RELATIONSHIP BETWEEN ACADEMIC RESILIENCE AND COLLEGE SUCCESS:
CROSS-NATIONAL EXPERIENCES OF LOW-INCOME/FIRST-GENERATION STUDENTS

A Dissertation in
Curriculum and Instruction and Comparative and International Education

by
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ABSTRACT

The present study examines the relationship between academic resilience (defined as the ability to effectively deal with setbacks, stress, or pressure in an academic setting) and the experiences of US students served by TRIO intervention programs (federally funded programs) that serve low-income/first-generation students. Based on a sample of 106, a mixed methods approach was used to analyze responses from participants who responded to a 27 item Likert-type scale (1-5) College Resilience Questionnaire (CRQ) that had been posted online (Survey Monkey). The results of the CRQ instrument reveal that academic resilience and academic and social engagement scores for females are higher than for males. Results further support findings from t-test scores ($t (106) = 2.21, p = .029$), which also show differences in academic resilience between females and males enrolled in TRIO programs. Next, further analysis used in-depth interviews to expand the analysis of the lived experiences from six participants’ interviews. Seven themes emerged from the data, which indicated that familial, institutional, individual, and socio-environmental protective factors play important roles for success in college of low-income/first-generation students. In general, the data seem to show that TRIO programs nurture students’ academic resilience. Additional analysis compared these results with South African resilience studies. The comparison shows similarities in sources for the resilience nurturing. The dissertation appendices contain details of the quantitative CRQ Questionnaire and the qualitative interview questions.
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DEDICATION

This work is dedicated to my father the late Justus Mua Kivondo and to my mother Dorothy Mua Kivondo. Their sacrifice and belief in my ability to succeed is what nurtured the zeal in me to do so.

A big thank you to great parents!
Chapter 1

Introduction

Statement of the Problem and Context

The present study investigates the relationship between academic resilience and the experiences of students served by TRIO (not an acronym) intervention programs in the USA. Irrespective of the efforts by the government and interested parties to increase college retention for low-income/first-generation students, serious positive outcomes are yet to be seen. Although numerous programs, funded by millions of dollars from the federal government exist, few positive outcomes are apparent.

Research in the last few decades (Ford, Okojie & Lewis, 1996; Rutter, 1990; Smokowski, Reynolds, & Bezruczko, 1999; Wang & Gordon, 1994), strongly supports academic resilience as one possible solution for helping low-income/first-generation students as well as all other students to persist in college. Academic resilience researchers (Gore, S., & Eckenrode, J. (1994; Groberg, 1993) agreed that fostering academic resilience in all children is possible through protective factors such as caring adults, opportunities for involvement in school or college, and high expectations. In addition, researchers showed that fostering academic resilience in the presence of adversity is possible, and that fostering academic resilience operates within home, school, and community environments. However, a few studies concentrate on academic resilience and the relationship it has with students served by TRIO intervention programs.
The assumption is that TRIO programs contribute to the participants’ academic resilience, which is inherent in the goals of helping participants to persist through high school and college. Accomplishing the goals occurs through the programs’ wide array of services that correlate with protective factors of resilience such as high involvement, high expectations, and caring adults, etc. This study examines the program’s methods for contributing to participants’ academic resilience. The main research question seeks to determine the relationship between students’ academic resilience and academic success through the experiences of TRIO program’s intervention. The study focuses on the experiences of TRIO students who are low-income/first-generation college students and who have unique challenges as they navigate college. These challenges (risk factors) associate with social and academic integration in college, a lack of which hinders their settling into and graduating from college (Braxton, Bray & Berger, 2000).

A comparison of the results of the study with South African resilience studies provided further insight. Since South Africa (SA) shares historical similarities with the US, SA became the obvious choice for comparison purposes. In addition, personal and social issue experiences during a high school South African history class motivated the consideration of SA resilience studies. Personal background provided a clear understanding of historical, contextual experiences of the population sample and created an adequately position from which to explore the subject through inclusion of personal and students’ experiences (Creswell, 1994). The research’s interest focused on whether or not students’ involvement in TRIO intervention programs affected their overall academic resilience. The idea for this dissertation arose from a personal story of resilience as well as from experience as a low-income/first-generation student, as told in a brief...
autobiography. This autobiographical approach is meant to provide an overview of the events that shaped my life and subsequently led to the study.

**Autobiographical Roots of the Study**

Growing up in an economically and academically challenged community in Kenya and being a first-generation college graduate opened my eyes and cultivated my desire to study students with similar challenges. During formative years, my father in particular, told me countless stories of the hardships he and his friends faced when attempting to reach grade school. “The school was far away,” he said. “We walked barefoot, so many miles every day, rain or shine, passing through the forest, risking being eaten by lions and hyenas. Life was tough.” My mother lamented of how the system restricted her off attending Alliance Girls Boarding High School (a very competitive school that assured its students of great careers once they graduated). Despite her acquiring the mandatory points for enrollment, she was slightly older than the rest of the students. Exhibiting great academic resilience, my parents graduated from a two-year teacher training college during the colonial period in Kenya, which encouraged all trained teachers to join and pioneer the teaching profession. Their dream was to have their children do better and excel in academic life.

At the local primary school (Ianzoni Primary School) where I attended for my early education, my teachers repeated the same directive, “Put more effort in your studies, put more effort in your studies.” They said the same thing when they wrote term report cards. In retrospect, these were protective factors advocating for academic resilience. Later, after matriculating in college, these words of encouragement became an
important mantra: I knew that my failure to work hard would destine me to a status worse than my parents’. For them, academic resilience allowed overcoming challenges and continuing with schooling.

The irony of my father’s story is that I, too, had my own hardships for attending school; stories I will perhaps live to tell my children. Every morning before school started, I would walk forty-five minutes to collect water for the family. Only after this chore could I join my classmates. Sometimes, I would arrive late and exhausted. Just like my father, I never rode a bus to school despite the long distance. I hardly had time to do assignments, given the amount of after-school, home chores, including fetching water, collecting firewood, and even sometimes cooking. Besides, the home environment was very poor and not conducive to completion of any meaningful assignments.

The school was far from what the United Nations Educational, Scientific and Cultural Organization (UNESCO) recognize as a standard school and much worse than what Jonathan Kozol (2006) described in Savage Inequalities: Children in America's Schools. The school often lacked the most basic resources needed for education, such as qualified teachers, adequate facilities, and textbooks. The school’s building had an earthen floor and very temporary roofing that leaked during rain to the point that we would all become soaked and remain wet until we returned home to find another leaking roof. To supplement this situation, every evening as my mother prepared dinner, my father would help my siblings and me with homework in addition to a “home curriculum” that he used to teach us. This was a very serious study session, complete with daily assignments. During this time, my father challenged us to study hard in preparation for the future. I am confident that these study sessions with my father were what opened my
eyes to reading and writing, and consequently prepared me for high school and higher education.

Since secondary education required parents to pay school fees for their children, my parents struggled with the expenses for a secondary school diploma. Despite the existing cultural practice of favoring boys over than girls in academic matters, they did not discriminate against me in favor of my brothers, but instead gave us equal chance. I recall that many of my girlfriends could not go to secondary schools because their parents chose to pay for their brothers. As a high school student, I had little information about college, even though the school administration submitted college applications for all students in Form IV (equivalent of 12th grade). Sometimes we lacked teachers for certain subjects, and had to read the textbooks ourselves, sometimes sharing with other students. All these were obstacles that stood in the way of academic success, and yet I overcame them in order to succeed. A history class in high school revealed the situation in South Africa (SA) to be much worse for others.

The class was in preparation for the culminating Kenya Certificate of Secondary Education. As the history class continued to meet throughout the semester, discussions of the Apartheid system in South Africa created depression, many questions, and a great desire to visit SA when I was able to afford the trip. I questioned the teaching methods, children’s living conditions, the discrimination among groups of people, etcetera. My intended trip to SA would be a fact-finding mission and a personal witness to racism and discrimination as affecting disadvantaged South Africans. The desire, deeply and firmly residing in my heart, remained through college. When I began working, this desire rekindled. After saving enough to support the trip, I booked a flight to Johannesburg from
where I would bus to Cape Town. I figured a bus trip would provide a vista of the SA
countryside; besides, I would experience a common transportation mode in SA. As fate
would have it, two close friends had relocated to South Africa from Kenya, one to train
with Youth with a Mission and the other to work as a teacher. Both hosted me at different
times during my visit that included the Soweto Shantytown in Johannesburg, a ride on a
train in a black only section, an experience in an upscale mall, a tour in a local taxi, a trip
to Table Mountain, and an association with penguins at False Bay beaches in Muizenberg
- Western Cape.

Going to the Soweto Shanty Town was the first I saw of state-run segregation.
Walking through Soweto was the first experience with a township-style ghetto. As I
studied the people passing by, I knew that at the heart of these Shanties was resilience,
resilience of a people who had been hurt but who kept hoping for a better tomorrow. Here
in the Shanties was resilience that kept family ties tightly knitted. Resilience enabled
families to survive on low wages from the gold mines and allowed families to send their
children to school to give them a better future. It also allowed women to walk with their
shoulders high even as abusive male partners vented their frustrations and trampled their
dignity.

Resilience afforded the women the ability to care for other children in the
community and treat them as their own. All my current efforts seemed worth the pain; at
least I would go back to Kenya knowing that the little education I had received had been
achieved in a system devoid of segregation. Although I was not raised in an apartheid
system, many similarities of resilience exist when comparing students’ situation in SA to
attain a college degree. Just like in my personal case, resilience made possible many
black South African students’, from these shanties, attaining academic success despite the challenges. Once in college, I began to think deeply about what my father’s advice about working hard for the sake of a better life someday, if I took it seriously. Perhaps because of my parents’ inability to graduate from a four-year college, they encouraged me to aim high in matters academic, knowing that one day I would be happy to have done so. They knew that I needed more than academic preparation to succeed within and beyond school.

In retrospect, I came to realize, years later, that my parents were asking me to be academically resilient. What I needed was academic resilience to overcome the odds I faced, graduate college, and earn a better living. In my case, my parents who were both elementary school teachers were my “intervention program.” They taught me the virtues that nurture academic resilience, including self-motivation. In similar ways, characteristics that promote academic resilience in low-income/first-generation students generally are the supportive mechanisms, which are central to this study.

**Academic Resilience in the Context of the Study**

Academic resilience, in the context of this study, is the ability to successfully deal with academic drawbacks and challenges that are typical of ordinary academic life (Martin & Marsh, 2008). Such drawbacks, or risk factors, include poor grades, competing deadlines, exam pressure, difficult schoolwork, chronic absenteeism, and maintaining regular class attendance (Martin & Marsh, 2006). Specifically, academic resilience refers to a phenomenon characterized by good outcomes despite serious threats to adaptation or development in academics. Since the 1970s, researchers have become more interested in
the phenomenon of academic resilience due to the number of dropouts in schools and colleges (Masten, 2001). In examining academic resilience among low-income/first-generation students, studies identified positive factors, which allowed students to "beat the odds" and succeed in spite of the negative factors surrounding them. Such factors are individual, institutional, familial and socio-environmental (Alva, 1991; Arellano & Padilla, 1996; Garmezy, 1991; Rutter, 1987). Knowledge of the factors associated with academic resilience provides a theoretical and empirical base from which to study academic resilience.

The last forty years have seen lower rates of college completion among students who are considered low-income/first-generation (National Center for Education Statistics [NCES], 2002). Students', common identification as low-income or first-generation, are those encountering factors with negative effects, such as, poverty and being the first in a family to attend college. Other factors affecting low-income/first-generation students include lack of interest in school, low grades, poor reading and math skills, financial problems, misconduct, personality problems, family problems, and socio economic problems are among the reasons some students are unsuccessful in school (Brown & Rife, 1991). Low-income /first-generation students who succeed academically despite the odds are, apparently, academically resilient, that is, they have shown success despite mitigating, negative circumstances (Wang, Haertel & Walberg, 1994).

Academic resilience is, perhaps, a dynamic developmental process that involves all forms of protective factors, individual, familial, institutional, or socio-environmental. As such, academically resilient students are able to transform difficult environments into a source of motivation by maintaining personal high expectations and aspirations, being
goal-oriented, having good problem-solving skills, and being socially competent (Wang & Gordon, 1994). Notably important is that academic resilience is a trait that pertains to a specific aspect of life (i.e., academic/scholarly). Therefore, in theory, even people who are resilient in terms of life in general may find difficulty succeeding in college because they lack this very institutional sort of resilience.

Academic resilience is commitment to complete a degree program, despite difficulties. Moreover, completing the program requires remaining engaged academically and socially while attending an academic institution. In other words, academic resilience tenacity for success when times are difficult and setbacks occur. It is about “hanging in there” and making adjustments, no matter what the difficulty. As mentioned earlier, the level of commitment of low-income/first-generation students towards degree completion interacts with social and academic engagements to propel students toward degree completion. In addition, academic and social engagements appear to be important elements of academic resilience (Martin, 2002). The relationship between academic resilience and experiences of students served by TRIO programs is a fitting study, because lessons learned have application to students with similar characteristics. Figure 1-1 illustrates the academic journey through social and academic engagements to academic resilience and finally to academic success.

Academic resilience propels a student to complete degree programs through various interactions, despite difficulties. In order to be able to complete a program, the student needs to remain engaged academically and socially while in college. Without maintaining a high level of commitment as well as social and academic engagements, a student can easily become a dropout.
Intervention programs are one way of encouraging academic resilience in the USA. Without intervention, many students raised in socio-economically and otherwise disadvantaged backgrounds and attending poor educational institutions are not likely to overcome these challenges and may fail academically. Many different types of intervention programs exist, for example, institutional intervention including academic
intervention programs, familial intervention including parental intervention, and socio-environmental intervention including church / community intervention; these assist students in various ways. In the last few decades, much research considered a variety of strategies, including programs to help low-income/first-generation students (Respress & Lutfi, 2006). The focus has been on strength-based approaches, such as intervention programs, that appear to hold much promise in helping students nurture their individual protective factors (Benard, 2004; Garmezy, 1993; Civita, 2000). Specifically, this study considers TRIO intervention programs, which are federally funded institutional based intervention programs.

TRIO programs offer key protective factors and exist in most academic institutions (colleges) all over the USA and its territories assisting students in various ways. In the last few decades, the federal government has played a crucial role in the educational sector through legislative decisions to create different types of academic intervention programs, which have impacted academic access and opportunities for low-income/first-generation students in the USA.

**Academic Intervention Programs in the USA.**

Historically, creation of academic intervention programs began in US colleges with the resistance of the southern states to desegregate school systems after the Supreme Court ruling of Brown vs. Board of Education Topeka Kansas nullified the status quo (Cozzens, 1998). A decade later, the ruling triggered President Lyndon Johnson’s address of the societal issue of equality by declaring a “War on Poverty” with the aim of creating
equity and access for all Americans. With his backing, Congress authorized the Higher Education Act (HEA) of 1965 and its subsequent amendments. This Act provided grants to administer the programs (referred to as Special Programs for Students from Disadvantaged Backgrounds) designed to assist students through the academic pipeline from middle and high school to higher education. These were academic intervention programs geared towards early intervention and providing academic support so that all children could be prepared to take advantage of the educational system, regardless of race, ethnic background, or economic status (Balz, 1998). Academic intervention programs are institution-based initiatives that serve as protective factors by encouraging students to engage other existing protective factors within the institution. For example, established offices, such as guidance and counseling, tutoring, and teacher-student mentoring programs among others, assist students. Many varieties of large, formal academic intervention programs exist; most of them operating through competitive grants from federal or state governments (Bernard, 1991). These programs’ designs increase the number of students from academically disadvantaged backgrounds enrolling in post-secondary education by supporting them before and after enrollment in college, and their creation provides low-income/first-generation students, with apparent potential to succeed in college, comprehensive academic support services, promotion of academic success, and support for retention and graduation from the college. Program participants receive assistance for building the skills, habits, and aptitudes that determine success, both in college and afterward, in their careers (Muraskin, 1997; Myers, 2003; Tinto, 1999). In a study analyzing 30 academic support programs for under-prepared college students tested effectiveness for achieving goals, Dumbuya (2005) determined that
academic intervention programs are effective in supporting low-income/first-generation college students’ academic success in post-secondary institutions.

Since the days of USA President Johnson, creation of academic intervention programs serving high school and college students who would otherwise drop out of the education pipeline have been widespread. These programs accentuated the belief that students can be as successful in their college education pursuits if adequately equipped with the fundamental social and academic skills needed to traverse the inhibiting risk factors of race, ethnicity, gender, and social class issues encountered along the way. The need to help low-income/first-generation students is even greater now that the overall minority population in the USA represents 34 percent of the total population (in 2008) and with low-income communities expanding due to difficult economic times (Ghosh, 2010; Moses, 2009).

Generally, most colleges have academic intervention programs that work towards improving the success-rates of students and assisting students with social and academic integration skills in order to improve academic success. These programs focus on strengthening students’ formal and informal contacts within the institution (Lotkowski, Robbins, & Noeth, 2004). Intervention programs also serve as a critical resource for providing orientation and skill-bases needed to help low-income/first-generation learn the culture of higher education (Cabrera & Padilla, 2004). In short, academic intervention programs aim to provide and promote those protective factors – including academic and social engagement – that appear to lead to success in higher education (Standing, 1999). The degree of influence the programs have in students’ academic resilience resulting in success is an intriguing issue and the focus of the current study.
As discussed, low-income/first-generation students are the intended, major beneficiaries of academic intervention programs based upon the assumption that these students continue to interact with program faculty, staff, and other students as they move towards greater integration within their social and academic environments (Martin, 2008). Chief among the considered programs are the Federal TRIO programs that serve low-income and first-generation students ranging from elementary school to college levels.

**TRIO Programs**

TRIO Programs, funded by Title IV of the Higher Education Act of 1965, support the nation’s commitment to provide educational opportunities for all Americans to enter and graduate college. TRIO is an umbrella term under which seven programs exist to battle poverty and create academic equity for low-income/first-generation individuals in terms of access to higher education. TRIO programs’ funding by the U.S. Department of Education through competitive grants accrues primarily to colleges and universities, which provide administration.

TRIO Programs began with the introduction of the Upward Bound program, as a pilot project in the Economic Opportunity Act of 1964 (P.L. 88–452), influenced by President Lyndon Johnson. The introductory orientation was early intervention and providing academic support to allow children’s preparation take advantage of the educational systems across the USA. TRIO refers to a group of approximately 2,886 federal education programs serving some 844,889 students, (Council for the
Advancement of Standards in Higher Education, 2009). These programs include Upward Bound, Veterans Upward Bound, Upward Bound Mathematics/Science, Educational Talent Search, Ronald E. McNair Post-Baccalaureate Achievement, Student Support Services and Educational Opportunity Centers (See Table 1-1). Obviously, from the table, the population served by TRIO programs has expanded over the last ten years, indicating that the need to assist low-income /first-generation students may be great.

