnicity and their GPA at T2, adjusting for high school GPA, via perceptions of the social adjustment subscale of college adjustment. It was hypothesized that social adjustment at T1 would not significantly mediate the relationship between first-generation college students’ ethnic background and their GPA scores at T2, such that lower GPA scores at T2 by ethnic minority students would not be explained by less social adjustment at T1, in comparison to White students, as there may be other factors that are more important for underrepresented student groups that were overlooked by Tinto’s original model.

As shown in Figure 1, the hypothesized model represented a good fit to the data in this case ($\chi^2 (1, N = 87) = 0.37, p = 0.54, CFI = 1.00, TLI = 1.21, RMSEA = 0.00$), however, a linear predictive relationship was not found. While there were significant differences in first-generation college students’ scores by GPA depending on ethnicity, such that first-generation students of a minority ethnic background reported lower GPA scores at the end of their first year in college
compared to FGC/White students, there were not significant differences in social adjustment scores. Specifically, social adjustment scores at T1 did not mediate the relationship of first-generation college student status/ethnic background and GPA scores at T2 (see Figure 1).

(n = 87)

*Figure 1. Model 1: SEM Path Analysis between First-Generation College Status/Ethnic Background and GPA overtime, mediated by Social Adjustment at T1*
In order to further test the hypothesis, alternative models were run to determine whether other models represented mediating associations. The alternative models omitted all of the relationships in the overall model one at a time to determine whether another model was a better fit. Table 6 shows the goodness of fit comparisons for all of the varying structural models. All of the model fit indicators, along with the chi-square, show that all of the newly tested models have good fit (only showcasing GPA score differences), except for the model that omits the ethnic background to GPA at T2 relationship. It can be concluded that all of the models demonstrate that social adjustment at T1 does not serve as a mediator in the relationship between first-generation status/ethnic background and GPA scores differences at T2.

Table 6

Model 1: Goodness Indicators of Structural Model Comparisons

<table>
<thead>
<tr>
<th>Omitted Relationships:</th>
<th>Chi-Square</th>
<th>p</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social/Academic Adjustment models:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity to Social Adjustment T1</td>
<td>1.23</td>
<td>0.54</td>
<td>1.00</td>
<td>1.13</td>
<td>0.00</td>
</tr>
<tr>
<td>Social Adjustment T1 to GPA at T2</td>
<td>1.42</td>
<td>0.49</td>
<td>1.00</td>
<td>1.10</td>
<td>0.00</td>
</tr>
<tr>
<td>Ethnicity to GPA at T2</td>
<td>17.51</td>
<td>0.00</td>
<td>0.48</td>
<td>-1.61</td>
<td>0.30</td>
</tr>
</tbody>
</table>

n = 87
Exploratory Research Question:

What themes emerge from FGC ethnic minority students at T2?

Additional Academic Stressors

The present study assessed a qualitative item regarding students’ perceptions of their Academic Stressors impacting their academic performance. The qualitative item was used to explore additional factors that may impact underrepresented students’ academic achievement in higher education (focusing on the intersection and dual focus of FGC from an ethnic minority background).

The qualitative item that was explored includes:

1. “We are interested in understanding what academic stressors college students experience. By academic stressors, we mean stressors that are directly related to school, but not personal life stressors that may have affected your academic performance. Based on this definition, what would you say has been stressful about your undergraduate experience? (If many things were very stressful or different times were stressful for different reasons, please list all.) In your response, please do not include personal, identifying information, such as your name or the names of your friends or professors.”

A broad content analysis approach was used to develop an understanding of student experiences via the categories found within the student responses. In order to be more grounded in the experiences of the students, an inductive and exploratory approach to the analyses was used, and as such, the data was organized to identify a framework, to then sort data and use the framework for further analyses and relationships. The inductive and exploratory approach allowed the research to be guided by the data. The researcher, furthermore, reflected on educational experiences as a first-generation college student to recognize any preconceptions and assumptions in order to deter from misinterpreting the data, as to really capture the essence and perspective of student responses (Law, Stewart, Letts, Pollock, Bosch, & Westmorland, 1998).
While there was only one method of qualitative data collection (open-ended items via an online survey), some important themes were still found. The researcher was able to thoroughly read and learn the student responses, code relevant responses for the current study to reduce information into key themes, and finally connect themes to literature.

Specifically focusing on the intersection of college generation status/ethnic background, the current study examined underlying themes across the first-generation college/ethnic minority background group. Out of the 50 FGC/ethnic minority students, 44 (88%) responded to the listed qualitative item and common themes were explored. The main themes that emerged in the responses included: academic stressors (84%; 36 students), financial stressors (25%; 11 students), out of school issues (14%; 6 students), and issues with institutional personnel (16%; 6 students) (outline of themes found in Table 7). About 20% of this student group listed at least 2 or more of these themes in terms of their academic stressors. Within these themes, major categories and minor categories were explored and some respective quotes will be used as descriptive examples.

**Qualitative Themes.**

**Academic Stressors:**

Within the academic stressors, of the 84% of students that listed academic stressors, the main categories that came up included: time (time management and lack of time), workload (amount of work and understanding), and college adjustment (unsure of next steps and the pressure of succeeding).
Time:

- “The jam-packed quarter system.”
- “Some stress factors have been the time schedule of classes”
- “Everything always piles up around the same time.”
- “Time management, not having enough sleep”

Workload:

- “The amount of readings assigned, the length of essays (6 pages and above) and the frequency in which these essays are assigned is stressful.”
- “So work can load up, and they might find themselves becoming overwhelmed with too much work, not enough sleep, etc.”
- “Having several major assignments due in the same week”
- “Sometimes the Instructors give out too much work”
- “Too many essays due on the same day or week.”

College Adjustment:

- “One great stressor of mine would be not being able to understand what the professor was teaching. You would have to figure out how to do it on your own”
- “Taking on more classes than I thought I could handle”
- “Pressure of succeeding versus failing.”
- “I know what i want to do in life but i do not know the steps i should take to get there any more”
- “Adjusting to college, in general: I think that it has been a bit difficult for me to adjust to DePaul because of the type of person that I am.”
- “getting use to the 10 week quarter system can be intense”

Financial Stressors:

In terms of financial stressors, 25% of the students noted lack of financial support (issues receiving scholarship money, lack of a job, and lack of enough financial aid), work (full-time work taking toll on academics), and inability to buy necessities (expensive campus food, and internet/computer software necessary for course assignments).
Lack of financial support:

- “I experienced academic stress related to my scholarship because there was an error in reporting service credit. Eventually the problem was solved (it was an issue for many students)”
- “My main stressor is strictly financial”
- Money, no job”
- “Financial aid”

Work:

- “Work and school at the same time”
- Working full-time”

Inability to buy necessities:

- “It's difficult to get lunch on campus. Restaurants are too expensive. Cafeteria food is expensive, unhealthy.”
- “Some of the homework for classes depends on software that dePaul computers have but I do not have at home and I can't always stay late in school so I get behind on work.”
- “I do not have internet access in my house”

Out of School Issues:

Several students (16% of the sample) discussed issues outside of school that were impacting their academics, including: family (helping/taking care of their families), and commuting (distance commuting, and living off-campus).

Family:

- “Taking care of my child”
- “Family matters”

Commuting:

- “The fact that I don't live on campus and I always have to travel back and forth”
- “Long commutes, seeking help around my home because I do not live on campus.”
• “I commute 3 hours on average.”

**Issues with Institutional Personnel/Understanding:**

Sixteen percent of the students listed issues with institutional personnel targeting lack of help and understanding, including counselors (who judge and are not helpful), professors (who are disorganized, not understanding, lack communication, not helpful, and difficult lecture styles) and university personnel (who are not helpful and lack communication).

**Counselors:**

• “The attitude of some people; the counselors are not helpful and judge one a lot”

**Professors:**

• “Professors who are not too understanding.”
• “Disorganized professors cause stress. Often, professors do not have a detailed syllabus for the quarter or they steer very far away from it. Disorganized professors can also pile up multiple assignments for one week but not have any for the next which is bothersome because it's as if they think students only have that one particular class. Lack of use of internet resources, such as email or D2L, causes a lot of stress because of the lack of communication.”
• “I had one professor who made students schedule time outside of the established class period/school set time/date to take the oral discussion final exam. It was very inconvenient for all of the students.”
• “Experienced the worst professor ever”
• “When you ask professors for help, they don't understand what you're trying to ask.”