Table 1-1. Estimated Number of TRIO Participants Served Program Years 1997-1998 through 2007-2008

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<tr>
<td>MCN</td>
<td>2,469</td>
<td>2,469</td>
<td>3,641</td>
<td>3,774</td>
<td>3,774</td>
<td>3,774</td>
<td>4,248</td>
<td>4,256</td>
<td>4,236</td>
<td>4,172</td>
<td>5,210</td>
</tr>
<tr>
<td>SSS</td>
<td>7,9</td>
<td>9,9</td>
<td>4,6</td>
<td>1</td>
<td>195,288</td>
<td>195,128</td>
<td>203,212</td>
<td>200,189</td>
<td>366,33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TS</td>
<td>4,1</td>
<td>1,1</td>
<td>4,4</td>
<td>4,4</td>
<td>387,741</td>
<td>384,588</td>
<td>384,588</td>
<td>393,747</td>
<td>0,0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UB</td>
<td>48,462</td>
<td>44,495</td>
<td>52,960</td>
<td>57,081</td>
<td>57,081</td>
<td>56,841</td>
<td>62,207</td>
<td>56,679</td>
<td>56,450</td>
<td>56,281</td>
<td>65,587</td>
</tr>
<tr>
<td>UBMS</td>
<td>*</td>
<td>3,722</td>
<td>6,200</td>
<td>6,093</td>
<td>6,093</td>
<td>6,093</td>
<td>7,087</td>
<td>6,845</td>
<td>6,817</td>
<td>6,705</td>
<td>6,808</td>
</tr>
<tr>
<td>VUB</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>5,269</td>
<td>4,909</td>
<td>4,909</td>
<td>5,660</td>
</tr>
<tr>
<td>TOTAL</td>
<td>685,56</td>
<td>712,36</td>
<td>722,47</td>
<td>725,25</td>
<td>748,59</td>
<td>872,54</td>
<td>873,836</td>
<td>870,330</td>
<td>877,777</td>
<td>871,818</td>
<td>844,88</td>
</tr>
</tbody>
</table>

*Number of participants included in UB and UBMS totals.
Source: U.S. Department of Education 2008

Key for Table 1-1.
EOC - Educational Opportunity Centers
MCN - Ronald E. McNair Post baccalaureate Achievement
SSSP - Student Support Services Program
TS - Talent Search
UB - Upward Bound
UBMS - Upward Bound Math and Science
VUB - Veterans Upward Bound

The main objective of TRIO programs is to provide academic and social support to students from low socio-economic backgrounds with family incomes that are below
150% of the poverty line, and students who will be the first in their families (first-generation) to graduate from college (Gullatt & Jan, 2003). The succeeding section outlines the target population’s characteristics and experiences.

Experiences of Low-income Student Populations

According to the US Department of Education, a low-income individual in the US is a person whose family's taxable income for the preceding year did not exceed 150 percent of the poverty level. These annually revised levels represent annual household incomes and the number of individuals in the household. The range is from $16,245 for a family of one to $55,515 for a family of eight (US Department of Health and Human Services, 2009). Details appear Table 1-2.

Table 1-2. Annual Low Income Levels

<table>
<thead>
<tr>
<th>Size of Family Unit</th>
<th>48 Contiguous States, D.C., and Outlying Jurisdictions</th>
<th>Alaska</th>
<th>Hawaii</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$16,245</td>
<td>$20,295</td>
<td>$18,690</td>
</tr>
<tr>
<td>2</td>
<td>$21,855</td>
<td>$27,315</td>
<td>$25,140</td>
</tr>
<tr>
<td>3</td>
<td>$27,465</td>
<td>$34,335</td>
<td>$31,590</td>
</tr>
<tr>
<td>4</td>
<td>$33,075</td>
<td>$41,355</td>
<td>$38,040</td>
</tr>
<tr>
<td>5</td>
<td>$38,685</td>
<td>$48,375</td>
<td>$44,490</td>
</tr>
<tr>
<td>6</td>
<td>$44,295</td>
<td>$55,395</td>
<td>$50,940</td>
</tr>
<tr>
<td>7</td>
<td>$49,905</td>
<td>$62,415</td>
<td>$57,390</td>
</tr>
<tr>
<td>8</td>
<td>$55,515</td>
<td>$69,435</td>
<td>$63,840</td>
</tr>
</tbody>
</table>

The increase in the number of students who drop out of college especially among low-income disadvantaged students is alarming. According to the Education Trust (2007), students from high socio-economic backgrounds represent a 75% college graduation rate; by comparison, only 9% of students from low socio-economic backgrounds graduate. Students living in poverty have fewer academic resources, including fewer good teachers, books, community education centers, etc., than do students from higher socio-economic levels (Bradley & Crowyn, 2002). Poverty has the potential to expose students from low-income backgrounds to inappropriate educational experiences through their families, schools, or communities (Pallas, Natriello, & McDill, 1989). Parents of higher socio-economic status tend to engage their children in more academic conversations than do parents of low socio-economic status (Battle, 2002; Caldwell & Ginther, 1996).

Students from low socio-economic backgrounds have greater exposure to risks and fewer resilience-promoting conditions (Borman & Overman, 2004). Financial problems are not the only barrier students from low-income families experience when trying to attain college attendance. Low-income students tend to experience additional social and academic hardships. Key barriers that hinder low-income students from attending higher educational institutions in addition to financial resources center on fundamental essentials necessary for acceptance to college, including, applications, academic preparedness, and financial alternatives (Borman & Rachuba, 2001). The experience of low-income/first-generation students as they climb the academic ladder are of importance for sharing with others in similar situations and especially as related to academic resilience, and become a motivation for this study.
Experiences of First –Generation Student Populations

The US Department of Education refers to a First-Generation Student (FGS) as one whose parents have not graduated from a four-year college (http://nces.ed.gov/pubs2001/2001153.pdf), and therefore, is the first from the home to graduate, or intend to graduate, from college. First-generation students are more likely to be from low-income families (Nunez & Cuccaro-Alamin, 1998; Choy, 2001) and two thirds of low-income students are first-generation (U.S. Department of Education. 2002). The students typically lack the skills and resources necessary to succeed in college and have multiple risk-factors that affect their progress while enrolled in college. These challenges include less academic preparation, lack of proper information for college expectations, financial challenges, and low grades upon entrance (Lara, 1992; Lohfink & Paulsen, 2005; Rendon, 1992; Terenzini et al., 1994; Pascarella & Terenzini, 1998; Riehl, 1994; York-Anderson & Bowman, 1991; Weis, 1990). These challenges make FGS the largest group of students to leave college before they obtain a certificate or degree and demonstrate a higher degree of difficulty making the transition from secondary school to college than their peers (Bean & Metzner, 1985; Billson & Brooks-Terry, 1982). Lack of proper transitioning leads students to feel the stresses and pressures of the college environment. These adverse conditions may lead some to drop out of college (Terenzini et al., 1996). Further, the educational system intimidates a large percentage of first-generation students who do not understand its flexibility or its lack (York-Anderson & Bowman, 1991).

Based on achieved academic level, college educated parents are better equipped to convey information of college experiences to their children; whereas, parents of first-
generation college students do not have that kind of information at all (York-Anderson & Bowman, 1991). In most cases, FG college students who succeed academically receive guidance from their teachers and counselors rather than from family members (Billson & Terry, 1982; Terenzini et al., 1996). In addition, successful FGS are more likely to receive extra support from friends and peers in college than from their parents (Terenzini et al., 1996; Thayer, 2000).

Studies have shown that FGSs do not have intimate involvement in academic and social activities on campus (Lohfink & Paulsen, 2005; Nunez & Cuccaro-Alamin, 1998; Pike & Kuh, 2005). Some are unfamiliar with the importance of social and academic engagement for positive college experiences and shy of being involved in college activities (Billson & Terry, 1982; Nunez & Cuccaro-Alamin, 1998; Pascarella et al., 1995; Pike & Kuh, 2005). When coupled with other risk factors such as poor grades, competing deadlines, exam pressure, and negative college climate factors, this lack of involvement can weaken students’ abilities to persist in college (Martin & Marsh, 2008). For those who succeed academically, the accomplishment requires a great degree of academic resilience. Their stories are inspiring and worth sharing and that is the aim of this study: To discover the relationship between academic resilience and academic success through vetting of experiences of TRIO students.

In summary, students from low-income/first-generation backgrounds are less likely to enroll and complete college because of a myriad of challenges that range from financial issues to lack of information about higher education (Akerhielm, Berger, Hooker, & Wise, 1998; NCES, 1997; U.S. Department of, 2002). A great need exists to improve access to higher education for these students, but according to Tinto, as cited by
Lederman (2008), “For too many low-income/first-generation students, the newly opened door to American higher education has been a revolving one” (p.2). National and global concern remains strong regarding the inequity and social exclusion of students from low-income and first-generation backgrounds and the rate at which they are exiting college before program completion (Kozol, 2006). While college access has increased for this population, the opportunity to successfully earn a college degree, especially a four-year degree, has not coincided (Lederman, 2008). According to recent statistics from the Pell Institute for the Study of Opportunity in Higher Education, 11 percent of low-income/first-generation students are likely to earn a bachelor’s degree after six years, compared to 55 percent of students who are not low-income/first-generation (Tinto & Engle, 2008). To address the issues raised by low-income and first-generation students, TRIO intervention programs act as protective factors and play an integral role in ensuring that students remain academically and socially engaged in both high school and college. The programs accomplish this by offering a range of services that include academic advising, mentoring, and tutoring (Chaney, Lewis & Farris, 1995). Researchers found that student engagement in high school can predict postsecondary persistence and success (Pascarella & Terenzini 1980). Tinto (1997) found that both academic engagement (AE) and social engagement (SE) contribute to college persistence, and therefore, are important factors for students’ matriculation in college. Both factors appear to predict academic resilience of students (Carlson, 2001).
Purpose of the Study

Much of the literature about academic resilience pays little attention to students served by TRIO programs and the extent to which the programs contribute to academic resilience. As previously indicated, predicting academic resilience is possible from two key protective factors: AE and SE. Also known is that TRIO students confront challenges that work to enhance or diminish their academic resilience. However, the relationship between academic resilience and academic success of students served by TRIO intervention programs is not well defined. This study seeks to fill that informational void. The evidence provided in the results of this study shows achieving academic success is possible regardless of parental education and income level.

In addition to the influence of the presented personal educational history, the interest and motivation to study these students arises from full-time engagement with TRIO Upward Bound Program students for seven years and witnessing the ease with which they abandon academic pursuits. Once enrolled in college, these students have an uphill battle. They face huge barriers in pursuit of college degrees, including lack of role models, little knowledge of higher education systems, financial difficulties, inadequate academic preparation, and lack of understanding of the application process. When they succeed in graduating college, many of them become the first in their families to do so. Attending college is insufficient; these students need support and encouragement to acquire a degree. Graduating against the odds is not a mean achievement. Thus looking at the contribution of TRIO programs to the academic resilience is worthy of study.
Significance of the Study

The study is important for several reasons: First, it considers TRIO students from the perspective of academic resilience, which is a great tool for college success. This study provides administrators in post-secondary institutions and other stakeholders’ valuable insights for promoting students’ academic resilience. Knowledge gained from this research aids advocates of TRIO programs (e.g., Council of Opportunity in Education) and policy-makers at state and federal government levels to advocate for more funding to further the goals of TRIO programs. Universities can recreate similar successes within their institutions by understanding the circumstances surrounding success stories of the students. Furthermore, students who find themselves in similar situations can learn through the experiences of others how to succeed in college. Thus, intervention programs can utilize the results of this study to re-create a conducive atmosphere in which student participants can nurture their inner resilience.

This study adds storied data to the research of academic resilience while at the same time shedding new light on how TRIO intervention programs contribute to the academic resilience of participants. Previous studies of academic resilience mostly relied on survey and demographic information and rarely included students’ perspectives from interviews. Therefore, this study is among the few that have used students’ interviews to collect data.

Finally, this study has a comparative education and international studies component that features SA (South Africa). SA was the choice for comparative purposes with the USA due to similar events and histories that have far reaching effects for some population groups. Perhaps a comparison of resilience findings between the United States and SA
provides an idea of which things are the same or are not. Arguably, both SA and American educators can learn many things from their respective educational systems to help students in both countries nurture academic resilience.

**Academic Resilience: Lessons from South Africa (SA)**

In 1994, South Africa made a peaceful transition from an oppressive racist regime (Apartheid) to a multiracial democratic state. The result of this transition, however, was anything but life-changing for some populations in SA (Mahalingam, 2003; Verkuyten, 2003). In particular, minority populations remain exposed to many different forms of political, familial, and community ills. Consequently, concerns for academic access and matriculation for these population groups continues to dominate public discourse (Yzerbyt, Rocher, & Schadron, 1997). In addition, studies examining academic resilience (Clauss-Ehlers & Wibrowski, 2006; Dass-Brailsford, 2005; Driscoll, 2006; Ebersöhn, 2007; Geoffrey, Borman, & Overman, 2004; Mampane & Bouwer, 2006; Theron, 2007), conducted in both Western and non-Western cultures including SA, have recently gained research momentum with educators seeking alternatives for retaining low-income/first-generation students. However, research on academic resilience in academic settings in South Africa is limited and the small amount of research that does exist briefly examines resilience and culture’s impact. Nevertheless, the results of the current, compared to South African resilience research, determine the striking differences and similarities and identify the research methods and needs to which academic resilience researchers both in the USA and in SA need to attend.
With a backdrop of many challenges, perhaps researchers should consider more seriously the concept of academic resilience.

**Limitations of the Study**

With only six students’ as interviewees, generalizing the results from this study is problematic; likewise, despite TRIO students’ similar characteristics, variance in ages and academic levels complicate students' pre-college characteristics and their unique and diverse experiences as they interact within the university, frustrate generalization. Furthermore, data from each interview represents the unique experiences of the six individual students. The findings represent experiences of the participants interviewed for this study, and therefore may not represent all first-generation and low-income students, many of whom are not members of TRIO programs. Since the survey questionnaire was self-reported instrument, perhaps, the participants reported inaccurate data. Therefore, different types of data collection methods could produce different findings. The study only considered students served and not those participating in TRIO programs, yet arguably, all low-income/first-generation students face similar challenges. Finally, the CRQ instrument, despite sensible construction, has not had previous application in studies, so no published information exists on which to form comparisons. Therefore, care in interpreting results is necessary, although actual results have their merit. South African resilience studies have middle school students as research subjects and rarely consider college students.
Delimitation of the Study

Despite a comparison with SA resilience studies, this study’s delimitation is TRIO program students in the United States. Another delimitation is the study’s reliance on data obtained from self-reports from students participating in the CRQ survey and whose scores form the basis for selecting interviewees.

Research Questions

From the previous discussions, this study responds to the research questions:

Quantitative question

1. Do low-income/first-generation female students have greater academic resilience levels compared to males?

Qualitative questions

2. What is the relationship between academic resilience and the experiences of students served by TRIO intervention programs?

3. How did involvement in TRIO intervention programs contribute to academic and social engagements in college?

4. What protective factors other than academic and social engagement influence participants’ academic resilience while in college?

5. How have the participants dealt with circumstantial challenges (i.e., risk factors) affecting them while in college?
Definitions

*Academic Engagement:* Academic engagement refers to a series of educationally related student behaviors or activities postulated as academically desirable, and such that members of various student populations can report on the frequency with which they participate in these activities. The more frequently an individual participates in an activity, the more that student is engaged (National Survey of Student Engagement).

*Academic Resilience:* The ability to effectively deal with setbacks, stresses or pressures in the academic setting (Martin & Marsh, 2008).

*Low-income/first-generation:* Young people are at-risk or educationally disadvantaged if they have been exposed to inadequate or inappropriate educational experiences in the family, school, or community (Pallas, 1989).

*College Resilience Questionnaire:* Study instrument that measures academic resilience (Carlson, 2001).

*Educational Opportunity Centers program:* A TRIO program that provides counseling and information for college admissions to qualified adults who want to enter or continue a program of postsecondary education (US Department of Education, 2008).

*First-generation Student:* An individual whose parent(s) or guardian(s) did not complete a baccalaureate degree (US Department of Education, 2008).
**Intervention Programs:** A range of programs in colleges that serve students who are at-risk for academic failure. The mission of these academic programs is to encourage and support students’ persistence in and graduation from college (US Department of Education, 2008).

**Low-income Student:** A student from a family whose taxable income for the preceding year did not exceed 150% of an amount equal to the poverty level determined by using criteria of poverty established by the Bureau of the Census (US Department of Education, 2008).

**Protective Factor:** Any circumstance that promotes healthy student behavior and decreases the chance that a student will engage in risky behavior.

**Resilience:** Resilience is the capacity to adapt while developing competence to cope despite challenging or threatening circumstances (Masten, 1994; M. A. Zimmerman & Arunkumar, 1994).

**Risk Factors:** Any circumstances that may increase a students’ likelihood of disengaging in social or academic matters (Murray, 2003).

**Ronald E. Mcnair Post Baccalaureate Achievement Program:** A TRIO program that prepares participants from disadvantaged backgrounds for doctoral studies through involvement in research and other scholarly activities (US Department of Education).

**Social Engagement:** A student’s level of satisfaction with friendships and peer networks.

**Student Support Service Program:** A TRIO program that provides students with basic
college skills, and serves to motivate students toward the successful completion of their postsecondary education (US Department of Education, 2008).

*Talent Search Program:* A TRIO program that identifies and assists individuals in middle schools from disadvantaged backgrounds and who have the potential to succeed in higher education (US Department of Education, 2008).

*TRIO Programs:* Federal funded educational opportunity outreach programs designed to motivate and support students who are low-income or first-generation or are both (US Department of Education, 2008).

*Upward Bound Math and Science:* A TRIO program designed to strengthen the math and science skills of students from disadvantaged backgrounds (US Department of Education, 2008).

*Upward Bound Program:* A TRIO program that provides fundamental support to participants in their preparation for college entrance (US Department of Education, 2008).

*TRIO Students:* Students who are currently participants or were participants in TRIO programs.

**Summary**

Despite challenges that could otherwise cripple low-income/first-generation students’ academic hopes, some are able to graduate from college. Such students exhibit academic resilience, which propels them to achieve their academic pursuits. The present
study considers the relationship between academic resilience and the experiences of students served by TRIO intervention program. The study includes a comparison of experiences of students from South African resilience studies. Analysis of the participants` interview transcripts and narrative accounts of their academic experiences as participants in TRIO programs identifies the factors that influenced these individuals and enabled them to overcome obstacles. In addition, the discussion includes a comparison of the research findings with SA resilience findings, and recommendations and implications for future research. The next chapter introduces several major areas including access to post-secondary education in the US, federally funded TRIO programs, and the demographics of the students served, and the effects of programs on academic resilience of college students. The chapter also addresses protective factors that contribute to academic resilience including academic and social engagement factors, institutional, familial, socio-environmental and individual protective factors.

**Organization of the Study**

This study’s organization constitutes six chapters. Chapter 1 is the introduction and includes, statement of the problem, purpose of the study, significance of the study, limitations of the study, delimitation of the study, research questions, organization of the study, and definition of terms. Chapter 2 includes a literature review including the resilience framework and provides an extensive overview of the existing literature relevant to the topic. It also provides a detailed account of intervention programs, including TRIO programs. Chapter 3 describes the research method used in the study population, data collection and analysis method, and research questions. Chapter 4
presents the expected outcomes of the study. Chapter 5 discusses the results and offers discussion of the study’s findings, and finally, Chapter 6 offers conclusions and implications for future practice, research, and policy.
Chapter 2

Literature Review

Introduction

The purpose of this mixed method study was to examine the relationship between academic resilience and the experiences of students served by TRIO intervention program. The results of the study were compared with studies of South African resilience studies. The academic resilience phenomenon has been examined in many studies across a variety of disciplines (Benard, 1991; Masten, 1994; Pines, 1984; Rutter, 1987; Werner & Smith, 1992, 1992). The study of academic resilience is critical to education because it gives in-depth knowledge on why some students succeed in school despite the presence of risk factors (Waxman, Gray & Padron, 2003). Closing the achievement gap between those students who are academically successful and those who are at risk of failure is an issue of great interest on the national education agenda in many countries. This is because access to college and equitable practices in college preparation has been an issue for many students all over the world and especially in the USA where a vast inequality exists in the academic pursuits of individuals from low-income/first-generation backgrounds.

As previously seen, these students have unique characteristics and complexity of problems caused by poverty, dysfunctional families and other social conditions that have made it difficult for them to succeed in college (Horn, 1995; Kaufman & Bradby, 1992; Swail, Cabrera, Lee, & Williams, 2005; Waxman, Gray & Padron, 2003). Research on why students drop out of college and why they stay in college is well documented (Barton, 2005; Engle, 2007; Orfield, 2004; Orfield, Losen, Wald & Swanson, 2004; U.S.
Department of Education, National Center for Education Statistics, 2004). Low-income/first-generation students experience challenging circumstances and risk factors. However, some students succeed in similar circumstances in academic matters despite the odds. Those who do, often exhibit traits of academic resilience. The academic resilience concept needs to be better understood contextually so that institutions of higher learning can use it to encourage their students that are struggling academically (Liddle, 1994).

**Empirical Studies on Academic Resilience**

Pioneer studies on academic resilience can be traced to the late 1960s and early 1970s through the work of (Germain, 1979; Rutter, 2000; Werner, 2000). They found that children’s development is deeply affected by their interactions between the biological, psychological, and social characteristics and conditions in her or his family, peer group, school, and community. Adoption of a resilience framework led researchers and policymakers to place greater importance on understanding the factors associated with individual, family, social, and community conditions that commonly occur in the lives of high-risk children and youths (Rutter, 1987). At the core of resilience framework is the presence of risk factors that must be overcome and encourage resilient traits that help children and youths overcome adverse conditions and function normally in the face of risk (Fraser, 2004; Jenson & Fraser, 2006).

In their study, Waxman, Gray and Padron (2003) found that learning environment, classroom instruction and motivational aspects are evident in the differences between resilient and non-resilient students. Findings also indicate that a resilient student will have a more positive outlook on their learning and classroom
environment while the opposite is true for non-resilient students who generate a more negative attitude with far less academic enthusiasm.

Reis, Colbert and Thomas (2005) conducted a multi-year study to examine resilience in 35 economically disadvantaged, ethnically diverse high school students who either achieved or underachieved in their urban high school. They examined both risk factors and protective factors to examine the pathways toward academic outcomes. The results showed that despite numerous risk factors, 18 high achieving students in the study developed resilience. All of the high achieving resilient students were involved in extracurricular activities. Although both groups experienced risk factors, many of the underachieving students reported different types and severity of problems. Further results suggest that for these underachievers, risk factors were not countered by key protective factors, such as having a teacher or a counselor as a role model, having peer support for academic achievement, or being involved in extracurricular activities.

This study demonstrated that several protective factors seem to contribute to academic resilience in high achieving students, including belief in self, determination to succeed, presence of a support system, participation in extracurricular activities, and involvement in summer enrichment programs. Protective factors also included association with other high achieving peers and family members, supportive teachers, and other supportive adults. Researchers found that if surrounded by supportive families and communities these children became increasingly resilient.

In another study, Martin and Marsh (2009) explored the link between academic resilience, a more expansive number of psychological, and engagement dimensions. The study used a model developed by Martin (2001), which consisted of a Student Motivation
and Engagement Wheel to examine the network of dimensions. Results showed five factors predicting academic resilience: self-efficacy, control, planning, low anxiety, and persistence. Results also demonstrated that academic resilience predicts three psychological and educational outcomes: enjoyment of school, class participation, and general self-esteem. The authors therefore proposed a 5-C model of academic resilience, composed of confidence (self-efficacy), coordination (planning), control, composure (low anxiety), and commitment (persistence). The authors suggested that interventions designed to target student’s academics should include self-efficacy, control, persistence, planning, and anxiety reduction.

Dass-Brailsford, (2005) conducted a study to examine how South African youth who experienced poverty achieved academic success and demonstrated resilience. Poverty was reported by all participants to be a major risk factor in their lives. Their support came from family members and was evidenced by the family atmosphere, family characteristics, and role models. Support also came from school. Participants were found to have a high self-esteem, were highly motivated, and goal oriented. In addition, participants viewed school positively and viewed their teachers as role models and sources of encouragement. In addition, participants had faith in a higher power as giving meaning to their lives and believed that the higher power provided comfort in challenging times.

In a longitudinal study, Bormab and Overman (2004) focused particularly on academic resilience in mathematics among poor and minority students to understand better the differences between academically successful students and their low socio-economic, non-resilient counterparts. The results showed that a more supportive school
environment was associated with the academic resilience of students. Results also showed a positive student/teacher relationship mattered most in terms of resilience, and that low Socio Economic Status (SES) students who achieved resilience demonstrated greater engagement in academic activities, a more positive outlook toward school, and higher self-esteem.

In seeking to find the relationship between educationally resilient students and classroom learning environments, Waxman, Huang, and Padron (1997) studied the distinguishing characteristics between resilient and non-resilient Latino students’ motivations and perceptions. They did so by comparing resilient and non-resilient middle school Latino students’ motivation and classroom learning environment in mathematics. They found out that resilient students had significantly higher perceptions of involvement, satisfaction, academic self-concept, and achievement motivation than their non-resilient counterparts did.

In another study, Gonzales and Padilla (1997, examined Mexican American high school students to see what factors contribute to academic resilience. The results showed that a sense of belonging was a significant predictor of academic resilience, supporting the theory that students’ who are engaged and have a positive connection with the school environment will demonstrate greater academic resilience.

In his study entitled “fostering resiliency in kids”, Bernard (1991) suggests specific ways that academic institutions can provide opportunities for students to develop internal assets for resilience. An important finding Bernard (1991) addresses is teaching students strong problem-solving skills. These skills allow resilient students to handle adverse situations as they arise. Individually working through adverse situations provides
anyone with a strong sense of autonomy, which is essential to becoming productive and successful in life. He also indicates that teaching students effective communication skills provides personal and professional opportunities that will enhance their quality of life and career. He also found that, positive relationships that provide inner-growth and peace, ultimately leads to constructive and optimistic outlook to the future (Bernard, 1991).

Results of in-depth interviews of resilient low-income/first-generation for a study that was conducted to identify factors that made them successful in college (McMillan & Reed, 1994) found that most students were involved in some sort of intervention program and that they were busy with activities and other positive uses of time in college. Students were found to have clear and specific long-term goals that they were confident of achieving, and great optimism about life. Many of them had experienced severe hardships, which they had turned around for their benefit in enhancing academic resilience. They had a great internal sense of control about their lives and took personal responsibility for their actions. Most were from challenged home backgrounds but did not find this a hindrance to their success; instead, they were working hard to turn things for the better. Most of them had role models in their lives that they believed in (McMillan & Reed, 1994).

Finn and Rock (1997) investigated the role of school engagement of academic resilience in a sample of African American and Hispanic students seeking to find out which component of resilience was the most important for academic success. Their findings showed that school engagement was a significant predictor of academic resilience, and that the students who felt more connected to school appeared to be more
resilient. These findings support the evidence that academic engagement and social engagement are critical aspects of academic resilience (Carlson, 2001).

Academic resilience in USA is really perseverance and determination in academic matters (Smokowski et al., 1999). Resilient students are able to translate difficult circumstances into a source of motivation by maintaining high expectations and aspirations, being goal-oriented, having good problem-solving skills, and being socially competent (Grotberg, 1997; Wang & Gordon, 1994). Research has shown that low-income/first-generation resilient students are more likely to work hard and do more homework, and less likely to skip class, be late, or get in trouble in class than their non-resilient peers (Finn & Rock, 1997). Wolin and Wolin (1993) identified other academic resilience characteristics as insight, independence, creativity, humor and initiative. In short, academic resilience is influenced by a variety of protective factors, which hold the key to better graduation rates in colleges for all students, and is especially important for low-income/first-generation students (Masten, 1994). In all these studies, none looks at the relationship between academic resilience and college success through the experiences of students served by TRIO intervention programs, something that this study is attempting to do.

In summary, stories of resilience are commonplace among disadvantaged students in the USA. Moreover, as has already been discussed, there are specific interventions that are unique to the USA students. Elsewhere, there are global, as well as culturally and contextually specific aspects to students’ lives that contribute to their resilience (Powell & Yamamoto, 1997). Aspects of students’ lives contribute to resilience depending on the culture and ethnic background of the specific student. It is important therefore to
understand that interventions for disadvantaged students outside the USA are related to the cultural and contextual understanding of where the student is. The resources available for student survival may be very different to those accessible to the USA in comparison to other world populations (Ungar, 2005). I have included a short summary of what resilience as pertains the students in South Africa (SA) really means. Earlier on, I stated that a history class back in High School motivated me to visit SA to witness the effects of the apartheid system. For this study, there was no other country that would have fit the comparative aspect as perfectly as SA because on a daily basis, the disadvantaged students are faced with the ripple effects of the apartheid era in similar ways minorities are impacted by the effects of slavery in the US.

**Resilience in South Africa**

A review of South African resilience studies in peer-reviewed journals between 1990 and 2008 explored resilience in multiple contexts of risk including academic, violence, residential care, learning disability, diseases, and poverty among other topics (Theron & Theron, 2010). In order to understand the country and the topic about resilience let us first look at the facts surrounding the country. South Africa as a country is divided into four major racial categories (1) The Black Africans, of which the Nguni and Sotho groups account for 90% of the Black population. Black population accounts 75% of the South Africa's entire population. (2) The Whites who account for about 13% of the population. (3) The Indians who account for around 3 % and (4) the Coloreds who are mixed White and Black descent and account for 9% of the population (US Department of Education, 2008). By race, more than 77 % of the destitute groups are
Black African households, 21% colored, 7% Indian and 5% White. Students from Black African communities are most often associated with lower educational outcomes in the country. The official unemployment rate among blacks ranges between 50 and 60% (US Department of Education, 2008). Among Black African students aged fifteen to thirty, an estimate of close to 60% is unemployed (Lam, 1999).

The grim apartheid era and its post-independence effects in South Africa have seen the country grapple with many problems. Issues touching on apartheid affected the disadvantaged groups and increased poverty among their lot. The South African Institute for Race Relations estimated that about 18 million people (47% of the population) were living below the poverty line and were struggling to survive while more than 4 million people were living in life-threatening conditions of malnutrition (SAIRR, 1994).

Education is the ideal tool for empowerment and success for all South Africans, especially historically disadvantaged groupings. In their work, Van der Berg and Burger (2003) commented that education system is the major tool to overcome human capital and labor market inequalities in South Africa. In the eyes of many contemporary South Africans who continue to struggle against the grasp of poverty and see education as a prospect beyond their means, this has continued to be a mere cliché.

With these grim statistics, navigating the academic ladder for these individuals is very challenging. However not all succumb to these negative consequences as many historically disadvantaged South Africans are able to enter and succeed in institutions of higher learning, overcoming the hardships encountered in this pursuit. These individuals face unique challenges as they strive to achieve academically amidst the strain of sustaining themselves financially in order to afford the necessities for survival in college.
In his study about students, Tinto, (1993) found that the more a student gets involved with college activities the more socially and academically integrated he becomes into the institution. This enhances the students’ commitment to the institution and to the goal of education. This commitment enhances academic resilience.

Theories of Student Involvement, Social and Academic Engagement and Student Integration

According to Tinto (1993), academic engagement alone is not enough to help some students persist in college. Social involvement and integration provide counterbalance to academic and social engagement. Students’ involvement in institutional activities is key to academic success Astin (1984). Institutional involvement is “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 297). Research by Astin (1994) revolves around the impact of student involvement on student outcomes in college, and is a critical element in academic success. It leads to greater integration in the social and academic systems of the college and promotes student academic success. Social integration is being fully aware of what goes on campus and being an active participant in academic and social affairs.

According to Tinto (1975), student integration theory proposes that certain background factors (e.g., family, SES, academic performance) help determine a student’s integration into an institution’s academic and social structures. Tinto (1993), asserted that students enter college with certain characteristics such as family background, skills, abilities, and prior schooling experiences that combine to shape their levels of commitment for completing their degrees. He also believed that students' level of
commitment were continually shaped by their interactive engagement with various academic and social systems of the college (see also, Pascarella & Terenzini, 2005). Research shows that a lack of student engagement is predictive of dropping out (Rumberger, 2004). In other words, the level of students’ commitment to college is central to degree completion and depends on experiences prior to college and reinforcement through social and academic engagement while in college. Students with low levels of commitment to college who lack such engagement are at risk of performing poorly or withdrawing from college altogether. Two theories guide these thoughts, Astin’s theory of Involvement (1984) and Tinto’s Student Integration Theory (1975).

**Student Involvement**

Astin’s theory states that students learn more by being involved in both the academic and social aspects of college experience (Astin, 1985). Student involvement, which is the amount of physical and psychological energy that a student devotes to the academic experience by studying, participating in student organizations, and interacting frequently with friends and faculty members, will help students achieve their goal of college completion (Astin, 1985; Astin, 1993; Horn, Chen & Adelman, 1998; Terenzini & Wright 1987; Tinto, 1975).

An involved student is one who devotes considerable energy to academics, spends much time on campus, participates actively in student organizations and activities, and interacts often with faculty and staff (Astin, 1984). This theory asserts that a student plays an integral role in determining his or her own degree of involvement in college classes, extracurricular activities and social activities. Astin states that the quality and quantity of
the student's involvement in college will influence the amount of student learning and development (Astin, 1984).

**Student Integration**

Tinto’s Student Integration Theory (1975) holds that students’ successful social integration increases their institutional commitment, ultimately reducing the likelihood of student attrition. This theory suggests that students arrive in college with certain expectations and aspirations. Their integration or lack of integration into the college experience affects their outcome (i.e. degree attainment). Based on establishing a sense of community on campus to enhance students’ sense of belonging, Student Integration Theory focuses on two factors of students motivation: commitment to their academic goals and commitment to the institution in which they are pursuing their academic goals (Tinto, 1993). When students are fully motivated, they engage in academics and in social activities on campus. Therefore social and academic engagement are key ingredients for students overall success in college.

**Social Engagement**

A student can be said to be socially engaged if he/she has a level of satisfaction with his/her friendships and peer network (Tinto, 1975). As already seen, Tinto’s (1993) model of persistence is based on the belief that social support is very important for students’ social integration. Social support networks, like clubs and study groups, have
been found to be useful in reducing discomfort and loneliness in college for these students (Terenzini et al., 1994). The importance of social engagement activities provided through colleges is essential in helping these students successfully complete college (LaVant, Anderson & Tiggs, 1997). In a study of 98 at-risk undergraduate students, Gloria, et al (1999) found that the strongest predictor of persistence in college is social support that involves support from family and friends. External encouragement and cheerleading by family and friends has a direct effect on persistence through social and academic integration (Eimers & Pike, 1997).

Several studies have supported the need for social engagement and support as important for students’ survival in college (Astin, 1984, Nunez & Cuccaro-Alamin, 1998). Socially engaged students have a sense of belonging and attachment to the institution. These studies have found that supportive contact with faculty is essential in developing students’ social and academic integration and persistence in college (Napoli & Wortman, 1998). A study by Eimer and Pike (1997) found that students who are generally isolated and who lack a sense of belonging are more likely to withdraw from college. Both academic and social engagements are important elements of student integration in college and are integral components of successfully navigating the education pipeline. Students who are not socially engaged experience feelings of isolation and are more likely to withdraw from college while socially engaged students are less likely to do so (Tinto, 1993).
Academic Engagement

Academic engagement is defined as a series of educationally related student behaviors or activities postulated as academically desirable, which students can participate in. In their work, National Survey of Student Engagement (NSSE) researchers (2008) have shown that academic engagement includes five dimensions or benchmarks: (1) active/collaborative learning; (2) student-faculty contact; (3) level of academic challenge; (4) enriching educational experiences; and (5) supportive campus environment. In addition, (Astin, 1995; Carini, Kuh, & Klein, 2006; Kuh, 2003) reported that a student’s persistence could be directly linked to factors that indicate a student’s academic involvement with college. In a study by Astin (1999), the most common reason men gave for dropping out of college is boredom with courses -- which is indicative of a lack of academic engagement. Women were found to be more engaged and academically resilient in college in comparison to men. Windfield (1994) suggests that colleges should provide opportunities for students to become academically engaged with undergraduate research, professional work experience, and faculty and student networks in academic disciplines. Students who find themselves in pursuit of an academic major they care about are more likely to engage in their program’s required coursework with an eye toward successful program completion. In general, low-income/first-generation, ` level of commitment towards degree completion interacts with their academic and social engagement. In other words, degree completion is enhanced through academic and social engagement. Any form of engagement, whether social or academic, increases the students’ comprehension about college and the exposure to different types of skills necessary for success. Research has determined that academic and social engagement can
lead to resources that can help in buffering risk factors and enhancing protective factors that promote academic resilience and therefore success. Social involvement leads to social engagement, which in turn leads to social integration. Social integration leads to academic engagement. However, those levels of commitment as well as academic and social engagements are not easily maintained during college due to some problematic factors known as risk factors.