**University Personnel:**

• “The communication between students and the department was very poor. I find it very unprofessional for any member of school, student or staff, to not respond to emails at appropriate times”
• “Finding the right person to talk to about certain issues at DePaul is extremely difficult. I always get continuously transferred to different people and never receive a solid answer.”
Table 7

Outline of Exploratory Themes and Categories for Academic Stressors Qualitative Item

<table>
<thead>
<tr>
<th>Qualitative Themes</th>
<th>Main Themes:</th>
<th>Major Categories:</th>
<th>Minor Categories:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Academic Stressors (84%):</td>
<td>(36 students)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time</td>
<td>• time management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• lack of time</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workload</td>
<td>• amount of work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>College Adjustment</td>
<td>• unsure of next steps</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• pressure of succeeding</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financial Stressors (25%):</td>
<td>(11 students)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lack of Financial Support</td>
<td>• issues receiving scholarship money</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• lack of a job</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• lack of enough financial aid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work</td>
<td>• full-time work toll on academics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inability to Buy Necessities</td>
<td>• expensive campus food</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• internet/computer software necessary for course assignments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Out of School Issues (16%):</td>
<td>(6 students)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family</td>
<td>• helping/taking care of families</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commuting</td>
<td>• distance commuting</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• living off-campus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Issues with Institutional Personnel (16%):</td>
<td>(6 students)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Counselors</td>
<td>• who judge</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• are not helpful</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professors</td>
<td>• disorganized</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• not understanding</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• lack communication</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• not helpful</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• difficult lecture styles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University Personnel</td>
<td>• are not helpful</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• lack communication</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER IV

Discussion

It is necessary to determine how to combat continuous gaps in educational achievement and completion rates between majority and underrepresented student groups in terms of several background characteristics (Cardoza, 2016; U.S. Dept. of Ed., 2016; Erbentraut, 2015; Korn, 2015). A review of the literature showed that underrepresented groups (including low-income students, minority ethnic groups, and first-generation college students) tend to have lower academic achievement, perceive the campus environment in a less positive light, are less adjusted to college, and have higher dropout rates compared to their counterparts (Cardoza, 2016; U.S. Dept. of Ed., 2016; Erbentraut, 2015; Korn, 2015; Holtschneider, 2014). The present study partially supported these previous research findings. The current study contributes to the literature by explaining how various and combined underrepresented student populations do not fare as well in college in comparison to majority student groups, particularly on a diverse campus. The results of the current study reveal that not only is there a lack of adjustment (particularly academic and social adjustment) during the first year, but that there are other factors (e.g., lack of campus supports/mentors, lack of financial aid, lack of understanding from campus personnel) involved, ultimately impacting academic achievement and connections to the institution for underrepresented students, that often result in lower retention rates.

The current study explored the perceptions overtime of urban university students from different ethnicities and college generational status on college adjustment measures (namely: social, academic and emotional adjustment, and attachment to institution). Group comparative analyses were used to assess college adjustment effects on academic outcomes, as there is limited research that compared multiple underrepresented background characteristics (such as
ethnicity and college generation status). The present study assessed self-reported initial social and academic adjustment to determine whether these constructs mediated the relationship between college generation status/ethnic background (first-generation college students (FGC) of ethnic minority groups and FGC of the majority ethnic group (White)) and GPA overtime. Lastly, the present study explored first-generation college students’ qualitative responses in a general assessment about their perceptions of academic stressors at the end of their first year in college.

Overall, results from Hypotheses 1 and 2 portray significant GPA differences at T2 between groups, along with differences in social and academic adjustment scores, although non-significant. Results supported that first-generation college students (FGC) from minority ethnic backgrounds reported lower adjustment (social, academic, emotional and attachment to institution) and academic achievement (GPA) scores compared to all other student groups. Across both FGC ethnic groups, academic adjustment and incoming high school GPA were similar at the beginning of the first year in college, whereas social adjustment scores are initially different and the gap widens overtime. However, social and academic adjustment, specifically, did not significantly impact FGC minority ethnic students’ lower GPA scores compared to other FGC students. Qualitative results provided viewpoints of academic stressors through the lens of students from multiple underrepresented backgrounds, including themes regarding academics, finances, off-campus responsibilities, and institutional personnel.

**Longitudinal Data Results**

**Hypothesis 1.** The current study indicated no significant gender differences; therefore, gender was not controlled in subsequent analyses. A *one-way MANCOVA* test, controlling for all college adjustment subscales at T1 and high school GPA, assessed all four college adjustment
subscales and GPA at T2 across the combined ethnic and college generational groups (FGC/Ethnic minority students, FGC/White students, Non-FGC/Ethnic minority students, and Non-FGC/White students).

Hypothesis 1 expected significant differences between college generation/ethnic groups, in terms of GPA and the college adjustment subscales at Time 2. There were overall significant main effect differences found for GPA at T2 between the groups; social and academic adjustment score differences at T2 approached significance. Univariate tests found that first-generation college students from minority ethnic backgrounds showed significantly lower scores on GPA, compared to all other student groups, supporting the present study’s hypothesis and consistent with previous research (Dennis, et al., 2005; Walton & Cohen, 2011; Cardoza, 2016). The current study further explored pairwise comparisons and found some supplementary results that were also supportive of the hypothesis: the FGC/minority ethnic student group showed significantly lower academic adjustment scores and lower social adjustment scores, compared to White students from either generation status, and NFGC students from either ethnic group, respectively. College generational differences thus were also dependent on the combination of ethnic background. Notable mean score differences were also found, such that the non-first-generation college group of both ethnic groups had the highest scores across 3 of the measures (social and emotional adjustment, and attachment to institution) in comparison to both FGC groups. Scores, in addition, were lowest across all subscales and GPA for the FGC/minority ethnic student group (with the biggest differences found for GPA, and social and academic adjustment), providing partial support for Hypothesis 1. The lower scores are important to take note of because research claimed that college adjustment and GPA scores impact retention (Aspelmeier, et al., 2012; Upcraft, et al., 2005), as students may decide to leave college when
they sense a lack of fit between themselves and the climate of the environment, according to Tinto’s (1975, 1988) models.

A possible explanation for the lower GPA and all adjustment scores for students who come from multiple underrepresented backgrounds (first-generation college and ethnic minority) includes that they may face even more barriers to the college transition than traditional students with a lack of college awareness to accessing resources, a lack of social capital and academic preparedness for college. For instance, underrepresented students have additional barriers to adjustment when their background differs from the dominant culture (Kuh, et al., 2006), particularly with limited college familiarity and cultural capital. The current study showed that the intersection of first-generation college student status and ethnic minority background adds to the complications during the first year of college, where underrepresented students are trying to maneuver a new system with additional struggles added to their list of other obstacles and outside responsibilities. Moreover, another study found that first-generation college students and students whose parents had some interaction with college but no bachelor’s degree had similar academic and social experiences (Pascarella et al., 2003). The similarities between these students suggested that being unaware of college cultures might deter students from successful campus interactions, despite parents’ efforts to be supportive (Erbentraut, 2015). Traditional students not only have better access to and ease with college information (including family members who attended college), they also tend to have a better understanding of college decision-making processes. Important factors that are crucial in academic attainment include family members or friends who are able to provide motivation, knowledge, and guiding experiences in college decisions (Portes & Fernández-Kelly, 2008). Parents and families should be received and involved on campuses to be engaged with the institutions, particularly for underrepresented
students as families provide a distinct support system (Braxton, Doyle, Hartley, Hirschy, Jones, & McLendon, 2013; Palmer, et al., 2011). Environmental supports are thus even more necessary when underrepresented student groups lack access to a college culture and capital.

While there is some programming for FGC students and students from ethnically diverse groups at the current campus, these groups still noted their lack of adjustment, perceived that their needs were overlooked, and had lower academic scores overtime. Tinto later specified that, rather than having isolated programs largely geared towards separate limited activities, it is necessary for institutions to integrate programming into the majority college environment, connected to the mainstream university life, for the success of underrepresented student groups (Tinto, 1982; 2006). Students may feel a sense of isolation and not a part of the campus environment when they perceive programming to be outside of the main institutional frame, which may be another explanation for the current results. Additional academic preparation, campus supports, welcoming environments, and programming to assist students in becoming better adjusted on college campuses are thus needed, where positive perceptions of the institution and a sense of community may help guide students towards degree commitment.

As underrepresented and first year students are often unsure of next steps, programming that encompasses educational and career advising and planning during the first year is necessary (Tinto, 2013). A latter Tinto principle also stipulated that programming is effective when it focuses on building the development of students who do not enter college at the prepared level, and incorporating varying classroom teaching strategies for differing learning methods (Tinto, 1993; 2013). The lack of such strategies, first year planning, and resources may have impacted students’ perceptions of their adjustment to college in the current study. Resource linkages are important on the behalf of the institution as some students are not equipped to connect with these
networks on their own, where consistent and even individual attention is needed (Tinto, 1988; 2013). Pertinent college information (such as financial literacy) should also be stream-lined to ensure that students are receiving accurate and helpful support, and better follow-up strategies should be implemented to ensure student success.

**Hypothesis 2.** Hypothesis 2 expected that the relationship between first-generation college/ethnic background status and GPA at the end of a student’s first year in college would not be mediated by initial academic and social adjustment differences, as suggested by Tinto’s (1975) model. Preliminary results across the Time 1 data found that there were several similarities (GPA and AA scores), comparing first-generation college students of both ethnic groups, along with non-significant differences (SA scores) that might warrant expectations. Both FGC students of either ethnic group initially reported similar scores on both the Academic Adjustment (AA) measure and high school GPA (also the reason that no SEM model was run for academic adjustment at T1 as a mediator of GPA scores differences), yet had differing Social Adjustment (SA) scores at T1, although not significant. These results suggest the need for further exploration of the students who share multiple diversity characteristics (e.g. ethnicity and college generation status).