Risk Factors

Risk factors are those conditions that are associated with a higher likelihood of negative outcomes in college students or circumstances that may increase a students’ likelihood of disengaging in social or academic matters (Murray, 2003; Winfield, 1993). The demographic characteristics of low-income/first-generation students can be considered as risk factors for academic success and seem to project the students in question toward a negative academic path. They emerge from the students’ backgrounds, taking into account how the students were raised, schools attended, how they prepared for college, family structure, and socio-economic factors. The more risk factors students find themselves with, the greater likelihood that they will opt out of college. As have explained above, low-income/first-generation students’ grapple with many risk factors yet, with little or no intervention, some are successful in college and in society. Irrespective of the number of risk factors that may be associated with some low-income / first-generation students; these students appear to develop characteristics and persistence skills that enable them to succeed. They defy the odds by turning their negative situations into positive outcomes. In their case, the presence of protective factors could have
counteracted the risk factors inherent in their academic journey. Their success is often brought about by key protective factors that offer a supportive base.

**Protective Factors**

Protective factors refer to resources available to the student at-risk that serve to counteract risk factors. They are very crucial as they determine which direction a student takes towards degree completion. Protective factors counteract risk factors to promote the characteristics of resilience (Anthony, 1987). These factors serve as resources upon which low-income/first-generation students can draw to overcome obstacles to their success college. Protective factors are components of academic resilience and are classified in four categories as follows: (1) individual protective factors such as locus of control and self-regulation (Rouse, 2001), personal initiative or spirituality through faith in a higher power (Banerjee & Pyles, 2004) (2) familial protective factors, such as emotionally supportive relatives and warm relationships with parents and extended family (3) institutional protective factors such as intervention programs, positive peer relationships, and supportive teachers and (4) socio-environmental protective factors such as peer, community, and church groups (Benard, 1993; Chase-Lansdale et al, 1999; Garmezy, 1991; Giordano et al, 1993; Kenny & Donaldson, 1991; Masten, 1994; Rack & Patterson, 1996; Werner & Smith, 1992). These protective factors encourage social and academic engagement which lead to academic resilience of low-income/first-generation. They are interrelated in the way they operate and have been identified as strong support systems and are key factors that help create supportive environments that develop.
academic resilience characteristics. The interrelationship is illustrated in Fig. 2.2.

![Diagram of academic resilience factors]

**Figure 2-1. The Author’s Conception of Protective Factors**

**Individual Protective Factors**

Benard (2004) found that everyone has an inner-resilience, which is part of their genetic make-up, and it can unfold naturally in the presence of certain environmental attributes. Individual protective factors such as problem solving skills, a sense of autonomy, self-efficacy, social competence, internal locus of control and high levels of engagement are viable characteristics of resilient students. Problem-solving skills
encompass the ability to plan or cultivate alternative solutions in discouraging circumstances and to think critically, creatively, and reflectively (Bernard, 1993; Buzzell, 1992). A sense of autonomy implies that the student has impulse control, a positive sense of independence, and a positive belief in the future. When students have a sense of autonomy, they believe in their abilities to influence events around them (Bernard, 1993; Wang, Haertel & Walberg, 1998). Students with good social competences have the ability to interact and accommodate others in the college community (Kumpfer, 1999). Others include tolerance for negative effects, self-esteem, and foundational sense of self, student's sense of control of environment and future, sense of humor, hopefulness, strategies to deal with stress, an enduring set of values, balanced perspective on experiences, fortitude, conviction, tenacity and resolve (Coleman et al., 1966; Jarrett, 1995). A study conducted by Pascarella and Terenzini (1991), shows that a positive self-concept and a positive mental outlook among undergraduates tend to enrich their college experience because such students are able to intrinsically get motivated to fulfill their academic obligation. Successful low-income/first-generation students have a strong sense of self-efficacy and see themselves as being successful because they work hard.

According to Bandura (1993), self-efficacy has important implications with regard to motivation where students perceive themselves to be competent individuals and are likely to attempt, to persevere, and to be successful in their academics. Perseverance is an intrinsically motivated trait. Internal locus of control refers to one’s belief that outcomes in life are based on one’s personal effort or ability or the lack of effort or ability (Benard 1993; Clauss-Ehlers, Yang, & Chen, 2006; Miller, Fitch, & Marshall, 2003; Rotter, 1966) reported that successful individuals were optimistic about their
futures, therefore allowing them to gain some sort of control over their environment. It is important to note that individual protective factors may have been acquired over time through different situations and experiences as the students progressed in life.

**Family Protective Factors**

A family can have positive and negative effects on a student’s academic success depending on the atmosphere at home (Jordan, McPartland, Legters & Balfanz, 2000; Sacker & Schoon, 2007). Successful students rely on their family for support. The role of the parent as a nurturer and encourager plays a big role in addition, the flexible role of extended family members who provide additional support and the emphasis within the households on positive achievement is very crucial (Choy, 2001). Research indicates that students benefit from parental involvement in the following ways: better attendance, higher homework completion rates, higher graduation rates, greater involvement in extra-curricular activities, more positive attitudes and better all-round behavior (Choy, 2001). The family establishes and unites their child with the larger society. Parents create and provide opportunities for their offspring to develop proficiency and aptitude in learning. Families continually seek ways to support healthy development, both physically and intellectually.

The role of the family in student academic achievement is crucial for student success. This is because a great number of obstacles students encounter cannot be attended to without the close involvement of the family (Werner & Smith, 1992). Studies in family involvement have found that parents play an important role in their child’s academic success and show a correlation between family engagement in a student’s life
and heightened academic attainment (Bernard 1991). Many students depend on their loved ones for encouragement and support, and for others this support is coupled and enhanced by individuals and forces in the community, who often step in when the family cannot offer this assistance to their offspring.

Familial protective factors have to do largely with basic commitment to completing a degree and include moral/financial support, regular encouragement, attending important events on campus, maintaining interest, expressing pride and the like. Support from parents or a guardian is a key factor affecting students’ aspirations to enroll in college and to stay enrolled despite the parents’ level of education (Hossler, Schmit & Vesper, 1999). Lack of such support (encouragement from family) is a key impediment to the student college success (Pascarella et al., 1995; Thayer, 2000; York-Anderson & Bowman, 1992).

**Institutional Protective Factors**

As has already been seen, low-income/first-generation students need help in circumventing the institutional challenges that would otherwise bar their success in college. Educational institutions are important because that is where students spend most of their time and students need to feel at home within the system (Braxton, Bray & Berger, 2000).

Given that the institution is the place the students spends most of his/her time, institutional protective factors act as the glue that holds all forms of protective factors together to the benefit of the student. It is here where individual virtues are cultivated and nurtured. It is here that they learn the ropes through social and academic engagement.
However, the college environment poses many challenges in and outside academics as the students seek to remain in the institutions. Colleges and universities may introduce resilience risk factors by failing to provide a supportive college climate, which is associated with resilience (Borman & Rachuba, 2001). Having a campus climate, which is welcoming to all students, contributes to the comfort and the success of all students and especially low-income students (Nettles, 1988). It is important that students experience a sense of connection with the university because that is key to their persistence and academic performance. A sense of belonging in the college assists in the resilience process (Wang et al., 1994). If this connection is lacking then the students may dropout or simply perform poorly academically.

The positive experiences including positive peer interactions, positive student faculty interactions, clear rules and regulations, high performance expectation, constructive feedback, and student engagement are important for encouraging resilient behavior (Niesel & Griebel, 2005). They serve as sources of support for students who face various obstacles. This supportive environment is important for the student to graduate with a degree. Successful students usually have friends, teachers, and concerned parties who talk to them and help them make good choices. They also have a strong ability to make and keep good friends. Positive peer influence is important when making career choice and teachers are valuable assets to the students, especially for low-income students (Werner, 1990). Any meaningful interactions between teachers and students yield huge academic as well as social benefits (Chickering & Gamson, 1987; Glennen, Farren, & Vowell, 1996; Heisserer & Parette, 2002; Werner & Smith, 1992).
Benard (1993) identified a strong support system that provided encouragement, high expectations, recognition and accomplishment as key to creating a supportive environment to succeed in college. In addition, factors that influence success in students are connected to relationships with peers and adults that were helpful to the student (Luthar & Zigler, 1991; Reed, McMillan & McBee, 1995). Advisory and counseling intervention programs and centers within the institution are valuable resources from where students can get help to remain stable in difficult situations. Institutional protective factors represent an effort created and/or sanctioned by the college to promote social and/or academic engagement. As such, they are an integral part in supporting and encouraging individual academic resilience toward staying enrolled and completing the degree program. Academic institutions help students develop academic resilience by providing positive and safe learning environments, setting high, yet achievable, academic and social expectations, and facilitating their academic and social success. Generally, institutional protective factors play a big role in enhancing academic resilience in low-income/first-generation students to an extent that positive interactions within institutional environments can make or break a student academically (Coleman et al, 1966).

**Social-Environmental Protective Factors**

Measures of socio-environmental protective factors that are protective factors in themselves include supportive peers, positive community influences including church, off-campus individuals that are easily accessible, sports, and positive role models. Socio-environmental protective factors involve neighborhood-community well-wishers, role models, mentors, coaches, clergy, neighbors, and counselors (Garmezy, 1991; Rak &
Patterson, 1996; Wang & Gordon, 1994). However, the most important difference may have to do with the student’s social life on campus; with her/his college peers.

Peers make a great impact on a student’s academic achievement and attitude in college. Peers are the most significant foundation of support and reinforcement for college students as they climb the academic ladder (Kenny & Donaldson, 1991). The influence of a peer with the same mindset, goals and background is crucial to the academic achievement of students, because they recognize that they are not alone in their struggle (Giordano, et al., 1993). Successful students usually have role models and concerned parties who talk to them and help them make good choices. They also have a strong ability to make and keep good friends. Positive peer influence is important when making decisions to keep trying in college. Benard (1993) found that peer relationships contribute to a student’s social, cognitive development and socialization. He also identified among peers a strong support system that provided encouragement, high expectations, recognition and accomplishment as key factors in reinforcing college success.

Factors that influence the development of academic resilience in students are also connected to relationships with adults that were helpful to the student (Reed, McMillan & McBee, 1995). According to Werner (1994), successful students are said to have faith in something beyond their circumstances. They have a strong belief in themselves that there is meaning in life even in pain and suffering. Werner also found that a strong church community provides structure and stability to resilient students. Students with encouraging role models are less likely to undergo varied academic shortfalls such as dropping out or repeating the same academic grade level (Crosnoe & Elder, 2004).
In summary, social competence is illustrated through the student’s responsiveness to a variety of situations and environments, including the ability to draw out positive responses from others; the capability to thrive in college; compassion; interactive abilities; and a sense of humor (Wang, Haertel & Walberg, 1994). Researchers seem to agree that the complex interactions among individual protective factors, family protective factors, institutional protective factors and social-environmental protective factors yield academic resilience (Pianta & Walsh, 1998; Kirby & Frasier, 1997).

**Protective Factors in South African the Context**

In an effort to explain resilience among South African students (White, Black, Colored, Asians and Indians), the studies described resilience as dependent on personal, familial, community and/or cultural protective resources. This description was unique to SA students and compares to the USA model of explaining academic resilience.

**Individual Protective Resources**

South African researchers agree with the USA researchers that resilience is encouraged (at least in part) by individual protective factors including: goal and/or achievement orientation, empathy, optimism, autonomy, conservatism, conscientiousness and the ability to self-regulate, extroversion and enthusiasm and assertiveness were linked to resilience (Kruger & Prinsloo, 2008; MacDonald, Gillmer & Collings, 2003; Theron, 2004). In addition to individual protective factors, the following resources were also reported to contribute to academic resilience: problem solving skills
and positive cognitive appraisal, an internal locus of control, a sense of self-worth and a preference for socially or system-appropriate behavior (Ebersöhn, 2008; Dass-Brailsford, 2005; Johnson & Lazarus, 2008).

**Familial Protective Resources** According to South African researchers (Ebersöhn, 2007; Kruger & Prinsloo, 2008; Mampane & Bouwer, 2006; Theron, 2007) parents are thought to encourage resilience. This is a common finding among USA resilience researchers who agree that the family plays a big role especially in their student’s academic life (Cameron, Ungar & Liebenberg, 2007; Egeland, Carlson & Sroufe, 1993; Theron, 2004). Van Rensburg and Barnard (2005) reported that in SA mothers buffered the effects of violence through close contacts with their children. The research in a Black township reported that mothers especially were often pillars of strength that enabled and provided a sense of security to their children by encouraging them actively towards self-actualization. SA research found that supportive family relations included joint participation in activities, experiences of belonging, being loved and being valuable within the family system, opportunities to pursue education, as well as the establishment of clear, consistent family rules.

**Community Protective Resources**

Protective resources anchored within communities were found to boost the academic resilience of challenged students (Ebersöhn, 2008; Kritzas & Grobler, 2005; Pianta & Walsh, 1998). Teachers were shown as being supportive, fair, non-discriminatory, motivating, inspiring role models, encouraging, helpful and caring. In
addition to teaching staff, schools enabled students towards resilience by providing them with a safe space in which they felt secure enough to open up. Schools that were well resourced were thought to encourage resilience. Generally, community protective resources related to communities that, (1) had adults who could be respected and who supported students success, (2) provided opportunities for therapy and bereavement counseling, (3) encouraged the experiences of active support from peers and teachers, promoted the sharing of expertise, food, clothing, financial resources and advice, and (4) motivated for community mobilization and community synergy to limit crime and violence. Peers were reported as resilience-promoting in a number of studies, primarily because they afforded opportunities for social acceptance and the development of positive identity and values and because students could talk to their peers about troubling matters and trust them to help out with any problems they may be facing (Ungar & Liebenberg, 2005; Pienaar, Beukes & Esterhuyse, 2006).

**Cultural Protective Resources**

Protective resources embedded in culture have been found to encourage resilience traits. In most of the research, this has been found to do with religion and other ethnic beliefs (Ungar, Brown & Liebenberg, 2007). Religious practices (Christian and Ancestral), religious leaders and personal faith were described as fundamental to the processes and outcomes of resilience. Being part of a religious community was noted as a means to further the support bases accessible to students. Germann (2005) noted the need for research into models of resilience that were sensitive to Southern African culture, whilst Ebersöhn (2007) called for community-based initiatives towards resilience that
were embedded in cultural practices and beliefs. Dass-Brailsford (2005) reported that extended families typical of indigenous African values were instrumental in encouraging resilience. Theron (2007) noted that the traditional values of ‘Ubuntu’ encouraged resilience among the township participants in her study.

In conclusion, South African studies of resilience mirror the studies of resilience as manifested in protective factors and as the product of the individual and the culture in comparison to the US. South African studies typically conceptualize resilience as the product of two or more of the protective factors, which include individual resources as, described in most resilience research (Luthar & Zelazo, 2003; Masten, Garmezy & Tellegen, 1984; Masten & Reed, 2004; Rak & Patterson, 1996). Just as the USA researchers found, South African studies (Cameron, Ungar & Liebenberg, 2007; Egeland, Carlson & Sroufe, 1993; Mampane & Bouwer, 2006; Theron, 2007; Ungar et al., 2007) also found that resilience is encouraged by other resources including cultural, community and familial resources. In other words, resilience, for the most part, springs from and is nurtured by personal strengths, and the individual supportive relationships. Therefore, skills, opportunities, and relationships, which promote academic resilience, can be provided through intervention programs like TRIO intervention programs. The US government spends billions of dollars trying to create a level playing ground in the academic sector through federal intervention programs like TRIO intervention programs (Council of Opportunity in Education, 2010).
TRIO Intervention Programs as Protective Factors

TRIO programs represent protective factors in themselves but also encourage students to engage in other protective factors within and outside the institution (Johnson, Soldner, Leonard, Alvarez, & Inkelas, 2007). Academic resilience research has identified the following protective factors, which are central to TRIO programs, as key to developing students’ academic resilience: (1) having strong, caring adults in their lives (Glasser, 1993); (2) believing that they were in control of their own lives (Gillock & Reyes, 1999); (3) belonging to a supportive family unit (Bradley & Crowyn, 2002); (4) building good relationships with their teachers; (5) being involved in school activities; and (6) feeling that they belong in school (Grantham, 2004; Murray & Greenberg, 2000; Resnick et al., 1997). All these protective factors contribute to academic resilience when they sustain and raise the level of commitment to degree completion for TRIO program students (Benard, 2004). This study is seeking to find out the relationship between academic resilience and academic success through students served by TRIO programs. TRIO programs provide resources designed to motivate and provide students with the necessary resources to ensure that they are successful in their goal of attending a four-year university. TRIO intervention programs provides additional services such as: instruction in reading, writing, study skills, and other subjects necessary for success in education beyond high school; academic, financial, or personal counseling; exposure to academic programs and cultural events; tutorial services; mentoring programs; information on postsecondary education opportunities; assistance in completing college entrance and financial aid applications; assistance in preparing for college entrance exams, and work study positions to expose participants to careers requiring a
postsecondary degree (Council of Opportunity in Education, 2010). Generally, TRIO programs assist students in learning the educational system and provide an understanding of what is required in order to successfully maneuver through college.

In addition, TRIO programs provide individualized support to students. The programs have been linked to better achievement and higher educational attainment for low-income/first-generation college students (Gandara, 2001) because they enhance academic skills and social development. They play an integral role in ensuring that students remain academically and socially engaged by offering a range of services that include academic advising, career exploration, counseling, remedial developmental courses, pre-freshman and other summer components, study skills courses, supplemental instruction, and tutoring (Thomas, Farrow, & Martinez, 1998). Encouragement through counseling and advising activities within the programs enhances intrinsic motivation in low-income/first-generation students, which forms the basis of resilience (Clauss-Ehlers & Wibrowski, 2007). Some TRIO intervention programs, like Upward Bound and Upward Bound Math and Science Programs, provide specific intervention for high school students to understand the college-going process and to encourage the students to attend college. As a group, TRIO programs help students to overcome adversity and adjust successfully to the college environment. These programs initiate protective mechanisms for student success (Garmezy, 1991; Masten, 1994; Masten, Best, & Garmezy, 1990; Masten & Coatsworth, 1998; Rutter, 1985; Wang, Haertel, & Walberg, 1994; Winfield, 1994). Through TRIO programs, low-income/first-generation may form a network of people to whom they can turn when there is need. In general, TRIO intervention programs provide and promote those protective factors that counteract inherent risk.
factors and lead to meaningful social and academic engagement while in college. Since the pilot Upward Bound Program of 1964, TRIO programs have evolved into a seven-program collection and grown to serve close to one million students annually. These programs include Upward Bound, Math/Science Upward Bound, Talent Search, Student Support Services, Veterans Upward Bound, Educational Opportunity Centers, and Ronald McNair Post-Baccalaureate Achievement Program.

**Upward Bound Program**

Upward Bound provides resources for participants to succeed in their pre-college performance and ultimately in their higher education pursuits. Students served by the program are low-income, first-generation or both. The goal of the program is to increase the rate at which participants complete secondary education and enroll in and graduate from college.

**Upward Bound Math/Science Program**

The Upward Bound Math and Science programs are designed to strengthen the math and science skills of participating students. The program’s aim is to help students recognize and develop their potential to excel in math and science, and to encourage them to pursue postsecondary degrees and careers in math and science.

**Talent Search Program**

Talent Search serves students from middle schools that have the potential to succeed in higher education. The program provides resources in the form of academic, career, and financial advisement to its participants and encourages them to graduate from high school. The program also serves high school dropouts by encouraging them to reenter the education system and complete their education. The main aim of Talent Search is to
increase the number of students from disadvantaged backgrounds who complete high school and enroll in colleges of their choice.

**Student Support Services Program**

The Student Support Services Program serves low-income and first-generation students who are already enrolled in college. Services include personal counseling, cultural enrichment activities, career counseling, tutoring and academic counseling. In addition, the program serves to motivate students toward the successful completion of their postsecondary education. The main goal of SSSP is to increase the college retention and graduation rates of its participants and help students make the transition from one level of higher education to the next.

**Ronald E. McNair Post-Baccalaureate Achievement Program**

The McNair program provides support and encouragement to promising low-income/first-generation students who enroll in advanced degrees. The program encourages participants to enroll in graduate programs and then tracks their progress through to the successful completion of advanced degrees. The goal is to increase the attainment of doctoral degrees.

**Veterans Upward Bound Program**

This program provides basic skills training to low-income/prospective first-generation college students who meet military service requirements and offers short-term remedial courses to help them successfully transition to postsecondary education. Through the program, veterans learn how to secure support from available resources such
as the Veterans Administration, veterans associations, and various state and local agencies that serve veterans.

**Educational Opportunity Centers**

The Educational Opportunity Centers program provides resources in form of counseling and information on college admissions to qualified adults who want to start or continue a program at college. Participants must be potential first-generation college students and meet low-income requirements.

It should be noted that despite the longevity and the demonstrated success of TRIO programs, they have been targeted for elimination for the last several years in a row. TRIO programs performance has been a key consideration in developing the Department of Education budget because of the amount of dollars involved. The administration evaluates and reviews programs throughout the federal government to identify strong and weak ineffective performers with a view to redirecting funds from lower-performing programs to higher-performing or more-effective programs. The funding has been restored in Congress each year due in large part to input from program lobbyists, like COE (Council for Opportunity in Education), program directors and student alumni from across the country who have benefited greatly from their participation in these programs (Engle, 2007).

In 1995, TRIO programs were slated for elimination under the republicans pledge to eliminate in their “Contract with America” fiscal blueprint budget. That budget called for the elimination of more than 200 government programs including TRIO programs (Thomas, Farrow, & Martinez, 1998). Fortunately, that did not happen. In 2006, TRIO Programs were not appropriated any monies and were going to be eliminated (Mitchem,
President George Bush had proposed to terminate 48 programs (including TRIO Upward Bound and Talent Search, entirely, thus freeing up nearly $1 billion for “high-priority activities more likely to yield positive and measurable results”. The Bush administration had argued that the programs in question had no overall impact on participants’ grades, credits earned, high school graduation rates, or college enrollment rates. If it was not for COE and several Congressmen who stepped in to defend the programs, that would have been the end of the programs (Mitchem, 2006).

TRIO has seen decreased funding since FY 2002. Since that time, the programs have experienced cuts, and level-funding. As a result, the programs have lost more approximately 44,000 students over the last five years (Council for Opportunity in Education, 2010). The House of Representatives passed HR 3010 and helped TRIO maintain its 2005 funding of $836.5 million (Mitchem, 2006). Though the bill has helped TRIO programs thus far, generally TRIO Upward Bound and Talent Search apparently remain targets for elimination (Council for Opportunity in Education, 2010).

In 2011, the republican-led House voted to cut a variety of education programs, most of which are targeted toward low-income students – including TRIO, GEAR UP, and Pell Grants. This prompted Council of Opportunity in Education to send out a plea to TRIO programs stake holders including TRIO program directors, students, parents, alumni, college and university presidents and interested parties and well-wishers to rally their congress men and representatives to fight for the programs (Council for Opportunity in Education, 2011). So far, it seems as if Upward Bound and Talent Search TRIO programs are the only ones that have experienced many trials, tribulations, and changes throughout the years and that seem likely to continue. It appears as though the people
who are in need are the people being cut out of America’s dream of educational and economic opportunity

**Summary**

Given the risk factors associated with low-income/first-generation students, it is evident that many of them are faced with eminent challenges in their pursuit of a college education. The literature review has stressed the importance of protective factors that counteract risk factors and encourage social and academic engagement. We have seen that any form of engagement, whether social or academic, increases the students’ comprehension about college and their exposure to different types of skills necessary for success. Moreover, engaged students in college experience increased autonomy, social maturation, aestheticism and awareness of interests, values, aspirations and religious views; all of which are believed to foster academic resilience.

The existence of intervention programs like TRIO programs helps prepare students for the challenges expected in college and equips them with skills they need to navigate the college’s social as well as academic life. Intervention programs are institution-based initiatives that serve as both protective factors and encouragement to students to engage in other existing protective factors within the institution. All forms of protective factors are important elements of academic resilience. Protective factors encourage students to feel at ease among other students and to navigate the college campus without fear or intimidation.

From the literature review, we know that academic resilience is a crucial protective factor in itself for students in general and low-income/first-generation in particular. We know that academic resilience can be acquired and learned through life’s
experiences. In addition, we know that factors external to the individual student work to enhance or diminish a student’s academic resilience. We have also seen that TRIO Programs provide individualized support to low-income/first-generation students, by assisting them in learning the educational system, and provide an understanding of what is required in order to successfully maneuver through the college system. However, what we know almost nothing about is how, or to what extent, students’ involvement in TRIO intervention programs influenced their academic resilience. There are few studies of academic resilience as pertains to TRIO students in the existing resilience research literature. This study aims to fill the research gap by adding to existing literature on academic resilience as it pertains to the experiences of the students served by the programs. The following chapter outlines my efforts to design a study that helps explore low-income/first-generation’ involvement with TRIO programs in relation to the students’ sense of academic resilience. The chapter also describes the methods used to select participants and collect and analyze data for this study.
Chapter 3

Research Design and Methodology

Introduction

The purpose of this mixed method study was to examine the relationship between academic resilience and the experiences of students served by TRIO intervention program. The results of this study were compared with experiences of students from the following South African resilience studies Cameron, Ungar & Liebenberg, 2007; Egeland, Carlson & Sroufe, 1993; Mampane & Bouwer, 2006; Theron, 2007; Ungar et al., 2007 among others. Characteristically, the low-income, first-generation students in this study were involved or had participated in one or two TRIO intervention program either in high school or in college. TRIO Programs have provided opportunity and access to low-income/first-generation students for forty-one years. This intense academic, cultural and social program provides hope and opportunity to students who may not otherwise receive the academic preparation for college admission and persistence to graduation.

In the recent past, studies that highlight factors that contribute to academic resilience among such students are increasing. However, few studies approach the topic from TRIO intervention programs standpoint. Little is known about the relationship between academic resilience and academic success through the experiences of students served by TRIO intervention programs and how the programs influence the academic resilience of its students. In order to understand this, it is important to research the phenomena of academic resilience from the stand point of TRIO programs in terms of
how the programs influence academic resilience of its students.

**Research Questions**

The primary objective of this study was to answer the following questions;

*Quantitative question*

1. Do low-income/first-generation female students have greater academic resilience levels compared to males?

*Qualitative questions*

2. What is the relationship between academic resilience and the experiences of students served by TRIO intervention programs?
3. How did involvement in TRIO intervention program contribute to academic engagement and social engagement in college?
4. What protective factors other than academic and social engagement influenced participants’ academic resilience while in college?
5. How have the participants dealt with circumstantial challenges (i.e. risk factors) affecting them while in college?

**The Research Design**

This study employed a mixed methodology approach involving both qualitative and quantitative research methods. Although designed to accomplish different goals, both research methodologies are complementary and can be combined effectively (Patton, 2002). The quantitative and qualitative approaches assisted with both data collection and analysis. On the one hand, qualitative research illuminates the individual differences between subjects in a study, and creates a more detailed portrait of the findings. On the
other hand, a quantitative design provides more generalizable data (Creswell, 2003). Quantitative research allows a researcher to identify variables and assess their relationships in ways that can be measured accurately and with consistency. It also allows the researcher to formulate unbiased explanations for a given phenomenon. Usually, this is done through a formal instrument that reduces data to statistical numbers. According to Patton (2002), one format that employs quantitative research methods is survey methodology.

Survey is among the most common data-gathering techniques (Merriam & Simpson, 1995). It is an effective tool for getting useful information from a study’s participants. For the present study, written questionnaires were used to examine the relationship between academic resilience and academic success through the experiences of students served by TRIO intervention programs. A self-administered on-line survey was assumed an effective way to capture survey data (Rossi, Wright, & Anderson, 1983). Though surveys can be expensive, advantages for using surveys are that the instructions are consistent for all participants and confidentiality of respondents can be maintained. A disadvantage of using a self-administered survey is that there is no control over a participant’s response especially in the case of open-ended questionnaires (Bourque & Fielder, 1995).

In addition to the quantitative methodology for this study, the researcher also included a qualitative component, which helped to answer the “how and what” lines of inquiry (Creswell, 2003). The aim of qualitative research is to understand the ways in which people create and give significance to occurrences they have experienced in their lives (Patton, 2002; Rossman & Rallis, 2003)
Qualitative methods for this study enabled participants to describe their experiences in their own terms, which then aided the researcher in identifying salient themes with respect to the intervention program and academic resilience. Qualitative research method is a way of understanding the experiences of students as they move into the culture of higher education and persist, stop out, or depart from college (Kuh & Andreas, 1991; Stage & Manning, 2003; Terenzini et al., 1994).

The present qualitative study provided an opportunity for the voices of TRIO students to emerge. It gave a descriptive analysis of the social and academic experiences of TRIO students who were selected for interviews. Due to the limited research on the experiences of TRIO students in higher education found in the literature, the study focused on the analysis of their responses to examine the relationship between academic resilience and college success, Table 3-1. below outlines the approaches to align the research questions with the methods.

Table 3-1. Summary of the Research Design Aligned with Research Method

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Participants</th>
<th>Type of Data Collection</th>
<th>Instruments/Methods Used</th>
<th>Data Obtained</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N=106 TRIO students</td>
<td>Quantitative</td>
<td>The College Resilience Questionnaire, Demographic Questionnaire</td>
<td>Demographic Information, Engagement Score, Social Academic Score</td>
<td>t-test, Descriptive Means, Frequencies</td>
</tr>
<tr>
<td>2, 3, 4 and 5</td>
<td>N=6 select TRIO students</td>
<td>Qualitative</td>
<td>Guided Questionnaires</td>
<td>Interview Responses</td>
<td>Content Analysis, Descriptive Means, Frequencies</td>
</tr>
</tbody>
</table>
Table 3-2 and Table 3-3 represent the similarities and differences in the methods, population and instruments used by some resilience researchers both in the US and in SA in the last decade.

Table 3-2. Summary of Select Research Methodologies used in South Africa Resilience Studies

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Study</th>
<th>Method</th>
<th>Population</th>
<th>Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dass-Brailsford (2005)</td>
<td>Exploring resiliency: Academic achievement among disadvantaged Black youth in South Africa.</td>
<td>Qualitative</td>
<td>16 participants (8 boys and 8 girls) with isiZulu as home language in their 1st year at university</td>
<td>Ethnographic interviewing (semi-structured individual interviews) Structured individual interview Written narratives Observation Life skills Rating Scale Focus group interviews</td>
</tr>
<tr>
<td>Theron (2007)</td>
<td>A South African study of resilience among township youth.</td>
<td>Mixed Method</td>
<td>Survey sample: 934 vulnerable and resilient youth (boys and girls) in Grade 9 from 8 townships in the Gauteng, North-West and Free State Provinces. Interview participants totaled 80 resilient youth</td>
<td>The Resilience Scale (self-developed by Mampane and Bouwer) The Learning Behavior Scale (self-developed by Mampane and Bouwer) In-depth interviews (based on responses to Resilience Scale)</td>
</tr>
<tr>
<td>Mampane and Bouwer (2006)</td>
<td>Identifying resilient and none-resilient middle-adolescents in a formerly Black-only urban school</td>
<td>Mixed Method</td>
<td>12 learners (6 boys and 6 girls) from a secondary school in a township; 8 curricular teachers for Grades 8 and 9</td>
<td>The Resilience Scale (self-developed by Mampane and Bouwer) The Learning Behavior Scale (self-developed by Mampane and Bouwer) In-depth interviews (based on responses to Resilience Scale)</td>
</tr>
<tr>
<td>Ebersöhn (2007)</td>
<td>Children’s resiliency as assets for safe schools</td>
<td>Quantitative</td>
<td>2391 children (1200 girls and 1191 boys) between the ages of 3 and 21 years from 78 schools in the Limpopo Province</td>
<td>Overall design: participatory action research – data in this publication based on quantitative non-experimental</td>
</tr>
<tr>
<td>Study</td>
<td>Research Question</td>
<td>Methodology</td>
<td>Sample Description</td>
<td>Data Collection Methods</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
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<td>-------------------------</td>
</tr>
<tr>
<td>Kruger and Prinsloo (2008)</td>
<td>The appraisal and enhancement of resilience modalities in middle adolescents within the school context</td>
<td>Mixed Methods</td>
<td>27 adolescents (Grade 8) in an inner-city school in Johannesburg: 9 Black (6 boys and 3 girls), 9 White (6 boys and 3 girls), 4 Colored (1 boy and 3 girls), 3 Indian boys</td>
<td>Observation, Self-reflective evaluations, Resiliency Scale (self-developed)</td>
</tr>
<tr>
<td>Govender and Kilian (2001)</td>
<td>The psychological effects of chronic violence on children living in South African townships</td>
<td>Quantitative</td>
<td>172 Black adolescent youths (Grade 9) living in the townships of the Midlands region of KwaZulu-Natal (94 boys and 83 girls)</td>
<td>Basic Demographics Questionnaire, Negative Life Events Questionnaire, Global Distress Scale, Ways of Coping Scale</td>
</tr>
<tr>
<td>Germann (2005)</td>
<td>I am a hero – Orphans in child-headed households and resilience</td>
<td>Qualitative</td>
<td>Female, born in 1988 in Bulawayo, Zimbabwe, heading a household</td>
<td>Narrative interview, Memory work</td>
</tr>
<tr>
<td>Pillay and Nesengani (2006)</td>
<td>The educational challenges facing early adolescents who head families in rural Limpopo Province</td>
<td>Qualitative</td>
<td>Early adolescent (13–16 years) Black youth (Limpopo) from child-headed families: 2 male and 2 female youth wrote life histories; 10 individual and 4 focus group interviews 4 focus groups with teachers (6 participants in each)</td>
<td>Individual and focus group interviews with learners, Focus group interviews with teachers, Written life histories, Observations</td>
</tr>
<tr>
<td>Researcher</td>
<td>Study</td>
<td>Method</td>
<td>Population</td>
<td>Instrument</td>
</tr>
<tr>
<td>------------</td>
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<td>------------</td>
</tr>
<tr>
<td>Geoffrey, Borman, and Overman (2004)</td>
<td>Academic Resilience in Mathematics among Poor and Minority Students</td>
<td>Mixed methods Longitudinal</td>
<td>3191 academically successful, or resilient, elementary school students from minority and low-socioeconomic-status (SES) backgrounds</td>
<td>A variety of measures</td>
</tr>
<tr>
<td>Benard (1991)</td>
<td>Fostering resiliency in kids: Protective factors in the family, school, and community</td>
<td>35 years-Longitudinal Mixed Methods</td>
<td>Children into adolescence and adulthood</td>
<td></td>
</tr>
<tr>
<td>Driscoll (2006)</td>
<td>Academic Resilience among Low SES High School Students</td>
<td>Mixed Method Longitudinal</td>
<td>Low-income white, African American and Mexican-origin students who attended public schools as eighth graders</td>
<td>NCES-constructed scale, Interviews, parental support scale, School engagement scale online survey consisted of open-ended questions valuing of schooling scale, bilingualism scale, distress scale</td>
</tr>
<tr>
<td>Perez et al. (2009)</td>
<td>Academic Resilience Among Undocumented Latino Students</td>
<td>Qualitative</td>
<td>10 undocumented Latino high school, community college, and university students</td>
<td></td>
</tr>
<tr>
<td>Morales (2011)</td>
<td>A Focus On Hope: Fifty Resilient Students Speak</td>
<td>qualitative</td>
<td>fifty low socioeconomic students of color from a variety of racial and ethnic backgrounds inner-city students in third grade to fifth grade</td>
<td>Chronicling specific protective factors and processes active in the students' lives. Self-reports Survey Character scale, self-efficacy scale, and attitude toward school scale</td>
</tr>
<tr>
<td>Study</td>
<td>Title</td>
<td>Research Instrumentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Padrón, Waxman, Brown, and Powers (2000)</td>
<td>Improving Classroom Instruction and Student Learning for Resilient and Non-resilient English Language Learners</td>
<td>Mixed methods 1,000 fourth- and fifth-grade resilient and non-resilient English language learners from 21 classrooms in three elementary self-report questionnaires Interviews Reading Strategies Questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Werner and Smith (1992)</td>
<td>Overcoming the odds: High risk children from birth to adulthood</td>
<td>Mixed method (Longitudinal) 700 children growing up with risk factors (one-third of whom had multiple risk factors) from birth to adulthood Survey and interview questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weaver (2010)</td>
<td>The Relationship Between Cultural/Ethnic Identity and Individual Protective Factors of Academic Resilience</td>
<td>Quantitative 239 students in grades nine through twelve attended the ten health classes Multi-group Ethnic Identity Measure – Revised (MEIM-R), 44-item Resilience Inventory (RI), negative life events inventory (NLEI)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In reviewing this research, there were commonalities in the protective factors that encourage academic resilience both in the US and in SA. For example on one hand familial, individual, social-environmental protective factors are well discussed in the literature in both countries. Institutional protective factors on the other hand are not as expounded in South Africa as much as they are in the US. Similarly, protective factors embedded in the culture do not feature in the US resilience literature as they do in SA resilience literature.