Although other academic differences were expected for college generational status in the present study, it is possible that FGC students at the beginning of their first year in college may perceive that they are adjust, particularly academically, if they were high achieving students while in high school. A previous study noted that underrepresented students who were the top academic achievers at the beginning of their high school career, compared to all other students, overwhelmingly left high school with lower GPAs and exam scores (Bromberg & Theokas, 2014). While first-generation college students may have felt that they adjusted well academically
early on, it will be necessary to understand their perceptions by the end of their first year, as that will ultimately impact students’ decisions to stay. With such immense shifts, it is necessary to understand where setbacks are happening towards efforts for improvement.

Other reasons as to why the academic outcomes may be so mixed, include that at the institution where the sample for this study was collected, about a third of the students that enroll each year are either low-income or first-generation college students. There are also several programs to assist students in the college transition (e.g., summer programming to ensure that students are prepared academically, as well as various supports in mentor and advisor relationship programs targeting FGC students for their services; Holtschneider, 2014). First-generation college students in the current study, therefore, may perceive that they are adjusting well in the beginning, or may have access to the nearby campus support initiatives, but may need additional supports later on. However, while academic adjustment and high school GPA initially started out similarly across first-generation college student ethnic groups, scores of both measures dropped considerably overtime for the FGC/Ethnic minority group. AA scores at T2 for the FGC/White students also improved overtime, and their GPA at T2 did not drop as much as FGC/Ethnic minority students’ scores. Other research found that underrepresented students have high educational aspirations and yet they tend to have lower rates of college completion (Engle & Tinto, 2008), which may suggest that more analyses are needed to better understand the gap in outcomes despite educational desires. The current study’s results also portray that underrepresented students approach college with equal academic adjustment and high school GPAs and may have high educations aspirations, yet their GPAs and academic adjustment still dropped overtime compared to traditional students. Such results may provide evidence that there are other elements impacts their success, as suggested in the qualitative results.
Therefore, it is important to define which varying groups are not succeeding during the first year in college to help better inform what their needs may be (Upcraft, et al., 2005). Regardless of national or overall institutional retention rates, specific institutional data may provide varying rates between student groups that are crucial to parse out. Some institutions have seen graduation gaps decrease amongst majority and underrepresented students, while other universities have found gap sizes more than doubling, even with comparable numbers of low-income and ethnic minority students, and admission requirements for instance (New, 2016). Several schools also realized that while their graduation rates had increased overall, rates for ethnic minority students had in fact remained stagnant, increasing the gap between the majority and minority ethnic groups (New, 2016), which is a potential future result at the current institution based the GPA changes by the end of the first year across the student groups. As results showed that FGC/Ethnic minority students had GPA and AA scores drop over-time, this may warrant the need for additional campus supports and services for the underrepresented student groups, and may provide evidence that there are some other barriers during the first year in college that impact this groups’ academics (such as social aspects, stereotype threat, family stressors, etc).

Tinto noted that that social relationships are particularly important for diverse student populations (Tinto, 1982), where students who are successful academically may still decide to drop out if they are not as happy with their social integration (Tinto, 1975). Support during the first year in college, along with strides towards goals of degree completion, are beneficial in guiding student success (Tinto, 2013). His retention model also posits that college dropout is determined over time via student and institutional interactions (Tinto, 1975; 1982). The current
hypothesis thus further explored Tinto’s model to determine whether social adjustment significantly impacts underrepresented students’ GPA (and potentially retention) overtime.

Results showed that Social Adjustment (SA) scores started out lower at T1 for the FGC/Ethnic minority students in comparison to FGC/White students. Data also revealed that SA scores dropped even more at T2 for the FGC/Ethnic minority students, while the FGC/White students’ scores remained overtime about the same. The differences again portrayed the importance of the combination of first-generation college status and minority ethnic backgrounds. The social adjustment results may reveal that underrepresented students do not feel that they fit in within the college atmosphere, particularly when they are new to the college environment/culture and may not see other students/faculty that resemble that or relate to their experiences. Tinto’s earlier model focused on perceived individual deficits rather than paying attention to the environmental influences, although his newer longitudinal model moved in a direction to not only look at the student characteristics, but the institutional attributes as well (Tinto, 1975; 2006). This shows that campus connections and commitment are also important in ensuring student success, and that initial student perceptions along with their end of the first year perceptions/adjustment are crucial to keep an eye on.

With the social adjustment (SA) differences at T1 between the combination groups (ethnicity/college generation status), a SEM model, controlling for prior academic achievement (high school GPA), was consequently run to determine if SA differences between FGC students of varying ethnic backgrounds may impact GPA at T2. SEM results indicated that social adjustment at Time 1 did not mediate the relationship between student background and GPA scores at Time 2. While FGC/minority ethnic students reported lower social adjustment at T1, these scores did not significantly lead to the lower GPA scores at T2, compared to FGC students.
of the ethnic majority group. Although the model indices were a strong fit, a predictive relationship was not found. Social adjustment did not serve as a mediator to provide some explanation for differences in GPA. Results showed that SA scores at T1 were not significantly related to GPA scores between the ethnicity/first-generation college status combinations. Tinto’s (1975) retention model, with a focus on traditional student groups, emphasized that the first year of college is a particularly tough transitional phase for students, and even more so with the impact or lack of academic and social connections (including peer and faculty) that ultimately effect student development and college persistence (Tinto, 1975; 1982; 1988). The results may further suggest that there are other factors and barriers involved during the first year that impact underrepresented students more so and differently than traditional students, and beyond their academic and social adjustment, and prior academic achievement. The results supported the hypothesis, suggesting that Tinto’s (1975; 1982) integration/retention model may not be relevant for students from underrepresented backgrounds, particularly in the combination of being the first in their family to go to college and from minority ethnic groups.

The SEM model and comparison analyses did, however, indicate that the underrepresented combination group had an array of struggles including lower social and academic adjustment, and lower GPA scores that may impact college dropout rates overtime. The following qualitative analyses may help to highlight other obstacles, in addition to the constructs provided in Tinto’s model, that students from underrepresented groups perceive as barriers to their academic achievement they may also affect their adjustment and choice to stay.

**Exploratory qualitative analyses: Additional academic stressors.** There are many variables found across over 30 years of research that have been shown to impact student retention, with the top factors including background demographics, funding college, and
academic and social engagement (Demetriou & Schmitz-Sciborski, 2011). The NSSE (National Survey of Student Engagement) survey found that underrepresented students in the U.S. struggle with less supportive environment perceptions, fewer campus interactions, frequently commute, work many hours, and have more financial stressors along with an inability to buy necessary academic materials compared to majority students (NSSE, 2015). The current study found similar stressors for underrepresented students, while adding in a couple of other highlights (targeting the need for campus personnel training, expanding teaching methods/redesigning courses, and available resources/supports).

The mixed methods approach for analyses provided helpful feedback in determining additional factors that may be overlooked without continuously incorporating student voices. The qualitative results presented that there may be other barriers to high academic achievement and college retention that may tie into Tinto’s model, revise or extend beyond the social and academic integration, particularly for the combination of underrepresented student groups. The current results highlighted students’ perceived obstacles related to academics (inadequate academic preparation/unaware of college knowledge), funding (lack of aid/funds, high tuition/supplies/food costs), off-campus responsibilities (long commutes, family, working many hours, less campus time), and campus personnel (not helpful/supportive, lack of effective communication, teaching strategies). The study explored qualitative themes regarding underrepresented students’ (dual combination of first-generation college student status and minority ethnic groups) perceived academic barriers. A content analysis found emerging themes (with major and minor categories), which included academic stressors, financial stressors, issues out of school, and issues with institutional personnel. At least 20% of the students also listed more than one of these academic stressor themes.
Specific academic stressors were listed by 84% of the students included in the qualitative analysis, which was comprised of: time (time management and lack of time), workload (college level academics: amount of work and understanding), and college adjustment (unsure of next steps and the pressure of succeeding). Many students’ comments lend to the idea of being inadequately prepared academically for the college level workload, along with noting the quick quarter system, and with a struggle in the management of their time and sleep. In these cases, students may benefit from gaining access to college courses before attending college along with workshops that build on focusing on their health, increasing campus resources, and prioritizing their academics in a strategic manner that they may not have learned earlier on. Students also mentioned their struggles with adjusting to college and understanding college dynamics, particularly on their own. Underrepresented students may need assistance in finding ways to connect to the college atmosphere while also being made aware of the necessary supports on campus, including mentors and programming, which may guide them towards success in multiple facets, including academics and social interactions.

About 25% of the students listed financial stressors that they perceive to impact their academics, which included: a deficit of financial support (issues receiving scholarship money, lack of a job, and lack of enough financial aid), work (full-time work while taking classes), and inability to buy necessities (expensive campus food, and a lack of internet/computer software necessary for course assignments). Many students expressed hardships with fund deficiencies through their own finances and financial aid, including finding jobs, to cover high tuition costs. Students additionally discussed the lack of reasonably priced food and books on campus, access to internet and computer software off-campus, and working off-campus that interferes with time for academics. Many first-generation college students and students from minority ethnic groups
especially the combination of these groups) tend to be low-income, and even when many work long hours in a week, they still struggle to afford tuition and essentials for their coursework that impact their academic achievement. Underrepresented students often live and work off-campus, adding to their academic burdens and commute, and may need additional campus connections and knowledge of how to take advantage of the resources that do exist. It may be beneficial to ensure that underrepresented students have more access to campus scholarships/resources and on-campus jobs to assist with funds and experience, and financial literacy before coming to campus and once at college, along with cheaper options and more access to necessary course materials that may be harder for students to use off-campus. On the other hand, an institution may need to focus on providing additional programming, funds, and access for students who may not know where to turn and are balancing many difficult life transitions all at once (in Appendix E: Additional financial support and affordability options/data).

Obstacles outside of the campus arena were included by 16% of the students, who specified: family (helping and taking care of), and commuting (distance and living off-campus). Several of the students discussed the hardships they face with long commutes and lack of time on campus, including family responsibilities. Institutions may assist by providing additional funds/options for transportation along with other classroom assignment/exam options for students who live and work off-campus. Traditional classroom methods may not be beneficial for students who do not have the means to live and spend a lot of time on campus, which may leave underrepresented students to feel left out and with fewer opportunities for success.

Institutional personnel came up in about 16% of the student responses in terms of a lack of help and lack of understanding from their experiences: with counselors (who judge/are not helpful), professors (disorganized, not understanding, lack communication, not helpful, and
difficult lecture styles) and university personnel (not helpful and lack communication). Many of the students discussed a lack of communication and understanding from campus personnel along with a sense of feeling unsupported or helped. Underrepresented students, who often do not have an understanding of college knowledge or a campus mentor, may be further deterred from adjustment to college and staying when they perceive a lack of care and help from those who are meant to provide supports. Varying methods of teaching may be helpful for such diverse student bodies as well. Perhaps more training and common procedures/language in working with students would be helpful throughout an institution to ensure that similar steps are being taken to provide supports to students, particularly when they seek out assistance to deter negative exchanges. It would be beneficial for campus-wide communication at all levels in regards to student interactions and guidance to ensure that students feel welcomed, that they are able to get assistance on campus, and are able to find access to the information needed to succeed.

Implications for Higher Education & Policy

Institutional commitment and inclusion. This study highlighted that while both student and campus efforts are crucial aspects of students’ outcomes, particularly for underrepresented student groups, that the institution plays a major role in student success. According to one of the principles of an updated Tinto (1993) retention model, commitment from the institution is required for students to build an attachment to the institution. Other than expecting that underrepresented students will assimilate into the mainstream campus atmosphere (as originally suggested by Tinto, although he later realized that changes in higher education as a whole are necessary to make a real impact on student success/retention; McCubbin, 2003), an alternative approach would be to develop processes aimed to appreciate, acknowledge and values student differences. By doing so, institutions’ programming for retention will re-shape to take a look at
the campus barriers to and needs for minority groups’ college success while embracing students’ diverse backgrounds (Thomas, 2002; Tierney, 1999; 1997; 1992a), as suggested by the current findings. If the focus consistently remains placed on students’ potential setbacks and failures, processes aimed to ensure students’ adjustment might overlook the institution needing change (Thomas, 2002). This institutional approach may also move beyond just a focus on access, but towards an emphasis of success for facing multiple barriers (such as found for first-generation college and ethnic minority students).

Many of the underrepresented students in the current study noted several academics stressors during their first year, so incorporating more services and recognizing academic barriers early on may be useful. Students have varying learning styles and levels, where a supportive campus environment is necessary, as students’ perceptions of low expectations from college personnel for higher academic work may not be conducive to their success (Brookings Institution, 2016). Some helpful strategies may include more access to additional campus supports/programming, such as access to campus job opportunities which will help decrease the burden of trying to find a sense of belonging at the institution, facilitating access to mentors, and provide financial support. Other strategies include various teaching/assessment methods, involving students in campus decision-making, and diversity trainings for a more welcoming environment. Several of these attributes taken together may be necessary for student and institutional growth. It is necessary to incorporate an outreach and welcoming to first-generation college and low-income students early on in college, as it is important to encourage them to connect with others to not feel left out or alone (Erbentraut, 2015; Guerra, 2015). Retention issues also tend to impact campuses with limited diversity from the students to the staff and leadership (Demetriou & Schmitz-Sciborski, 2011). A wide range of diverse student groups on
campus may increase assistance, comfort, and social involvement, along with hiring more faculty/staff of color as essential components to building a stronger sense of community and campus connection for all students (BSU, 2016; PDC, 2016; Thomas, 2002; Tierney, 1999).

The current findings suggest that first-generation college students of underrepresented backgrounds require mentoring and programming necessary for success, and are more likely to feel at home when they are able to find faculty to connect with and areas where they feel safe and included. A lack of student engagement in the classroom and faculty involvement in the overall mission of the school may detour the goal to impact student retention, particularly highlighting the first year (Tinto, 2006; Tierney & Sablan, 2014). Faculty interactions with students should further align with campus missions, as positive faculty interactions impact both academic and social integration, sense of isolation, and retention rates (Demetriou & Schmitz-Sciborski, 2011; Tinto, 1975; 1982; 1988). Qualitative research by The Education Trust found that underrepresented students succeeded with the assistance of an advisor. These advisors guided them early on towards beneficial information, and did not deter their aspirations but rather influenced their views of their academic capabilities and overcoming barriers (Bromberg & Theokas, 2014). Faculty need to represent positive perceptions and have high expectations for students, to foster a sense of welcoming for all students (Tierney, 1997; 1999).

Diversity and cultural competence training may be key in providing staff at educational institutions with awareness of the varying student body and need for resources, along with building communication, understanding, and student inclusion (PDC, 2016; Palmer, et al., 2011; Thomas, 2002; Tierney 1997, 1992a). Teaching strategies and assignments should furthermore be more accommodating with the acknowledgement that some students have outside responsibilities and less access to time and resources (Thomas, 2002). Cultural components need
Tinto’s model also stressed the need to incorporate supportive academic and social communities in multiple settings and across students, as well as the importance of faculty participation (Tinto, 1993; McCubbin, 2003). Peer supports, faculty role models, more flexible housing options, and additional social opportunities benefit underrepresented students (Palmer, et al., 2011; Thomas, 2002; Tierney, 1997), along with diversity training and varied classroom strategies, and should be included within institutional goals to impact underrepresented student success (In Appendix F: Additional institutional tasks, and institutional data impacts).

**Implications for Community Psychology**

**Necessary programming.** The current study’s findings suggest that, while there may be some supports on campus, additional programming may be needed to target underrepresented student groups. As underrepresented students are not only struggling financially and academically, but deal with unfamiliar social and structural barriers, it will be necessary for educational institutions to take note of successful programming and best practices to support such students. Without such programs, underrepresented students may not feel welcomed, often get left behind, and may not realize that they are able to or know how to succeed. Community psychologists are able to create interventions, build current programs, and share pertinent information with higher institutional and community stakeholders (Dalton & Wolfe, 2012). There are overall, however, a limited number of programs and funding available to assist the large amount of underrepresented students with the preparation needed (Erbentraut, 2015). As the first year of college is so crucial for student success, educational systems may need to pay particular attention to funding allocations, and ensuring that experienced staff and faculty are working with related programming and essential resources (Tinto, 2006). Methods of
accountability and even reward structures may be helpful, along with tailoring current successful programming (Tinto, 2006).

One report suggested, however, that not only is it necessary to focus on programming that is known to be effective with various student groups, but that good implementation is one of the most crucial aspects in leading to student success (New, 2016; PDC, 2016). Tinto, after his updated models, highlighted an emphasis on more effective/enduring programming to positively impact student outcomes with a focus to capture unique and underrepresented student voices (Tinto, 2006). Community research has a unique opportunity to better inform such programming that works with underrepresented populations to help ensure that the successes are understood, multiplied, and maneuvered to be equipped for varying student groups (Dalton & Wolfe, 2012). Programs that connect students to necessary resources early on, provide campus involvement and mentoring, and incorporate goal-planning are relevant to build a deeper sense of belonging. It is necessary to ensure that resources are accessible to all students, particularly underrepresented student groups who are often left out of opportunities, such as study abroad and campus organizations. Development and implementation of resources is key within the field of community psychology (Dalton & Wolfe, 2012). Community psychologists also assist with inclusion of all perspectives in a collaborative and participatory manner, and promote empowerment, which are beneficial for underrepresented groups (Dalton & Wolfe, 2012). (In Appendix G: Examples of Successful Programming/Services & TRIO Programs).

**Continual assessments.** To benefit the groups that are not faring as well, educational institutions should first look at what is occurring amongst the groups in order to better understand how to bridge current efforts and determine what work needs to be done next. The current study found results for underrepresented student groups during the first year in college,
but further assessments with the student population would be beneficial. Tinto (2006) realized that assessments need to be completed at multiple time points and in varying institutions types/educational settings that may impact student attrition differently. Continuous assessments may also be ideal to promote the benefits of effective practices on campus (Tinto, 2006; Tierney & Sablan, 2014). With evaluation information, institutions may have a better idea of their students, are more able to acknowledge varying perceptions and the need for institutional accommodations necessary for diverse and underrepresented student groups to succeed in college. Assessments and program evaluation are also key components within the realm of community psychology.