**Research Instrumentation: The CRQ (College Resilience Questionnaire)**

The study instrument, the College Resilience Questionnaire (CRQ) consists of 27 items and measures college student resilience (Carlson, 2001). The author’s view of
resilience was based on her examination of social and cognitive characteristics of resilient students. According to her, resilience is a "complex interaction of risk factors and protective factors that lead to positive developmental outcomes" (p. 11). Tinto (1993) guides her in defining college student resilience, which identifies social and academic integration as central to persistence in college. According to Carlson, 2001 "students who become socially and academically integrated are better able to cope with academic risks and therefore persist" (p. 61). She created two categories of questions touching on - academic engagement and social engagement factors for the CRQ instrument. The social engagement construct is based on eight items, while academic engagement construct is based on 19 items (Carlson, 2001). Together, these factors measure academic resilience. Respondents indicated their level of agreement with CRQ items on a Likert-type scale by indicating 1 (always false), 2 (usually false), 3 (neutral), 4 (usually true) and 5 (always true). The composite scores of AR, AE and SE were later used to determine who would be interviewed and provided descriptive data for analysis.

**Sampling Framework**

The study was open to any participants of any TRIO intervention program in the US and its territories. The investigator worked with various TRIO program directors to get study participants. At the beginning, the researcher intended to work with a population of 300 TRIO students. However 106 respondents responded to the CRQ survey. Eligibility characteristics of TRIO students consisted of low-income/first-generation /both characteristics. Additional participants were identified from TRIO alumni college websites and recruited via email. Still more participants were recruited
from alumni and students from various TRIO intervention programs who subscribe to
Facebook (an Internet social utility that connects people that share the same cause,
friends. etc.). For this purpose, the investigator worked with Facebook website
administrators for permission to contact participants from the target groups (students
currently or at one point in time were involved in TRIO programs). All responses were
anonymous. Respondents were only allowed one submission. Multiple electronic
submissions from a single address were denied.

In the initial participant recruitment posting, a brief summary of what the research
study would entail was shared. Once recipients expressed a willingness to participate, an
e-mail was sent (see Appendix A) with a link to SurveyMonkey.com, where the survey
was posted between July 7 and August 7 2008. The respondents were ethnically diverse
including Hispanic, African American, white, Native Americans and Asian students.
Specifically there were 32 white students, 74 minority students including Asian (7),
Black (48), and Native American (4), and Hispanics students (15). Figure 3-1 represents
the participants’ representation by race.
Figure 3-1. Participants Representation by Race

Table 3-4. TRIO Program Participating Universities by Number of Participants

<table>
<thead>
<tr>
<th>University</th>
<th>State</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Massachusetts</td>
<td>MA</td>
<td>1</td>
</tr>
<tr>
<td>North Western University</td>
<td>IL</td>
<td>1</td>
</tr>
<tr>
<td>Alfred University</td>
<td>NY</td>
<td>1</td>
</tr>
<tr>
<td>American University of Antigua</td>
<td>Antigua</td>
<td>1</td>
</tr>
<tr>
<td>Bloomsburg University</td>
<td>PA</td>
<td>1</td>
</tr>
<tr>
<td>California University of PA</td>
<td>PA</td>
<td>1</td>
</tr>
<tr>
<td>Cincinnati State &amp; Technical College</td>
<td>OH</td>
<td>1</td>
</tr>
<tr>
<td>Clarion University of PA</td>
<td>PA</td>
<td>1</td>
</tr>
<tr>
<td>Colby-Sawyer College</td>
<td>NH</td>
<td>1</td>
</tr>
<tr>
<td>College of St. Scholastica</td>
<td>MN</td>
<td>4</td>
</tr>
<tr>
<td>New Mexico State University</td>
<td>NM</td>
<td>1</td>
</tr>
<tr>
<td>Lincoln University</td>
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<td>1</td>
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<tr>
<td>Florida International University</td>
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<tr>
<td>Harrisburg Area Community College</td>
<td>PA</td>
<td>3</td>
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<tr>
<td>Harrisburg University</td>
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<td>1</td>
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<tr>
<td>Indiana University of Pennsylvania</td>
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<td>Itasca Community College</td>
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<tr>
<td>Johnson and Wales University</td>
<td>RI</td>
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<tr>
<td>Johnson C. Smith University</td>
<td>SC</td>
<td>1</td>
</tr>
<tr>
<td>Kutztown University</td>
<td>PA</td>
<td>10</td>
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<tr>
<td>Lebanon Valley College</td>
<td>PA</td>
<td>1</td>
</tr>
<tr>
<td>University</td>
<td>State</td>
<td>Count</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Long Island University</td>
<td>NY</td>
<td>1</td>
</tr>
<tr>
<td>MacIntosh College</td>
<td>NH</td>
<td>1</td>
</tr>
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<td>Millersville University</td>
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<td>Montana State University</td>
<td>MT</td>
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</tr>
<tr>
<td>North Georgia College and State University</td>
<td>GA</td>
<td>1</td>
</tr>
<tr>
<td>North Iowa Area community College</td>
<td>IA</td>
<td>1</td>
</tr>
<tr>
<td>Penn State University</td>
<td>PA</td>
<td>24</td>
</tr>
<tr>
<td>Plymouth State College</td>
<td>NH</td>
<td>1</td>
</tr>
<tr>
<td>Shippensburg University</td>
<td>PA</td>
<td>1</td>
</tr>
<tr>
<td>Southern New Hampshire University</td>
<td>NH</td>
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<tr>
<td>St Edwards University</td>
<td>TX</td>
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</tr>
<tr>
<td>Temple University</td>
<td>PA</td>
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</tr>
<tr>
<td>The Art Institute of Seattle</td>
<td>WA</td>
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</tr>
<tr>
<td>The College of New Rochelle</td>
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<td>Illinois State University</td>
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<tr>
<td>university of Arkansas</td>
<td>AK</td>
<td>1</td>
</tr>
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<td>University of Minnesota Duluth</td>
<td>MN</td>
<td>1</td>
</tr>
<tr>
<td>University of New Hampshire</td>
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</tr>
<tr>
<td>University of Pittsburgh</td>
<td>PA</td>
<td>3</td>
</tr>
<tr>
<td>Wright State University</td>
<td>OH</td>
<td>2</td>
</tr>
<tr>
<td>University of Colorado</td>
<td>CO</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 3-5. TRIO Program Participating Universities by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>No. of Participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>West</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>North East</td>
<td>81</td>
<td>76</td>
</tr>
<tr>
<td>Mid-West</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>US Territory</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

At the end of the survey, participants were requested to provide contact information should they be willing to participate in a post-survey interview. 102 respondents provided this information. After the data were analyzed quantitatively using descriptive and inferential statistics, interview data were collected from six respondents via telephone between June and July 2009. These interviews sought to highlight many of the issues that TRIO students face and to gain an in-depth understanding of the complexity of their lives. Specifically, these data sought to answer the question: What is the relationship between academic resilience and academic success through the experiences of students served by TRIO intervention programs?

Out of those respondents willing to be interviewed, eight were purposefully selected based on their academic resilience outlier scores. Other criteria used included RIO eligibility and whether they were both low income and first generation or exhibited just one of the characteristics. Those that did not exhibit both characteristics were not selected for the interviews. The rationale was that the selected students would have more challenges to overcome in their academic pursuit. Other qualifiers included academic
engagement and social engagement scores; gender; age and race. 20 participants (See Table 3-6) exhibiting variations of these characteristics were initially selected.

Table 3-6. Initial Participants Selected for Qualitative Interviews

<table>
<thead>
<tr>
<th></th>
<th>Race</th>
<th>Gender</th>
<th>Age</th>
<th>TRIO Program</th>
<th>Eligibility</th>
<th>AE Mean scores</th>
<th>SE Mean scores</th>
<th>CRQ Mean scores</th>
<th>Follow up interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hispanic</td>
<td>Male</td>
<td>18</td>
<td>UB/SSSP</td>
<td>Low income/First Generation</td>
<td>1.25</td>
<td>1.84</td>
<td>1.59</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>White</td>
<td>Male</td>
<td>41</td>
<td>UB</td>
<td>Low income</td>
<td>2.37</td>
<td>2.52</td>
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<tr>
<td>3</td>
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<td>Male</td>
<td>25</td>
<td>UBMS</td>
<td>Low income/First Generation</td>
<td>2.12</td>
<td>2.78</td>
<td>2.59</td>
<td>Yes</td>
</tr>
<tr>
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<td>Male</td>
<td>26</td>
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<td>2.77</td>
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<td>5</td>
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<td>Male</td>
<td>24</td>
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<td>2.92</td>
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</tr>
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<td>4.26</td>
<td>4.25</td>
<td>Yes</td>
</tr>
<tr>
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<td>Male</td>
<td>18</td>
<td>UB/SSSP</td>
<td>Low income/First Generation</td>
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<td>4.84</td>
<td>4.25</td>
<td>Yes</td>
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<tr>
<td>12</td>
<td>Black</td>
<td>Male</td>
<td>18</td>
<td>SSSP</td>
<td>Low income</td>
<td>4.00</td>
<td>4.36</td>
<td>4.25</td>
<td>Yes</td>
</tr>
<tr>
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<td>Female</td>
<td>23</td>
<td>UB</td>
<td>Low income/First Generation</td>
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<td>4.47</td>
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<td>UB</td>
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<td>4.88</td>
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<td>4.89</td>
<td>4.92</td>
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<td>17</td>
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<td>24</td>
<td>UB</td>
<td>First generation</td>
<td>5.00</td>
<td>4.89</td>
<td>4.92</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>25</td>
<td>UBMS</td>
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<td>4.94</td>
<td>4.92</td>
<td>yes</td>
</tr>
<tr>
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<td>Female</td>
<td>19</td>
<td>UB/SSSP</td>
<td>Low income/First Generation</td>
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<td>4.94</td>
<td>4.96</td>
<td>Yes</td>
</tr>
<tr>
<td>106</td>
<td>White</td>
<td>Female</td>
<td>32</td>
<td>UB</td>
<td>First generation</td>
<td>5.00</td>
<td>5.00</td>
<td>5.00</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Key**


This initial selection was followed by the systematic elimination of twelve based on the weight and comparative relevance of their above characteristics. For example, potential interviewees were compared to see who had more risk factors, or what similarities they had in order to avoid tautology of presentation of ideas. Eventually, six unique respondents were chosen to participate in the interviews, with two acting as back up just in case any of the original six could not be reached or had changed their minds. Six participants provided enough cases to examine similarities and differences but not too many that one is in danger of being overwhelmed by the amount of data produced (Seidman, 2005).

**Data Collection Procedures**

The Institutional Review Board Office (IRB) at The Pennsylvania State University was involved from the onset of this study. An informed consent form (see Appendix B) was attached to the online survey for participants to read and accept before taking the survey. Logging into Survey Monkey, the study’s informed consent form appeared first, with instructions that participants could download a copy (see Appendix B), followed by
demographic items, and, finally, the CRQ instrument itself (see Appendix C).

Demographics were also collected by use of the survey. Demographics (including age, gender, race, language, and eligibility criteria for admission to the TRIO program), were collected as participants’ self-report using CRQ surveys. Participants’ ages were grouped into two levels – those aged 30 and younger and those aged 31 and older. Participants indicated their gender identification from three choices: male, female, and other. The race variable was an open-ended question, and responses were coded as either majority (White) or a minority race. For the language variable, participants responded by checking or not checking English as second language (ESL). Participants who did not check ESL on the survey were coded as native English speakers.

Eligibility for TRIO programs was determined by participants’ self-reports of the following: low college entry scores, low-income, and first-generation in their family to complete a four-year college degree or on their way to doing so, or some other qualifier (Appendix C). For this study, participants’ eligibility for TRIO was qualified by responses on the income (low) and generation (first) entries. Specifically, participant responses were coded according to “TRIO Eligibility” as being first-generation, low-income, or both of these qualifiers. Low college entry scores were removed as a qualifier because most TRIO students have low scores. Likewise, TRIO eligibility was removed as a qualifier because all respondents were TRIO students. Furthermore, federal guidelines require only status as low-income, first-generation, or both for students’ eligibility in TRIO programs. Table 3-7 below shows participant demographics along these lines. The TRIO federal guidelines state that a minimum of two-thirds of the participants must qualify as both low-income and first-generation college. The sample included students
who were low-income/non-first-generation college (n=22), first-generation college/non-
low-income (n=27) and those that were both low-income and first-generation college
(n=57).

Table 3-7. Respondents Demographic Data (N=106)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>35</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>71</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>30 and younger</td>
<td>93</td>
<td>87.7</td>
</tr>
<tr>
<td>Age</td>
<td>31 and older</td>
<td>13</td>
<td>12.3</td>
</tr>
<tr>
<td></td>
<td>Low-income (LI)</td>
<td>22</td>
<td>20.8</td>
</tr>
<tr>
<td>TRIO Eligibility</td>
<td>First-generation College (FG)</td>
<td>27</td>
<td>25.5</td>
</tr>
<tr>
<td></td>
<td>LIFG</td>
<td>57</td>
<td>53.8</td>
</tr>
<tr>
<td>Language</td>
<td>Native speakers of English</td>
<td>80</td>
<td>75.5</td>
</tr>
<tr>
<td></td>
<td>ESL speakers</td>
<td>26</td>
<td>24.5</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>29</td>
<td>27.3</td>
</tr>
<tr>
<td>Race</td>
<td>Minority</td>
<td>77</td>
<td>72.6</td>
</tr>
</tbody>
</table>

For the qualitative section of the study, select participants were contacted by
e-mail or phone to participate in an interview. These participants were informed that the
interview was to be recorded with their permission, and that the audio recording tapes
would be stored in the investigator’s home under lock and key, to be destroyed after a
period of three years. Interviewees were assured that none of the procedures would cause
risk. The consent forms gave specific contact numbers for respondents to call if they had
any questions. Furthermore, interviewees were told that they could refuse to answer any
questions depending on how it was presented. Fortunately, this option was not exercised.
Using a guided questionnaire, in depth interviews were conducted with the interviewees
being encouraged to share their feelings and viewpoints on the impact of TRIO
intervention program on their academic resilience.
Participants were asked to provide a detailed description and explanation of the factors they feel had been most influential to their academic resilience. The roles of what previous research (Luthar, & Zigler, 1991; Reed, McMillan & McBee, 1995; Pascarella et al., 1995; Thayer, 2000; York-Anderson & Bowman, 1992) had identified as protective factors originating at the individual, institutional, familial and socio environmental levels were among the questions asked. These questions prompted students to give their responses about college experiences based on their participation in TRIO program. The interviews tried to capture accurate descriptions of the participants` experiences as related to academic resilience as participants` of a TRIO program. Following transcription of the interviews, the researcher interpreted the participant's experiences seeking to identify salient themes and narratives. Analysis consisted of reading and re-reading individual transcripts, seeking to identify meanings central to the participant's TRIO involvement experiences, and comparing and contrasting the findings to identify similarities in the participants' responses.

The interview protocol (see Appendix D) was kept flexible to enable probing and negotiate better understanding (Darlington & Scott, 2002; Ritchie & Lewis, 2003). The interviews were audiotaped and transcribed for analysis. Each interview sought to capture particular explanations and responses pertaining to academic challenges (resilience evidence) with respect to respondents’ participation in TRIO intervention programs. Because utilizing qualitative data represents a commitment to seeing the social world from the point of view of the interviewees (Marshall, & Rossman, 1999), these data provided an important source for developing an analysis that serve to expand and provide depth to descriptive quantitative results.
Data Analysis

This study collected two types of datasets. For the quantitative data, the researcher created a database to store the results from the survey Monkey website. The Statistical Package for Social Sciences (SPSS) 16.0 was used to conduct statistical analyses. SPSS was seen to be essential for tabulating the data in order to answer a survey research question posted in this study and to identify the characteristics scores of TRIO participants (academic engagement, social engagement and the academic resilience) for each participant. The researcher used descriptive statistics to report the responses for the Academic Engagement (AE), Social Engagement (SE), and Academic Resilience (AR) scores. Additionally, the researcher calculated and identified the mean, range, and standard deviation scores for all three categories using SPSS software. Inferential statistical tests included \( t \)-test, which was used to determine which gender (male or female) has greater academic resilience. This was of special interest to the researcher who is female owing to her background and interest in women issues. The researcher used simple descriptive statistics to analyze the majority of the data for the CRQ. For the qualitative portion of the study, the researcher asked the six participants whether their involvement in TRIO intervention program assisted them in their overall academic resilience. The researcher asked general questions to examine the students’ academic and social engagement in the program. The responses from the interview were coded and sorted in appropriate tables according to themes (Patton, 2002). Content analysis was used to interpret the data. To summarize, the methods utilized for the study were considered adequate to answer the research questions.
Reliability of Study Results

All study participants were enrolled in a TRIO program at one point or another. Therefore, dependability for this study can be seen in the selection of participants who were qualified to address the issues related to the research problem. In addition, changes that occurred throughout the research process are documented and reported to the IRB. All participants in this study had uniquely different experiences as students enrolled in TRIO programs. Triangulation, the strategy of using multiple research methods enhanced reliability of this study. The study used a survey to gauge the academic resilience of the participants as per the CRQ survey scores after which the interviewees were selected.

Role of the Researcher

To address the qualitative portion of the study, I identified the following areas where my personal bias might influence the research process or findings. As the Skills Development Coordinator of a TRIO program at one of the State system universities in Pennsylvania I coordinated the programs Saturday sessions and taught some courses for program admitted students for four years (2003-2007). I took an academic counselor role and visited the students in their respective high schools where they shared their school experiences with me freely. In addition, I was assigned specific low-income/first-generation regular college students for academic advising within the university. Later when I worked for another intervention program within the university that served low-income/first-generation students they reminded me about the same challenges TRIO student are faced with.
As a first-generation student myself, I had similar challenges and obstacles to undergraduate degree completion as the students I served in TRIO programs. Because of my struggle to understand the culture of college coupled with the lack of guidance and mentoring, I strongly identified and empathized with the challenges faced by TRIO students. My personal experiences are the basis for this study, because of my strong commitment to first-generation, low-income, and minority students who are at risk of academic failure in higher education. I was aware of the personal values and biases that could lead me to empathize with the elements of the students' accounts of their experiences that related with mine at each phase of the research process. To guard against this, I developed the following protocol to ensure credibility in the research process:

1. I continuously reviewed the data and emergent themes to ensure the findings represented the experiences of all participants.

2. Member checking- The participants received a copy of a transcript of their interview and a draft of the findings with an invitation to review and comment on the accuracy of both documents.

3. Peer Review –Some university professors on my committee and a colleague with knowledge of higher education and TRIO program critically evaluated the research methods employed in this study.