Researchers within community psychology have the opportunity to provide insights through assessments and evaluations to determine areas of learning and strength building. Program evaluations, from needs-assessments to process and outcome evaluations, are necessary to determine benefits, areas for improvement and potential expansions, or necessary programmatic changes. Frequent program and policy assessments are thus recommended to get a sense of any need for change and retention impacts (Braxton, et al., 2013). Lack of funding, however, detours schools from being able to fully implement useful programming that promotes academic success for underrepresented groups (Brookings Institution, 2016). Effective programming is able to receive assistance and funding through policy development, grant writing, advocacy and community collaborations to build towards successful implementation, incorporating additional values of the field of community psychology (Dalton & Wolfe, 2012). Community psychologists are ideal to assist with policy assessments/change for more educational funding, but also in determining cost-effective programming to improve student
outcomes, particularly when underrepresented populations would benefit educationally and economically in the short- and long-term.

**Limitations in the Present Study**

It is necessary to discuss potential limitations in the current study. Response bias may be possible in the study survey because self-reported measures were used. The current study also was limited in terms of the varying student groups and demographic variables that were included. While the current research did include ethnic background and college generational status, prior academics and some gender differences among first-year students, study limitations include the exclusion of variables such as family income level (despite the research that highlights underrepresented students tend to be more low-income in comparison to majority students), religion, living situations, commuter status, hours of work, etc.

While research noted that many first-generation college students and students from ethnic minority backgrounds are from low-income families (NCES, 2016; Demetriou & Schmitz-Sciborski, 2011; Engle & Tinto, 2008; Kuh, et al., 2006), it would be necessary to determine whether income level and work status impacted the results or may lead to varying results.

Minority ethnic students were combined in the present study because there were limited numbers within specific ethnic groups to determine statistical power. The small number of students additionally within the combined groups (first-generation college plus ethnic groups) may limit generalizing information only to similar populations. Generalizability of the present results is of further concern, given that the participant sample was taken from a single large Midwestern faith-based university in an urban setting. In addition, only a small percentage of the freshmen class responded to the survey (30% at time 1, and 9% at time 2), which may have led to a biased
sample of students who provided responses. It is possible that students who already felt more adjusted or had higher GPAs, at either time point, may have responded to the survey.

It is not certain why all students who completed the survey at Time 1 did not respond to the Time 2 survey (44% started the T2 survey, while only 32% completed it), where important voices may have been missed, including those who may have dropped out or who felt more or less adjusted to college. While academic achievement was measured in the study, it was not assessed whether students did leave, transfer, or take time off during their next years in college. A next step would include getting a sense of which students dropped and why they dropped, particularly if students with lower scores on the social constructs or lower academic achievement stayed. Tinto discussed the idea that some students decide to “stick it out” at a college even with little commitment to that particular institution (Tinto, 1975), which would be interesting to further assess as to why students who may struggle decide to stay. The current methodology did not capture beyond the first year, and future studies should incorporate the following college years to determine whether adjustment may have more of an impact later on for underrepresented groups.

College adjustment is a social construct that may not have been the best measure to capture how adjusted underrepresented students perceive themselves on campus. The items may be better geared towards traditional students, impacting the study results, and warrants further investigation. Qualitative responses may be ideal to capture student voices and gather additional understanding of underrepresented students’ experiences. The qualitative item in the current study, however, did not assess student perceptions of how they overcame academic obstacles. The item explored students’ academic stressors, but omitted asking about personal factors that may have made more transparent the important barriers underrepresented students experience.
The qualitative data was also only captured via one item that was included in the overall study, which is addressed as another limitation. Interviews, more open-ended questions, and even focus groups would be ideal for better qualitative results. There were also no plans for follow-up that could have provided further insight.

**Future Research**

The current study portrayed the importance of assessing the first year of college in terms of college adjustment, campus experience perceptions, and GPA across ethnic groups and college generation status. Results were related to previous research, with all hypotheses supported (to a certain degree). Taken together, the results of the present study might cross a gap in literature in terms of underrepresented combination groups on a more diverse campus. The current theory, based on Tinto’s (1975) retention model, may be expanded to include various groups across multiple time points to ensure that all diverse student populations are included. Even so, additional research is warranted.

Future research may want to further explore gender comparisons focused on academic differences, investigating whether campus perceptions impact female and male students differently (Suarez-Orozco, et al., 2010; Nicolas, DeSilva, & Rabenstein, 2009). Future research also seems warranted in comparing ethnic groups separately, to determine where additional differences may occur with the college generation backgrounds. It would be necessary to assess other environmental variables, such as campus values, participation in clubs, and pre-college characteristics, including prior high school experiences, family situations, and age for older students. Although omitted from the studies, socioeconomic status and financial burdens, including work status, financial aid, and necessary commuting may be crucial in pursuing the role of possible associations that were overlooked.
Future studies should also look more into high school GPAs, as it was only used as a control variable in the current study, to determine whether prior academic achievement for various groups may lead to varying results. It may be interesting to also look at student outcomes in college beyond the first year as well. Benefits may be gained from future research exploring student adjustment and GPA across all four years in students’ college careers, along with dropout rates. Other studies might find additional value in including transfer student experiences, incorporating an expansion of the longitudinal study beyond the first year in college. While breaking down student characteristics is relevant to determine where differences occur, comparing service access and usage may also be important to expose why such variations are happening. It would be relevant to target early mentor relationship and other forms of social support, along with more qualitative methods and analyses. It may be helpful to understand students’ needs and necessary programming, why some programs are not being fully taken advantage of while others have high success rates and usage. Assessing student adjustment across varying student bodies and campuses, including two-year institutions, also may be ideal in order to understand factors that may impact students in a variety of settings. With the suggested prospective research, such next steps are necessary to add to educational theories in higher educational as well as within community psychology, particularly for underrepresented student groups.

**Additional qualitative analyses in appendix.** Future research should also incorporate more qualitative research and analyses. In order to get a better sense of the qualitative results, and to further understand the end of the 1st year of college, further analyses from the student perspective were deemed relevant. Brief qualitative analyses from an additional open-ended item are found in Appendix D. Interested readers are encouraged to view these additional preliminary
themes that were pulled out to further explore students’ own understandings, particularly FGC/minority ethnic students perceptions on their lack of mentor relationships on campus.

Overall, FGC/minority ethnic students found multiple barriers to obtaining a mentor on campus, including a lack of opportunities or knowledge on how to acquire a campus mentor, lack of campus belonging, lack of trust, and issues found with commuting, working, and other tasks.

Further analyses of qualitative results may help determine additional barriers students perceive impact their achievement and ultimately may impact their retention. Such results may provide some insight into programming or resources that may be the most beneficial to work with this underrepresented subset group of students.
CHAPTER V

Summary

The transition during the first year in college is critical for students’ decision to stay in college. Research promotes the importance of social and academic integration in terms of college retention (Minor, 2015). Underrepresented students in higher education have high achievement gaps and college dropout rates (U.S. Dept. of Ed, 2016; Brookings Institution, 2016; Korn, 2015; Guidry, 2015; Fain, 2015) with added barriers including high tuition costs, less academic preparation, perceptions of negative peer interactions, limited faculty/campus supports, lack of a sense of belonging, and less campus engagement (U.S. Dept. of Ed., 2016; Jaschik, 2015; Minor, 2015; Guerra, 2015; Tough 2014; Strayhorn, 2009). Using Tinto’s retention model, the aim of the current study explored whether the model encompassed diverse student groups highlighting college adjustment and academic achievement at a diverse institution during the 1st year in college. In order to further capture underrepresented perspectives, the study included qualitative data in terms of students’ perceived academic stressors.

Results indicated for Hypothesis 1 that at Time 2, first-generation college students of minority ethnic backgrounds reported lower GPA scores compared to all other student groups, as well as lower social adjustment and academic adjustment scores compared to several of the groups. Although not all significant, non-first-generation college group of either ethnic group had the highest scores across social and emotional adjustment and attachment to institution, while scores were lowest across all subscales and GPA for the FGC/minority ethnic student group.

For Hypothesis 2, specifically looking at first-generation college students, preliminary results found that FGC students of both ethnic groups initially reported similar scores on
academic adjustment and GPA, whereas both scores dropped considerably overtime for the FGC/ethnic minority group. In comparison, academic adjustment scores for the FGC/White students improved overtime, while their GPA at T2 did not have a drastic drop. Results also showed that social adjustment scores started out lower at T1 and dropped at T2 for the FGC/ethnic minority students, compared to the FGC/White students’ score that remained similar overtime. SEM results indicated that social adjustment at Time 1 did not mediate the relationship between student background (ethnicity/first-generation college) and GPA scores at Time 2. While FGC/minority ethnic students reported lower social adjustment at T1, compared to FGC students of the ethnic majority group, these scores did not significantly lead to the lower GPA scores at T2. These results suggest that Tinto’s (1975; 1982) retention model may not be relevant for students from underrepresented backgrounds, particularly with the combination of first-generation college students from minority ethnic groups.

Brief qualitative analyses also found that FGC students from ethnic minority backgrounds observed multiple barriers to their academic life. Students’ perceived obstacles included academic-related struggles (inadequate academic preparation/unaware of college knowledge), funding (lack of aid/funds, high tuition/supplies/food costs), off-campus responsibilities (long commutes, family, working many hours, less campus time), and experiences with campus personnel (not helpful/supportive, lack of effective communication, teaching strategies).

Tinto’s (1975) original model of retention overlooked diverse student characteristics/experiences as well as the importance of institutional attributes and commitment. Institutions should focus on their barriers and necessary steps for student inclusion and success, beyond access. Crucial aspects include overall campus buy-in, cultural competency training,
varying teaching strategies, community building and support systems, incorporating frequent assessments to gather student voices and understand environmental impacts, and providing effective programming geared towards the educational success and retention of underrepresented student groups, particularly during the first year.
REFERENCES


Angeles: Western Psychological Services.


COE. (2016b). First-generation millennial voters: Who they are, how to reach them, and what
they care about most. Council for Opportunity in Education (COE).


Nora, A. (2003). Access to higher education for Hispanic students: Real or illusory? In
J. Castellanos & I. Jones (Eds.), *The majority in the minority: Expanding representation of Latino/a faculty, administration and students in higher education* (p. 47-67), Sterling, VA: Stylus Publishing.


PDC. (2016) President’s Diversity Council Notes about Race on Campus, Retrieved from the Office of the University President.


Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research.
Review of Educational Research, 45, 89-125.


Appendix A

College Adjustment Measure

Students Adaptation to College Questionnaire (SACQ)
Students Adaptation to College Questionnaire (SACQ)

(PA: Personal-Emotional Adjustment; SA: Social Adjustment; AA: Academic Adjustment; AI: Attachment to Institution)

All items rated on a 9-point scale (1 = doesn’t apply to me at all; 9 = applies very closely to me).

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel that I fit in well as part of the college environment. (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>2. I have been feeling tense or nervous lately. (PA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>3. I have been keeping up to date on my academic work. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>4. I am meeting as many people, and making as many friends as I would like at college. (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>5. I know why I’m in college and what I want out of it. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>6. I am finding academic work at college difficult. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>7. Lately I have been feeling blue and moody a lot. (PA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>8. I am very involved with social activities in college. (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>9. I am adjusting well to college. (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>10. I have NOT been functioning well during examinations. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>11. I have felt tired much of the time lately. (PA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>12. Being on my own, taking responsibility for myself, has not been easy. (PA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>13. I am satisfied with the level at which I am performing academically. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>14. I have had informal, personal contacts with college professors. (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>15. I am pleased now about my decision to go to college. (AI)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>
16. I am pleased now about my decision to attend this college in particular. (SA) 1 2 3 4 5 6 7 8 9
17. I'm NOT working as hard as I should at my course work. (AA) 1 2 3 4 5 6 7 8 9
18. I have several close social ties at college. (SA) 1 2 3 4 5 6 7 8 9
19. My academic goals and purposes are well defined. (AA) 1 2 3 4 5 6 7 8 9
20. I haven't been able to control my emotions very well lately. (PA) 1 2 3 4 5 6 7 8 9
21. I'm not really smart enough for the academic work I am expected to be doing now. (AA) 1 2 3 4 5 6 7 8 9
22. Lonesomeness for home is a source of difficulty for me now. (SA) 1 2 3 4 5 6 7 8 9
23. Getting a college degree is very important to me. (AA) 1 2 3 4 5 6 7 8 9
24. My appetite has been good lately. (PA) 1 2 3 4 5 6 7 8 9
25. I haven't been very efficient in the use of study time lately. (AA) 1 2 3 4 5 6 7 8 9
26. I enjoy living in a college residence hall (please omit if you do not live in a residence hall; any university housing should be regarded as a residence hall). (SA) 1 2 3 4 5 6 7 8 9
27. I enjoy writing papers for courses. (AA) 1 2 3 4 5 6 7 8 9
28. I have been having a lot of headaches lately. (PA) 1 2 3 4 5 6 7 8 9
29. I really haven't had much motivation for studying lately. (AA) 1 2 3 4 5 6 7 8 9
30. I am satisfied with the extracurricular activities available at college. (SA) 1 2 3 4 5 6 7 8 9
31. I've given a lot of thought lately to whether or not I should ask for help from Counseling Services or a psychotherapist outside of college. (PA) 1 2 3 4 5 6 7 8 9
32. Lately I have been having doubts regarding the value of a college education. (AA) 1 2 3 4 5 6 7 8 9
<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>33. I am getting along very well with my roommate(s) at college (please omit if you do not have a roommate). (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>34. I wish I were at another college or university. (AI)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>35. I've put on (or lost) too much weight recently. (PA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>36. I am satisfied with the number and variety of courses available at college. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>37. I feel that I have enough social skills to get along well in the college setting. (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>38. I have been getting angry too easily lately. (PA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>39. Recently I have had trouble concentrating when I try to study. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>40. I haven't been sleeping very well. (PA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>41. I'm not doing well enough academically for the amount of work I put in. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>42. I am having difficulty feeling at ease with other people at college. (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>43. I am satisfied with the quality of the caliber of courses available at college. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>44. I am attending classes regularly. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>45. Sometimes my thinking gets muddled up too easily. (PA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>46. I am satisfied with the extent to which I am participating in social activities at college. (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>47. I expect to stay at this college for a bachelor's degree. (AI)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>48. I haven't been mixing too well with the opposite sex lately. (SA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>49. I worry a lot about my college expenses. (PA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>50. I am enjoying my academic work at college. (AA)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>
51. I have been feeling lonely a lot at college lately. (SA)  
52. I am having a lot of trouble getting started on my homework assignments. (AA)  
53. I feel I have good control over my life situation at college. (PA)  
54. I am satisfied with my program of courses for this quarter. (AA)  
55. I have been feeling in good health lately. (PA)  
56. I feel I am very different from other students at college in ways that I don't like. (SA)  
57. On balance, I would rather be home than here. (SA)  
58. Most of the things I am interested in are not related to any of my course work at college. (AA)  
59. Lately I have been giving a lot of thought to transferring to another college. (AI)  
60. Lately I have been giving a lot of thought to dropping out of college altogether and for good. (AI)  
61. I find myself giving considerable thought to taking time off from college and finishing later. (AI)  
62. I am very satisfied with the professors I have now in my courses. (AA)  
63. I have some good friends or acquaintances at college with whom I can talk about any problems I may have. (SA)  
64. I am experiencing a lot of difficulty coping with the stresses imposed upon me in college. (PA)  
65. I am quite satisfied with my social life at college. (SA)  
66. I'm quite satisfied with my academic situation at college. (AA)  
67. I feel confident that I will be able to deal in a satisfactory manner with future challenges here at college. (AI)
Appendix B

Perceptions of Academic Stressors
"We are interested in understanding what academic stressors college students experience. By academic stressors, we mean stressors that are directly related to school, but not personal life stressors that may have affected your academic performance. Based on this definition, what would you say has been stressful about your undergraduate experience? (If many things were very stressful or different times were stressful for different reasons, please list all.) In your response, please do not include personal, identifying information, such as your name or the names of your friends or professors."
Appendix C

Demographic and Educational Information
Demographic and Educational Information

What is your gender?

Male
Female

Please enter your LAST FOUR (4) digits of your DePaul student ID number.

Last 4 digits DePaul ID #:

What is your ethnicity? [Check all that apply]

American Indian/Native American
Asian/Pacific Islander (please specify below)
African American/Black
Latino(a) (please specify below)
White/Caucasian
Other ethnicity (please specify below)

How old are you?

What was your cumulative high school GPA?

Are you currently enrolled at DePaul University?

Yes
No
What is your most recent cumulative GPA at DePaul?

How many credit hours have you completed at DePaul thus far?

Where do you currently live?
   - On campus, in student housing
   - Off-campus Without parents/guardians
   - Off-campus With parents/guardians
   - Other (please specify)

Who do you currently live with? (Check all that apply)
   - Mother/Stepmother
   - Father/Stepfather
   - Grandparent
   - Aunt/Uncle
   - Cousin
   - Foster Parents
   - Roommates
   - Other (Please specify)

How far did your mother (or the person who is like your mother) go in school?
   - Less than a high school graduate
   - High school graduate
   - Technical school or 2-year college (associate’s degree)
   - 4-year college (bachelor’s degree)
Master’s degree
Ph.D. or professional degree
I don’t know

How far did your father (or the person who is like your father) go in school?
Less than a high school graduate
High school graduate
Technical school or 2-year college (associate’s degree)
4-year college (bachelor’s degree)
Master’s degree
Ph.D. or professional degree
I don’t know

What is your major? If you are undeclared or do not know yet, please state “Undeclared.”
Appendix D

Additional Qualitative Analyses at T2
Additional Qualitative Analyses at T2

The results found in the study prompted an additional follow up to the minor mixed-methods approach, in order to better understand some of the other potential and perceived barriers to adjustment, academic achievement, and retention through the voices of those perhaps less familiar with college experiences. The current study briefly assessed qualitative responses to another item included in the survey at Time 2 as an exploratory component. The analyses included apparent themes among FGC/ethnic minority students in terms of reasoning behind their lack of mentor relationships on the college campus. Overall, some interesting insights were found regarding students’ perceptions of not connecting with a campus mentor.