**Interpretation of the Results**

In this work, I focused on intervention programs and in particular, TRIO programs because I believe that these programs have the potential to affect academic resilience for low-income/first-generation students. In addition, I believe other countries can benefit from borrowing from the USA. Through my interpretations of the meanings
students ascribe to their experiences in TRIO programs, I hope to make this work useful for scholars and practitioners who are interested in understanding how college intervention programs influence academic resilience in its participants not only here in the US but also in other countries. Though my research draws on open-ended interviews, with six students who participated in TRIO programs, the research participants reflect the larger first-generation/low-income college students’ population on college and university campuses all over the world.

**Summary**

This study used a mixed methods approach (quantitative and qualitative) for data gathering and analysis (Creswell, 2003). It was conducted to further understand the relationship between academic resilience and the experiences of students served by TRIO intervention programs. In order to do this, a College Resilience Questionnaire (CRQ) was posted online where TRIO study participants recruited for the study responded to the survey. The researcher used six participants from the 106 who responded to the CRQ to accurately personify the social and academic experiences of TRIO participants in relation to academic resilience. I have provided a summary of sample and the measures taken to analyze the data. Descriptive data analysis was used to describe the basic features of the data collected by survey. Inferential statistics using t-tests showed which gender was more academically resilient. For qualitative data, six interviewees provided information that showed the relationship between academic resilience and academic success through their experiences as participants of TRIO programs.
Chapter 4

Findings

This chapter presents the findings from the mixed methods data collection protocols. Mixed methods approach was selected as the best method in order to capture the students’ perspectives of their experiences in college. The aim of this study was to examine academic resilience of low-income/first-generation college students served by TRIO programs. By utilizing a College Resilience Questionnaire (CRQ) (Carlson, 2001) (see Appendix C), participants responded to a set of questions whose score was indicative of their social as well as their academic engagement. A combined score of academic and social engagement was postulated to approximate their academic resilience. In addition, six participants were selected to take part in an in-depth qualitative interview. The interview questionnaire sought personal responses from participants by recounting their life experiences as members of TRIO programs. Their responses included information from the very first time they enrolled in TRIO program through their current positions in college or through college. These responses captured observations of their experiences in their academic and personal pursuits despite their challenging situations and negative influences that permeated their environments as low-income/first-generation students.

The data presented in this chapter are organized into two areas responding to the quantitative and qualitative research questions, which guided the study. Subsequently, the chapter is organized into five sections: The chapter includes: (a) descriptive data, including the CRQ factor scores and the participants’ demographic characteristics; (b) inferential statistics for the quantitative data, including analysis of the data; (c) participant
profiles; (d) common themes from the interviews and (e) answers to the qualitative questions.

**Descriptive Statistics**

One hundred and six completed online questionnaires (CRQ) were used in the analysis of the data using SPSS (Statistics Package for Social Sciences /16.0 for windows PC version; SPSS 2000). The completed questionnaires represented 35.3% of the 300 questionnaires distributed through the Internet. The researcher used email and phone to contact respondents. Of these 106 respondents, 71 (67%) were females while 35 (33%) were males. The ages of students who participated in this study ranged from 18 to 50 years of age. Eighty percent of the participants ranged between 18 and 26. The ethnic makeup of the study participants were primarily minority with the following breakdown: 32 (30%) white students, 74 minority students including Asian 7 (7%), Black 48 (45%), Native American 4 (4%), and Hispanics students 15 (14%). The return rate for the surveys was more than anticipated.

All the respondents had participated in federally funded TRIO programs in different institutions nationally. Descriptive statistics were compiled based on the results of the demographic items of the questionnaire: gender, age, TRIO eligibility, language and race. Academic Engagement Data, Social Engagement Data, and Academic Resilience Data (See Table 4-1).
<table>
<thead>
<tr>
<th>Demographic</th>
<th>n</th>
<th>AE</th>
<th>SE</th>
<th>AE</th>
<th>SE</th>
<th>AR</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Male</td>
<td>35</td>
<td>4.03</td>
<td>0.74</td>
<td>4.01</td>
<td>0.91</td>
<td>4.03</td>
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</tr>
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<td>0.43</td>
<td>4.33</td>
<td>0.40</td>
<td>4.29</td>
<td>0.38</td>
</tr>
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</tr>
<tr>
<td>30 years and under</td>
<td>93</td>
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<td>4.24</td>
<td>0.60</td>
<td>4.22</td>
<td>0.53</td>
</tr>
<tr>
<td>Over 30 years</td>
<td>13</td>
<td>4.06</td>
<td>0.74</td>
<td>4.08</td>
<td>0.80</td>
<td>4.07</td>
<td>0.74</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LI</td>
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<td>4.00</td>
<td>0.67</td>
<td>4.15</td>
<td>0.89</td>
<td>3.90</td>
<td>0.68</td>
</tr>
<tr>
<td>FG</td>
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<td>4.24</td>
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<td>4.31</td>
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<td>4.10</td>
<td>0.41</td>
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<td>LIFG</td>
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<td>4.22</td>
<td>0.56</td>
<td>4.26</td>
<td>0.62</td>
<td>4.08</td>
<td>0.53</td>
</tr>
<tr>
<td><strong>Language</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Native English Speakers</td>
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<td>4.22</td>
<td>0.60</td>
<td>4.19</td>
<td>0.54</td>
</tr>
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<td>4.24</td>
<td>0.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>32</td>
<td>4.10</td>
<td>0.51</td>
<td>4.13</td>
<td>0.75</td>
<td>4.11</td>
<td>0.67</td>
</tr>
<tr>
<td>Minority</td>
<td>74</td>
<td>4.22</td>
<td>0.56</td>
<td>4.26</td>
<td>0.57</td>
<td>4.24</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Key- AE=Academic Engagement, SE=Social Engagement, AR=Academic Resilience, M=Mean, SE=Standard Deviation, TE=TRIO Eligibility

**College Resilience Scores**

Participants responded to 27 social and academic engagement questions. The questions focused on protective factors in the literature to identify what protective characteristics may contribute to the student’s academic resilience toward success in college. Participants rated themselves on how they felt about their level of, positive relationships, sense of purpose, individual resourcefulness, faith and their overall
academic drive. Respondents indicated their level of agreement with CRQ items on a
Likert-type scale between 1-5 (see key below). Results show that, females did better than
the males in the overall resilience score with the lowest ranked female scoring a 3.44
resilience score compared to 1.59 for males. Thirteen females scored below a 4 while in
total 58 females scored a 4 and above. Males performed poorly with six males scoring
less than 3 on the academic resilience score. The lowest ranked male scored a 1.59
resilience score. Translated literally, with this presentation, it could mean that females are
more resilient than males.

Table 4-2. CRQ Item Scoring

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
<th>Gender</th>
<th>Total No.</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I never give/gave up at college</td>
<td>F</td>
<td>71</td>
<td>4.35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>35</td>
<td>4.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>4.29</td>
</tr>
<tr>
<td>2</td>
<td>I actively pursue/pursued my educational goals</td>
<td>F</td>
<td>71</td>
<td>4.64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>35</td>
<td>4.31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>4.53</td>
</tr>
<tr>
<td>3</td>
<td>I have/always had good friends to talk to at college</td>
<td>F</td>
<td>71</td>
<td>4.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>35</td>
<td>3.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>4.20</td>
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<tr>
<td>4</td>
<td>I am/was a self-starter on my assignments</td>
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<td>71</td>
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<tr>
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<td></td>
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</tr>
<tr>
<td>5</td>
<td>College excites/excited me</td>
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<tr>
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<td>I am/was very optimistic about my education</td>
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</tr>
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</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>35</td>
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</tr>
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<td></td>
<td>All</td>
<td>106</td>
<td>4.14</td>
</tr>
<tr>
<td>8</td>
<td>I learn/learned from</td>
<td>F</td>
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<tr>
<td></td>
<td>Description</td>
<td>Gender</td>
<td>Count</td>
<td>Average</td>
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<td>--------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>9</td>
<td>I expect/expected to do well in college</td>
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<td></td>
<td>M</td>
<td>35</td>
<td>4.05</td>
</tr>
<tr>
<td>10</td>
<td>I make/made friends in classes easily</td>
<td>M</td>
<td>35</td>
<td>3.65</td>
</tr>
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<tr>
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<td>I make/made the best of each educational experience</td>
<td>M</td>
<td>35</td>
<td>3.77</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>4.05</td>
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<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.19</td>
</tr>
<tr>
<td>12</td>
<td>I know/knew how to get homework done</td>
<td>M</td>
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<td>3.74</td>
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<tr>
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<td></td>
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<td></td>
<td>F</td>
<td>71</td>
<td>4.07</td>
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<td>13</td>
<td>I am/was able to connect with others in my classes</td>
<td>M</td>
<td>35</td>
<td>3.91</td>
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<td></td>
<td>All</td>
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<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.05</td>
</tr>
<tr>
<td>14</td>
<td>I get/got along well with others at college</td>
<td>M</td>
<td>35</td>
<td>4.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
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<td>4.31</td>
</tr>
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<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.39</td>
</tr>
<tr>
<td>15</td>
<td>I am/was a good problem solver on academic things</td>
<td>M</td>
<td>35</td>
<td>3.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>3.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.05</td>
</tr>
<tr>
<td>16</td>
<td>I make/made good things happen in my education</td>
<td>M</td>
<td>35</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>4.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.30</td>
</tr>
<tr>
<td>17</td>
<td>Nothing blocks/ blocked my educational path for long</td>
<td>M</td>
<td>35</td>
<td>3.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>4.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.53</td>
</tr>
<tr>
<td>18</td>
<td>I like/liked to take charge of my education</td>
<td>M</td>
<td>35</td>
<td>4.34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
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<tr>
<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.52</td>
</tr>
<tr>
<td>19</td>
<td>There are people in college who really believe/believed in me</td>
<td>M</td>
<td>35</td>
<td>4.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>4.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.52</td>
</tr>
<tr>
<td>20</td>
<td>I adapt/adapted easily to new courses</td>
<td>M</td>
<td>35</td>
<td>3.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.02</td>
</tr>
<tr>
<td>21</td>
<td>I have/had a lot of faith in how I will/would do</td>
<td>M</td>
<td>35</td>
<td>4.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>71</td>
<td>4.25</td>
</tr>
</tbody>
</table>
22. I have/had someone who encourages/encouraged me to do well in college
   - All: 4.48
   - F: 4.67
   - M: 4.08

23. I keep/kept going when things are/were tough in classes
   - All: 4.48
   - F: 4.59
   - M: 4.25

24. I feel/felt difficult courses make/made me a stronger person
   - All: 4.03
   - F: 4.11
   - M: 3.88

25. I like the student/person I have become
   - All: 4.30
   - F: 4.46
   - M: 3.97

26. My family encourages/encouraged me to continue my college education
   - All: 4.42
   - F: 4.60
   - M: 4.05

27. My close friends encourage/encouraged me to continue my education
   - All: 4.48
   - F: 4.61
   - M: 4.20

In summarizing the findings in Table 4-2, the researcher found that TRIO students are generally a determined lot. The group scored very high in items related to their goals to graduate and to go on to college (4.15). The respondents also scored very high in having people who believed in them (4.38). A huge number said they kept going when things got tough (4.45). Also, they scored very high on having self-esteem (4.11) and about being optimistic (4.35). Most of these findings were consistent with the research and literature on resilient, for low-income/first-generation TRIO students. For each aspect of protective
factors (indicators that have a positive effect on a risk situation) discussed in the literature review, results of the CRQ show all four categories (institutional, individual, familial and socio-environmental) as being very important (See Figure 4-1).

Figure 4-1. CRQ Mean Scores for Key Protective Factors

Having protective factors in multiple domains (e.g., within the college system, in peers, with family, and within the community) is particularly important in buffering students from the effects of negative risks. The findings show that what seems to matter most for low-income/first-generation students is that college fosters an atmosphere in which students feel treated well, close to others and as part of the system (Blum & Rinehart, 1997). Table 4-2 shows that it was not always easy to make friends in class (3.75) nor were they able to connect with other students in class (3.96). This is supported by
research that says that low-income/first-generation students tend to have lower levels of social integration in college (Hsiao, 1992; Nunez & Cucca-Alamin, 1998).

**Academic Engagement Scores**

Academic engagement refers to students’ involvement with educational activities like homework, meeting with professors, going to the library, and attendance in class. An engaged student is one who devotes considerable time in studying, spends much time on campus, interacts frequently with faculty etc. Academic engagement was assessed using 19 questions and it was determined by reported behaviors that included the above examples. The highest rated question for participants’ academic engagement related to personal goals “I actively pursue my educational goals” (4.53). The lowest rated question for participants’ academic engagement related to class performance “I learn/learned from tests” (3.66). Table 4-3 below shows the percentages of responses to the academic engagement questions.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>AE Items</th>
<th>Gender</th>
<th>Total no.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>I never give/gave up at college</td>
<td>F</td>
<td>71</td>
<td>2 (1.8%)</td>
<td>4 (3.7%)</td>
<td>5 (5.6%)</td>
<td>16 (15%)</td>
<td>44 (41.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>35</td>
<td>3 (2.8%)</td>
<td>2 (1.8%)</td>
<td>3 (2.8%)</td>
<td>5 (5.6%)</td>
<td>22 (20.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>5 (5.6%)</td>
<td>6 (5.6%)</td>
<td>8 (7.5%)</td>
<td>21 (19.8%)</td>
<td>66 (60.3%)</td>
</tr>
<tr>
<td>(2)</td>
<td>I actively pursue/pursued my educational goals</td>
<td>F</td>
<td>71</td>
<td>0%</td>
<td>0%</td>
<td>4 (3.7%)</td>
<td>17 (16%)</td>
<td>50 (47.1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>35</td>
<td>0%</td>
<td>3 (2.8%)</td>
<td>2 (1.8%)</td>
<td>11 (10.3%)</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>goals</td>
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<td>0%</td>
<td>3 (2.8%)</td>
<td>6 (5.6%)</td>
<td>28 (26.4%)</td>
<td>69 (65%)</td>
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<tr>
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</tr>
<tr>
<td>4</td>
<td>I am/was a self-starter on my assignments</td>
<td>F</td>
<td>71</td>
<td>0%</td>
<td>1 (0.9%)</td>
<td>9 (8.4%)</td>
<td>29 (27.3%)</td>
<td>32 (30.1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>35</td>
<td>0%</td>
<td>6 (5.6%)</td>
<td>3 (2.8%)</td>
<td>18 (16.9%)</td>
<td>8 (7.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>0%</td>
<td>7 (6.6%)</td>
<td>12 (11.3%)</td>
<td>47 (45.2%)</td>
<td>40 (36.7%)</td>
</tr>
<tr>
<td>5</td>
<td>College excites/excited me</td>
<td>F</td>
<td>71</td>
<td>0%</td>
<td>1 (0.9%)</td>
<td>9 (8.4%)</td>
<td>36 (33.9%)</td>
<td>25 (23.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>35</td>
<td>1 (0.9%)</td>
<td>6 (5.6%)</td>
<td>1 (0.9%)</td>
<td>15 (14.1%)</td>
<td>12 (11.3%)</td>
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<td>All</td>
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<td>1 (0.9%)</td>
<td>7 (6.6%)</td>
<td>10 (9.4%)</td>
<td>51 (48.1%)</td>
<td>37 (34.9%)</td>
</tr>
<tr>
<td>6</td>
<td>I am/was very optimistic about my education</td>
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<td>0%</td>
<td>0%</td>
<td>7 (6.6%)</td>
<td>22 (20.7%)</td>
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<tr>
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<td>0%</td>
<td>4 (3.7%)</td>
<td>3 (2.8%)</td>
<td>11 (10.3%)</td>
<td>17 (16%)</td>
</tr>
<tr>
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<td>All</td>
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<td>0%</td>
<td>4 (3.7%)</td>
<td>10 (9.4%)</td>
<td>33 (32%)</td>
<td>59 (54.7%)</td>
</tr>
<tr>
<td>7</td>
<td>I have/had high self-esteem about college</td>
<td>F</td>
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<td>0%</td>
<td>2 (1.8%)</td>
<td>11 (10.3%)</td>
<td>34 (32%)</td>
<td>25 (23.5%)</td>
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<tr>
<td></td>
<td></td>
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<td>35</td>
<td>1 (0.9%)</td>
<td>3 (2.8%)</td>
<td>3 (2.8%)</td>
<td>11 (10.3%)</td>
<td>17 (16%)</td>
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<td>0.9%</td>
<td>5 (4.7%)</td>
<td>14 (14.1%)</td>
<td>45 (41.5%)</td>
<td>42 (38.6%)</td>
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<tr>
<td>8</td>
<td>I learn/learned from tests</td>
<td>F</td>
<td>71</td>
<td>0%</td>
<td>8 (7.5%)</td>
<td>21 (19.8%)</td>
<td>26 (24.5%)</td>
<td>16 (15%)</td>
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<td></td>
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<td>35</td>
<td>0%</td>
<td>5 (5.6%)</td>
<td>10 (9.4%)</td>
<td>13 (12.2%)</td>
<td>7 (6.6%)</td>
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<tr>
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<td></td>
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<td>0%</td>
<td>13 (12.2%)</td>
<td>31 (30.1%)</td>
<td>39 (36.7%)</td>
<td>23 (20.7%)</td>
</tr>
<tr>
<td>9</td>
<td>I expect/expected to do well in college</td>
<td>F</td>
<td>71</td>
<td>0%</td>
<td>1 (0.9%)</td>
<td>5 (5.6%)</td>
<td>27 (25.4%)</td>
<td>38 (35.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>35</td>
<td>0%</td>
<td>3 (2.8%)</td>
<td>4 (3.7%)</td>
<td>16 (15%)</td>
<td>12 (11.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>106</td>
<td>0%</td>
<td>4 (3.7%)</td>
<td>9 (8.4%)</td>
<td>43 (41.5%)</td>
<td>50 (46.2%)</td>
</tr>
<tr>
<td>11</td>
<td>I make/made</td>
<td>F</td>
<td>71</td>
<td>0%</td>
<td>3 (2.8%)</td>
<td>6 (5.6%)</td>
<td>36 (33.9%)</td>
<td>27</td>
</tr>
<tr>
<td>the best of each educational experience</td>
<td>M</td>
<td>35</td>
<td>1 (0.9%)</td>
<td>6 (5.6%)</td>
<td>5 (5.6%)</td>
<td>11 (10.3%)</td>
<td>12 (11.3%)</td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>106</td>
<td>1 (0.9%)</td>
<td>9 (8.4%)</td>
<td>11 (10.3%)</td>
<td>47 (45.2%)</td>
<td>39 (34.9%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| (12) | I know/knew how to get homework done | F | 71 | 0% | 1 (0.9%) | 3 (2.8%) | 16 (15%) | 12 (11.3%) |
| M | 35 | 1 (0.9%) | 3 (2.8%) | 3 (2.8%) | 11 (10.3%) | 12 (11.3%) |
| All | 106 | 1 (0.9%) | 4 (2.8%) | 6 (5.6%) | 46 (44.3%) | 49 (45.2%) |