Additional Qualitative item:

Students were asked whether they had formed a mentor relationship on campus, with a specific mentoring definition. If the students did not find a mentor, they were asked for some reasons potentially as to why.

"Is there *anyone at DePaul who is at least two years older* and more experienced than you and you go to for support and guidance? This person is not a parent or the person who raised you or a boy/girlfriend, and must be a part of the DePaul campus community. This person is someone who:

a) you can count on to be there for you;
b) who believes in you and cares deeply about you;
c) who inspires you to do your best; and
d) who has really influenced what you do and the choices you make"
Do you have a person like this at DePaul University?" Yes/No

2. (If no) Why do you think that you have not developed this type of relationship at DePaul (If there are many things you can identify as a reason for not developing a relationship, please list and explain all), and how has this affected your past school year?

About 48% (24 responses out of 50) of students who are FGC/ethnic minority students responded as to why they did not have a mentor on campus. Of those that responded, the themes that consistently came up included: 38% lacking opportunities to find a mentor/lacking knowledge to acquire a mentor, even though they would like a mentor, 38% included that they do not talk to too many people, feel lonely or not a part of the campus, 21% found barriers commuting, 17% discussed a lack of time, including hours of work, while 13% noted trust issues. Here are some of the quotes reflected by these themes:

- “I don't really talk to anyone. It makes me feel a bit lonely here.”
- “Racism within the university, judgmental counselors”
- “It is hard to as a commuter.”
- “I don't really feel part of this school, people who live on campus are very click-ish and I commute”
- “I am too busy with school and work to make connections/relationships at DePaul.”
- “I have not been involved with the counselors at school since I'm almost always busy catching up on homework. I have two jobs and attend school full time which can get very stressful.”
- “I think that it is mostly because I have not had time to take advantage of many of the opportunities DePaul has to offer. I work a lot apart from being a full time student so this has been a major factor. I would have definitely benefitted from having this sort of relationship because I would have someone to come to regarding issues with a class, or a professor, or just simple guiding me through the little things that come with being a college student.”
Appendix E

Financial Support & Affordability
Financial Support and Affordability. Some studies showed that students tend to struggle in college regardless of academic abilities (Engle & Tinto, 2008), and often times because funding is a main reason. A recent study by the Council for Opportunity in Education, the organization for federal TRIO programs that promote education for underrepresented student groups, found that the majority (97%) of TRIO students noted financial aid as their main worry, and then campus support services after that (COE, 2016b). First-generation college students from minority ethnic backgrounds tend to come from low-income households in comparison to most other students (Kuh, et al., 2006). Underrepresented populations struggle with a lack of financial aid and high tuition costs; with tuition rates mounting, low and middle income students find financial burdens as a barrier to access and completion in higher education (Sanchez, Esparza, Colon, & Davis, 2010; Fry, 2004). While over the past several decades, the Federal Pell Grant covered nearly half of tuition fees for low-income students, these grants only covered a little over a quarter of college costs in recent years (Korn, 2015). With the pending reduction or elimination of the Illinois state MAP (Monetary Award Program) grant, underrepresented students are the most at risk of not being able to afford tuition and dropping out, continuously impacting rates (U.S. Dpt. Of Ed., 2016; PDC, 2016). In fact, there are continued gaps of access where high-income students find increasingly higher rates of college completion in comparison to low-income students within recent educational statistics (Korn, 2015; Holtschneider, 2014; Spittle, 2011). One study found that almost half of students to 90 percent had frequent or some financial concerns respectively, that may impact their ability to stay in school (Thomas, 2002). When financial needs cannot be met (which, in turn, may interfere with academic achievement and social connections), many students decide not to continue schooling (Pascarella et al., 2004; Terezini et al., 1996).
The Pell Institute’s research on the last 45 years found that not only do underrepresented students struggle with college costs and have the largest unmet need in aid/costs, but they also tend to borrow more in loans compared to majority students even when they receive the Pell Grant (Pell Institute, 2015; Engle & Tinto, 2008). A recent study by the Education Department represented how much students struggle with loan borrowing, including repayment and defaulting (Nasiripour, 2015). The new U.S. Secretary of Education noted how some low-income students borrow nearly half of their family’s annual income, while not being given the necessary supports and services to succeed (U.S. Dpt. of Ed., 2016). Not only are repayment plans and large interest fees hard to manage, but often times students are unaware of the loans they are taking out and what the process entails. Financial literacy and additional counseling, along with scholarships are crucial for underrepresented populations, as student loan debt (noted as the second highest consumer credit in the U.S.) has been increasing consistently with tuition hikes, impacting students’ lives and future wealth for several decades (Nasiripour, 2015; White, 2015).

A recently proposed budget plan for college affordability called for a decline in loan interest rates and tuition costs, with state grants to the schools that lower such costs and also have higher success rates with low-income students, boosting access, accountability, and completion (Jaschik, 2015).

Even when students are academically inclined or working hard towards degree completion, however, such goals are often undermined with the inability to afford costs moving forward, among other reasons (Kuh, et al., 2006). In one case, a Black Student Union group on a diverse campus discussed many of their distresses in a document that encompassed ethnic issues and a lack of financial aid (BSU, 2016). The students, for example, noted their struggles to pay tuition along with holds placed on their accounts deterring class registration for needed courses,
yet being aware of university budget surpluses (BSU, 2016). Students wonder if holds are necessary for students from low-income families, especially when certain financial delays are out of their hands, such as pending aid and scholarships. Universities would benefit from determining whether further campus scholarships may be implemented and who would benefit most from receiving these funds.

Some institutions may be under the impression that underrepresented students are receiving enough aid in federal grants and therefore do not need as much institutional funds. With the conception that lower-income students do not need additional funding, institutional funding tends to go to more high-income students, while low-income students end up in more debt and still cannot fully fund tuition (Engle & Tinto, 2008). An example in 2015 at one institution included total need-based aid and non-need based aid were near $108 million and $97 million respectively, with institutional aid for non-need based at nearly $88 million (some of which goes to students with no financial need) and need-based at about $63 million. Over $6 million in institutional work-study/employment was offered to non-need based students for additional funding and experiences that fewer low-income students were thus able to receive, as only $1.6 million federal work-study was included. In the same year, over $40 million in need-based student loans (also unsubsidized/private loans) and another about $55 million in parent loans were taken out, many loan types with some of highest interest rates yet many low-income families need to revert to them; IRMA, 2015. Such notions impact underrepresented students, not only financially, but in terms of social and academic growth with the added stress of limited financial options, taking out multiple loans with additional burdens placed on struggling families, and working additional hours, in contrast to more affluent students, who may not need to rely on aid or jobs with the financial assistance of their families. More financial assistance is necessary
for underrepresented populations to persist through college and complete degrees; otherwise academic gaps will inevitably continue to escalate.

Research indicated that financial resources do assist students in college retention and graduation, particularly underrepresented student groups (Gonzalez, 2011; Kuh, et al., 2006). One university, in recognizing the burden students face with loans and tuition fees, created a program that keeps students from working too many hours to keep on track to graduate on time (New, 2016b). The aforementioned program was utilized after the realization that too many underrepresented students were working multiple jobs and/or over 40 hours per week, deterring them from timely degree completion and from focused attention on schoolwork with added financial stressors. The university offered grants to students who worked only a set amount of hours while keeping on track to graduate, saving both the school and students large amounts of money over time (New, 2016b). Underrepresented students may thus have a stronger sense of a campus connection with additional time for school activities, tutoring, and available programming. Another suggested strategy illustrated the option of exchanging loans that underrepresented students take out for grant money, via the institution or government, once they reach high academic performance or timely college completion (Pell Institute, 2015). Such programming and alternatives seem ideal for students who are low-income and first-generation college students, who struggle to pay for college and may even assist their families financially, by providing these students with the option to receive their education in a timely manner and with less debt.
Appendix F

Institutional Tasks

& Institutional Data Impacts
**Institutional Tasks.** Rather than the students trying to fit into the campus atmosphere as suggested by Tinto, perhaps an institution may need to work better to include, welcome, and support students from various backgrounds outside of the traditional focus. It is not enough to focus on enrollment numbers through recruitment and providing access to underrepresented students without also allowing success outcomes to occur overtime. It is necessary to focus on underrepresented students’ experiences, ongoing development, and needs for targeting programming. Underrepresented students also need to perceive that their voices are being heard and are respected in order to build a sense a community and belongingness (one of the values within community psychology, several of which were discussed in the implication section). Values of social justice (also important for community psychology) are necessary for incorporating multiple perspectives and allowing all stakeholders to be represented in the discussion from idea to implementation (Reynolds, 2014). Open discussions to plans of action set in place may allow students to feel that their concerns are being heard. The Diversity Council at one institution suggested incorporating student feedback and ideas through regular focus groups or online surveys, and seeing campus officials actively listening and engaging in various school events for students to show support (PDC, 2016). Frequent conversations and university-wide collaborations among all stakeholders involved, from students to the administrators, are important to keep all abreast of occurrences, rather than just a few staff or programs that are available to students (PDC, 2016; Engle & Tinto, 2008; Thomas, 2002). In order for students to feel that they are adjusted to college or belong, they may need to feel that their college achievement matters at all institutional levels, from marketing strategies to the classroom, with full commitment.
Institutional Data Impacts. At the institution where the current study took place, recent high graduation rates were found for first-generation college students (around 80% or higher within 6-years for TRIO first-generation college students at the campus, also higher than the 73% institutional rate), but when further reviewing other data it was revealed that there is a larger percentage of Caucasian first-generation college students at the current institution (near 50% during the year 2011 of the current study), which may drown out the less positive perceptions, achievement, and retention rates of FGC from minority ethnic backgrounds (IRMA, 2015c). For the entire freshman class of 2011, for instance, more Caucasian students graduated (63%; compared to Asian 55.6%, Multiethnic 52.7%, Hispanic/Latino 49.7%, and African-American 41.1%) within 4 years (by the end of the 2014-15 academic year) than any other ethnic group (IRMA, 2015b; first-generation college rates by ethnic groups were not included; but FGC had 57% with 4-year graduation rate for the 2011 cohort, and low-income students had a 52% graduation rate – these rates seem further exacerbated with the combination of underrepresented backgrounds. Students that also struggle during the 1st year on probation have a less than 3% chance to graduate in 4 years, about 22% in 6 years, in a recent institutional analysis). Research noted that underrepresented students have higher attrition rates in private 4-year institutions (Engle & Tinto, 2008), and therefore it is ideal to assess all student groups at the current institution and view the intersection of background characteristics as well.

Institutions that rely heavily on student tuition yet are concerned for student collegiate achievement may benefit from measuring why students apply to and ultimately accept or deny attending the institution. The Admitted Students Questionnaire at one institution in an assessment of incoming freshman found that while many students were concerned about financial costs, the students who listed the institution as their number one choice still ended up
enrolling and had higher perceptions of the school than did students who did not end up enrolling (IRMA, 2016), regardless of other factors. Such data may assist in determining whether certain student groups are more likely to attend based on financial aid need or other areas (including location, prestige, athletics, outcomes, etc.) to better balance scholarship funding and marketing strategies, and ultimately impact student adjustment and decisions to stay (Fain, 2015).

One recent study found that varying percentages of freshmen students at the beginning of their 1st year actually felt “well-matched” to the university in terms of academic background (63%), social interest (58%), ethnic match (47%), and SES/family wealth (26%) during the recent 2015 academic year (IRMA, 2016). Further analyses may show whether academic, social, financial, or institutional perceptions had the most impact on student attrition as well as retention for the freshmen students. The study was also the only 1st year study that was conducted in the last several years at the institution, where retention rates for freshman from the previous year to the 2015 academic beginning year was just under 84% (IRMA, 2015). Another study found that students prefer not to stay at a school where they feel that they have to fit into the majority views rather than be who they are (Thomas, 2002). It would therefore be useful for institutions to distinguish which students leave and for which reasons, along with tracking retention rates for the following years with frequent assessments (McCubbin, 2003). Varying first year perceptions speak to the importance of assessing new students regularly, and at the end of the school year to gather student insight, changes and impacts with institutional support.

One institution improved first year programming via NSSE (National Survey of Student Engagement) assessment results, by incorporating high-impact practices and introducing learning environments both in and out of the classroom with faculty and mentors, along with early intervention approaches (NSSE, 2015). Such changes led to increased retention within the
institution and in comparison to other schools, not only representing successful academic and social aspects, but illuminate the need for evaluations in order to better understand the population. Issues may be addressed with further evaluations, but there should also be a focus on those who are low-income, first-generation college students, athletes, various ethnic groups, etc. Research suggested that an investigation of varied student groups, as investigated in the current study, rather than the full picture from a distance, is necessary to get a sense of which groups are succeeding and how, or are struggling and why (New, 2016).
Appendix G

Examples of Successful Programming/Services

& TRIO Department of Education Programs
Examples of Successful Programming/Services. Successful approaches and necessary programming/services to benefit underrepresented student groups are included. Despite a shortage of interventions benefitting underrepresented student groups in terms of academic gaps (including graduation and achievement rates), there are several programs geared towards minority ethnic groups, low-income, and first-generation college students that have led to major educational impacts across students’ academic careers. Some colleges, cognizant of the low college adjustment and barriers underrepresented students face, have implemented programming for low-income, students from minority ethnic backgrounds, and first-generation college students that may impact their overall college experience. These programs include aspects of mentor relationships, summer funding and coursework, donated used books, academic supports, and early orientations to the campus so that students have more of an awareness of campus resources and connections with successful results (Cardoza, 2016; U.S. Dpt. Of Ed., 2016; Tinto, 2013).

A tutoring program in Chicago found beneficial results, regardless of the lack of resources and funding, successfully improving student test scores, math levels, and course grades in a brief period of time through individual daily tutoring efforts incorporating additional time, skill-building, encouragement, and feedback during school hours, which may have also impacted students’ attachment to the institution (Brookings Institution, 2016). Some institutions have implemented study skills courses specifically related to a required class in an effort to build on content simultaneously, rather than separate development courses, with very successful results (Tinto, 2013). It may be beneficial to also allow these additional sessions to count for class credit to further fuel student engagement and full utilization of tutoring services. Summer bridge programs with college credit have also led to better grades and college rates, including
supplemental instruction and a specific curriculum with student services designed for first year underrepresented and often underprepared students.

Other successful programming includes the Young Scholars Program that prepares underrepresented students for college curriculum and provides mentoring, advising, tutoring, clear degree pathway assistance, and scholarships on a need-basis (New, 2016). There are also the TRiO Programs, the Center for Student Opportunity, and the America Needs You Programs that assist throughout the undergraduate level guiding low-income and first-generation college students towards academic achievement in a similar manner, stressing necessary mentor relationships (Erbentraut, 2015). These effective programs have found high college completion rates for underrepresented student groups who typically have low rates. Traditional students may also benefit and learn from the connections with students from diverse backgrounds just as much as the reverse may be true. It would be relevant for schools to note the varying campus atmospheres and particular resources that may be adding to success at related institutions, and therefore assessing successful programs on similar campuses or with a comparative student population would be helpful.

One university closed the first-generation college and minority ethnic students’ graduation gap compared to Caucasian students by introducing mechanisms to track students who are at-risk for class failure or who are steering away from their academic pathway to graduate on time (Cardoza, 2016). Institutions should also focus on particular classes that frequently encompass low student grades along with a lack of class offerings that are necessary to graduate (Tinto, 2013). There are also studies that suggested highlighting students’ achievements in an effort to promote aspects of potential expansion for all students, from a more strengths-based approach (Demetriou & Schmitz-Sciborski, 2011). Other institutions increased
the enrollment and graduation rates of various underrepresented populations through intentional work by incorporating student awareness and providing the necessary academic and financial support; however there are very few programs that have made such efforts while also focusing on improving rates (U.S. Dpt. Of Ed., 2016).

**TRIO Department of Education Programs.** Within TRiO, there are the seven federally funded programs (including the McNair Scholars Program and Student Support Services Program at the college level) that are found at numerous educational institutions throughout the nation. These programs guide underrepresented students towards academic success and educational attainment through advising, tutoring, mentoring, participation, goal-setting, financial literacy, summer programming, first-year seminars, professional development, school visits, campus presence, and exposure to resources that they may not otherwise have access to or know how to reach, and often times with staff who have also come from similar backgrounds (U.S. Dpt. Of Ed., 2016; ACT, 2016; COE, 2016b; U.S. Education Department, 2015; Belisle, 2015; Korn, 2015; Woodard, 2015; Tierney & Sablan; Holtschneider, 2014; Engle & Tinto, 2008; Kuh, et al., 2006). Students from these programs discuss the sense of encouragement they receive, the direction, opportunities for collaborations, networking, and experiences that build them towards academic success, particularly with the previously limited educational opportunities (Sohr, 2015; Schabbing, 2015, Noce, 2015; Guidry, 2015). There are also benefits to encompassing several TRIO programs within an institution for a joint effort, from high school supports through the college levels. Several programs have additionally been inspired by TRIO programs which also gear students up for higher academics, research, and connections with graduate students (Harveson & Janke, 2015).
Studies also highlighted that non-cognitive variables impact retention and academics, may assist students in building a deeper sense of perseverance, and in feeling welcomed on a college campus (ACT, 2015; Walton & Cohen, 2011; Dweck, 2006). A pilot program at the current study’s institution, finding successful preliminary data, focused on 1st year TRiO students from underrepresented populations and was implemented by community psychologists during the Winter quarter of academic year 2015-16. In an effort to improve student sense of belongingness and educational experiences to eventually impact college attainment, the pilot focused on incorporating the Growth Mindset model from Carol Dweck, which stressed that intelligence is malleable. The social belonging intervention by Walton & Cohen (2011) was also integrated. The social belonging component suggested that there are harmful effects of social isolation on college campuses that impact both the intellectual achievement and health of students, which also may lead to lower college retention, particularly for underrepresented students. Non-cognitive focused programs allow students to realize that struggles may be inevitable during the transition phase but that ultimately the students will find their place (Minor, 2015; Tough, 2014), and build a connection to the institution.