| (15) | I am/was a good problem solver on academic things | F | 71 | 0% | 3 (2.8%) | 15 (14.1%) | 28 (26.4%) | 25 (23.5%) |
| M | 35 | 0% | 3 (2.8%) | 5 (5.6%) | 19 (17.9%) | 8 (7.5%) |
| All | 106 | 0% | 6 (5.6%) | 20 (19.8%) | 57 (44.3%) | 33 (30.1%) |

| (16) | I make/made good things happen in my education | F | 71 | 0% | 0% | 7 (6.6%) | 35 (33%) | 29 (27.3%) |
| M | 35 | 0% | 3 (2.8%) | 4 (3.7%) | 18 (16.9%) | 10 (9.4%) |
| All | 106 | 0% | 3 (2.8%) | 11 (10.3%) | 53 (50.9%) | 39 (35.8%) |

| (17) | Nothing blocks/ blocked my educational path for long | F | 71 | 1 (0.9%) | 4 (3.7%) | 11 (10.3%) | 29 (27.3%) | 26 (24.5%) |
| M | 35 | 0% | 4 (3.7%) | 8 (7.5%) | 12 (11.3%) | 11 (10.3%) |
| All | 106 | 1 (0.9%) | 8 (7.5%) | 19 (17.9%) | 41 (37.7%) | 37 (35.8%) |

| (18) | I like/liked to take charge of my education | F | 71 | 0% | 0% | 4 (3.7%) | 25 (23.5%) | 42 (39.6%) |
| M | 35 | 0% | 3 (2.8%) | 2 (1.8%) | 20 (18.8%) | 10 (9.4%) |
| All | 106 | 0% | 3 (2.8%) | 6 (5.6%) | 33 (9%) | 52 (57.5%) |

| (20) | I adapt/adapted easily to new courses | F | 71 | 0% | 2 (1.8%) | 11 (10.3%) | 41 (38.6%) | 17 (16%) |
| M | 35 | 0% | 3 (2.8%) | 9 (8.4%) | 10 (9.4%) | 13 (12.2%) |
| All | 106 | 0% | 5 (4.7%) | 20 | 51 (48%) | 30 |
Responses as depicted in Table 4-3 above show that students were academically determined. This conclusion is based on the number of students that give themselves a rating of 4 and above in all the academic engagement questions. To summarize, the literature review showed us that student involvement in academic activities positively contributes to the development of academic engagement outcomes. This is consistent with the long-standing conclusion that student engagement in educationally purposeful
activities can positively affect student college outcomes (Astin, 1993; Kuh, 2003; Pascarella & Terenzini, 1991, 2005). The literature has consistently confirmed the importance of academic engagement in eventual outcomes that students gain from their college education (Astin, 1993; Kuh, 2003; Pascarella & Terenzini, 1991, 2005). At the same time, students’ levels of social engagement are understood to be equally important.

**Social Engagement Scores**

Social Engagement was assessed by eight items asking students to rate how they were involved in various social activities on campus. Social engagement in college measured the presence of protective factors in the students’ lives. It was determined by behaviors that included interactions with supportive family, peers, teachers and other cheer leaders. The highest rated question for participants’ social engagement related to other people- “My close friends encourage/encouraged me to continue my education” (4.48). The lowest rated question for participants’ social engagement related to personal effort- “I make/made friends in classes” (3.77).

Table 4-4. CRQ Responses by Percentage

<table>
<thead>
<tr>
<th>Social Engagement Items</th>
<th>Gender</th>
<th>N</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have/always had good friends to talk to at college</td>
<td>F</td>
<td>71</td>
<td>0%</td>
<td>2</td>
<td>9</td>
<td>23</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>35</td>
<td></td>
<td>2</td>
<td>2</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>10</td>
<td>2</td>
<td>4</td>
<td>13</td>
<td>38</td>
<td>49</td>
</tr>
<tr>
<td>I make/made friends in classes easily</td>
<td>F</td>
<td>71</td>
<td>0%</td>
<td>4</td>
<td>20</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>35</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Question</td>
<td>Gender</td>
<td>All</td>
<td>F</td>
<td>M</td>
<td>F (0%)</td>
<td>M (0%)</td>
<td>All (0%)</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
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<td>----</td>
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<td>---------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>13 I am/was able to connect with others in my classes</td>
<td></td>
<td>10</td>
<td>71</td>
<td>35</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>4 (3.7%)</td>
<td>2 (1.8%)</td>
<td>6 (1.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.8%)</td>
<td>24</td>
<td>30</td>
<td>(12.2%)</td>
<td>15 (14.1%)</td>
<td>26 (22.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>44 (41.5%)</td>
<td>44 (41.5%)</td>
<td>44 (41.5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 I get/got along well with others at college</td>
<td></td>
<td>10</td>
<td>71</td>
<td>35</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>2 (1.8%)</td>
<td>1 (0.9%)</td>
<td>1 (0.9%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.9%)</td>
<td>12</td>
<td>6</td>
<td>(5.6%)</td>
<td>6 (5.6%)</td>
<td>12 (12.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 (42.5%)</td>
<td>45 (42.5%)</td>
<td>45 (42.5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 There are people in college who really believe/believed in me</td>
<td></td>
<td>10</td>
<td>71</td>
<td>35</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>2 (1.8%)</td>
<td>1 (0.9%)</td>
<td>1 (0.9%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.9%)</td>
<td>12</td>
<td>6</td>
<td>(11.3%)</td>
<td>12 (11.3%)</td>
<td>24 (22.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>65 (61.3%)</td>
<td>65 (61.3%)</td>
<td>65 (61.3%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 I have/had someone who encourages/en encouraged me to do well in college</td>
<td></td>
<td>10</td>
<td>71</td>
<td>35</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>10</td>
<td>2</td>
<td>3 (2.8%)</td>
<td>3 (2.8%)</td>
<td>3 (2.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.8%)</td>
<td>13</td>
<td>9</td>
<td>(8.4%)</td>
<td>9 (8.4%)</td>
<td>9 (8.4%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>51 (48%)</td>
<td>51 (48%)</td>
<td>51 (48%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 My family encourages/en encouraged me to continue my college education</td>
<td></td>
<td>10</td>
<td>71</td>
<td>35</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>1 (0.9%)</td>
<td>4 (3.7%)</td>
<td>5 (4.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.8%)</td>
<td>16</td>
<td>8</td>
<td>(7.5%)</td>
<td>8 (7.5%)</td>
<td>8 (7.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>44 (41.5%)</td>
<td>44 (41.5%)</td>
<td>44 (41.5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27 My close friends encourage/encouraged me to continue my education</td>
<td></td>
<td>10</td>
<td>71</td>
<td>35</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>1 (0.9%)</td>
<td>1 (0.9%)</td>
<td>1 (0.9%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.9%)</td>
<td>13</td>
<td>6</td>
<td>(12.2%)</td>
<td>13 (12.2%)</td>
<td>22 (20.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>69 (65%)</td>
<td>69 (65%)</td>
<td>69 (65%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1= always false, 2= usually false, 3= neutral, 4 = usually true and 5= always true
Quantitative Findings

Research Question 1

Do low-income/first-generation female students have greater academic resilience levels compared to males?

In the present study, CRQ mean scores for each group were compared to see whether there were any demographic influences on Academic Resilience, Academic Engagement, and Social Engagement. To answer the research question, T-tests were performed on gender, which had two levels or sub-groups (males and females). T-tests usually test the significance of difference between the means of two groups.

Table 4-5. CRQ Mean Scores and T-test Results for the Gender Demographic

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>t-score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Resilience</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>35</td>
<td>4.02</td>
<td>0.78</td>
<td>2.22*</td>
</tr>
<tr>
<td>Female</td>
<td>71</td>
<td>4.28</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td><strong>Academic Engagement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>35</td>
<td>4.03</td>
<td>0.73</td>
<td>1.93</td>
</tr>
<tr>
<td>Female</td>
<td>71</td>
<td>4.25</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td><strong>Social Engagement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>35</td>
<td>4</td>
<td>0.9</td>
<td>2.63*</td>
</tr>
<tr>
<td>Female</td>
<td>71</td>
<td>4.32</td>
<td>0.39</td>
<td></td>
</tr>
</tbody>
</table>

- *P < .05.

There was a significant effect for gender, with women receiving higher scores than men. Results (see Table 4-5) show that females ($M = 4.28$, $SD = .38$) scored significantly higher when compared to males ($M = 4.02$, $SD = .78$) on the CRQ Academic Resilience score. $t (106) = 2.21$, $p = .029$. A significant difference in CRQ Academic Engagement
was noted between females (M= 4.25, SD = .43) and males (M= 4.03, SD= .73). There was also a significant difference in CRQ Social Engagement scores between females (M = 4.32, SD = .39) and males (M = 4.00, SD = .90); t (106) = 2.54, p = .010. T-test results therefore show that females have greater academic resilience than males. This result adds weight to the descriptive statistics as seen earlier, which found females to have scored better than the males in the academic resilience scores. Table 4-5 above shows that gender has a positive influence on academic resilience in that females are depicted as being both academically and socially engaged than males.

**Qualitative Findings**

The purpose of this mixed method study was to examine the relationship between academic resilience and the experiences of students served by TRIO intervention program. The results of this study were compared with experiences of students from South African resilience studies. In addition to quantitative findings, qualitative data analysis was used to determine ways in which involvement in interventions relating to TRIO programs has contributed to the academic resilience of TRIO students while in college. Interview data serve to expand the breadth of the study and offer details about schooling experiences of TRIO students in high school and college. Interview data was used to seek from participants specific details about their backgrounds, motivations, challenges, and setbacks they may have gone through in their academic journeys. Six participants were selected to be interviewed. These six students were selected from those students who checked at the end of the CRQ survey that they would be willing to be interviewed for the study. Initially, 20 students were selected according to their CRQ scores. However, most of them were eliminated for various reasons ranging from
similarities in characteristics to how they scored in the CRQ to get the six that were eventually interviewed. The researcher contacted them by phone and email and explained about the interview protocol including the importance of the signed consent form. After this contact, arrangements were made to mail the consent form to the interviewee for signing upon which they would mail it back to the researcher. The focus of the interview was to gather data in response to the interview questions listed in the appendix (see appendix D).

**Interview Format**

Interviewees were contacted by email and phone and asked to get in touch with the researcher with a suitable date and time for the interview. Following this, over the phone interviews were conducted with each interview being audio taped for accuracy purposes. Before the interview was conducted, participants were reminded about the interview consent information and also informed that the audiotapes would only be used for transcription and would be kept under lock and key (in the researchers home) for a period of three years upon which they would be destroyed. Each interview lasted for about 30 minutes. Interviews were transcribed using Dragon Naturally Speaking software. They were then studied for common themes. Participants were given fictitious names in an effort to protect their confidentiality. Of the six participants who were interviewed, four were male and two were female (See Table. 4-6).
Profiles of Interview Participants

In order to acquaint the reader with the participants in this study, I begin this section with a narrative introduction of selected participants. These introductory vignettes provide insight into the experiences of the students before and after their admission into college. I am using the “nested contexts”, a metaphor used to describe the exploration of the meaning of the participants’ experiences in social and cultural environments (Lubeck, 1988). This kind of introduction allows the reader to see and understand the perspectives of the participants. This introduction is set within four contexts that characterized their experiences:

1. TRIO program student
2. Gender
3. Low-income/First-generation backgrounds
4. Social class (minority vs. majority)

By using these contexts, I hope to convey the individuality of each student, as well as the connections between them that I believe influenced their experiences in college. Table 4-6 lists the six interviewees and their pseudonym, race, gender and Academic resilience scores as per the CRQ.

Table 4-6. Interviewee Characteristics and Resilience Scores

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Gender</th>
<th>Race</th>
<th>TRIO Eligibility</th>
<th>TRIO Affiliation</th>
<th>AR score/5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jonah</td>
<td>Male</td>
<td>Hispanic</td>
<td>Low-income/first-generation</td>
<td>UB SSSP</td>
<td>4.25</td>
</tr>
<tr>
<td>Gala</td>
<td>Male</td>
<td>Hispanic</td>
<td>Low-income/first-generation</td>
<td>UB SSSP</td>
<td>1.59</td>
</tr>
<tr>
<td>Fuji</td>
<td>Male</td>
<td>White</td>
<td>Low-income/first-generation</td>
<td>UBMS</td>
<td>2.59</td>
</tr>
<tr>
<td>Granny Smith</td>
<td>Male</td>
<td>White</td>
<td>Low-income/first-generation</td>
<td>UB SSSP</td>
<td>4.25</td>
</tr>
</tbody>
</table>
Participant one- Jonah

Jonah is Hispanic and currently attends a community college with a hope of going to a four-year college. He is pursuing a major with hopes of becoming a Federal Bureau of Investigation (FBI) agent. He joined the Upward Bound Program in 8th grade and was enrolled in the program for five years. His decision to go to college was made when he enrolled at the Upward Bound Program. The Upward Bound staff there boosted his desire to go to college by talking and encouraging him. In high school, he describes himself as a very good student who was in honor roll and focused in his schoolwork. Jonah sings praises for what Upward Bound Program has done for him saying that the program was like a second family to him and he is so grateful. For social engagement, he credits the program for teaching him how to get along well with others. The UB staff has been encouraging him to keep working hard in college and not quit, they are there for him to consult all the time. He says that his character has remained the same in college as it was in high school but he has become more dedicated. Jonah uses the following words to describe the Upward Bound Program staff “They really played a really big role, they supported me in everything they said, and they had the answer for everything I asked them. I would not be in college, if it were not for them. They played a very big role, I cannot thank them enough. I would be in the program forever but you have to move on. You know what I am saying.”
Participant two- Gala

Gala is a low-income/ first-generation Hispanic male student at Bloomsburg University. Gala’s involvement in Bloomsburg University Upward Bound Program while in high school made his transition to college easier. Because of his own hard work and perseverance (which he credits learning from UB personnel and experiences), along with various academic and social support and engagement activities, college success is now driven by plans for attending graduate school and studying marine biology. Gala is involved in the Students United for Success club, where members discuss problems they face and try to help each other out. Comparing the person, he was before he joined the program and now, Gala sees some change, in that he has become more mature and he has had in Upward Bound people encouraging him. He does not seem to doubt his abilities but rather knows that he has become more mature and “tougher” with time through his involvement with the program.

Participant three-Fuji

Fuji is a White male who joined the University of Arkansas Upward Bound Math and Science through the advice of his teacher. After high school, he enrolled in the University of Arkansas. In college, he kept the company of a small group of friends. He was not in any particular program except work-study. Though as a high school student he thought he would definitely finish college, due to financial difficulties and a personal encounter, he had with another student, he dropped out of college. He is meanwhile taking some courses in a community college as he prepares to return to college. While enrolled in the University of Arkansas, he did work study in the library to get some
needed cash. To improve on his academics he says that he went to see his professors but did not participate in any tutoring.

**Participant four- Granny Smith**

Granny Smith was enrolled in the New Hampshire University Upward Bound Program for four years during which time his dream of joining college became a reality. He came from a poor White background where none of his parents had gone to college. As a student in the program, he was exposed to social diversity, learned social skills and study skills, which became beneficial to him later not only as a college student but also as a working adult. While in the program, he gained self-esteem, self-confidence and became hopeful about college. As a college student, he was a highly motivated B average student with a goal of getting a better job upon graduation. Not only did he continue receiving support and encouragement from his parents, the Upward Bound program staff, his High school teachers and the summer session teachers offered tremendous support too. He was a well-balanced student involved in various academic and social activities. Upon graduation from college, he enrolled in graduate school where the skills he had acquired in Upward Bound Program and in college made him confident that he could handle graduate studies. As a working adult, he has remained a strong advocate of the program and believes in its work. Given how he was able to overcome the academic challenges in his way, Granny Smith was academically resilient.

**Participant five- Fortune**

Fortune is an African American female 2nd year student at the University of Pittsburgh, whose major is accounting. Fortune joined the University of Pittsburgh`s
Upward Bound Program at the advice of her mother and aunt after hearing about it from her friends in high school. The program introduced her to college life and taught her various academic and social skills and strategies for success. Going to college fulfilled her goal as she overcame serious challenges that she had growing up living in a poor tough neighborhood, in a single parent household. She is the first in her family to go to college. Fortune has remained the same sort of university student as she was in high school: responsible, determined, and goal-oriented. Despite a difficult transition from her small high school to a large university (University of Pittsburgh), and challenges she identifies being a minority student, she remains socially and academically engaged. Her persistence, patience, and determination to succeed, coupled with her willingness to seek various sorts of academic support (including TRIO’s Student Support Services Program) and the continued encouragement she receives from her mother and aunt at home combine to suggest that she is indeed academically resilient.

Participant six- McIntosh

McIntosh is an African American female who had made up her mind about going to college before she knew about the Upward Bound Program. She is currently enrolled in Shaw University. She credits her Upward Bound Program for giving her the opportunity to have a “real college experience” and for jump starting her for college with college credits through the Bridge program. McIntosh also benefited from the counselors talking to her about the future and encouraging her to work hard. She talks about having goals that she was working hard to accomplish. Through Upward Bound Program, she says she has become a better person. McIntosh is in contact with people she met in the
program who still encourage her. She does seem to have understood the value of education through the Upward Bound Program and all the people she met there.

**Common Themes**

It is important that a researcher have a clear understanding of the procedures for the conduction of a qualitative study in order to ensure that he or she can analyze the data in a method that will clearly bring out the voices and lived experiences of the participants (Cresswell, 2003; Moustakas, 1994). In order to obtain authentic interpretations of TRIO program and its participants, this section includes the participants’ individual words that express their thoughts about the program. Each participant shared common characteristics and yet brought their own unique perspective to the interviews. In addition, students discussed their sense of the obligation to succeed as being a big factor in their lives. All six interviews were transcribed and studied in efforts to identify any common themes. In order to do that, each transcription was read numerous times so as not to miss anything of importance in the responses. I listened to the recorded interview several times and tracked the typed transcript to make certain of its accuracy. In the process of transcribing the data, I identified significant proclamations or phrases of the interviewees that spoke to and captured the meaning of the academic resilience phenomenon. Following the identification of the significant assertions and phrases present in the data, I began to reduce the interview transcription data into categories and themes (Moustakas, 1994). As the interviews were reviewed several times, common themes began to emerge for all the participants. After I reduced and grouped the data into categories and themes, I then scrutinized the context in which the participants talked
about it. Their meaningful experiences are organized into themes. After I reduced and grouped the data into categories and themes, I then scrutinized the context in which the participants talked about it.

I then proceeded to reduce the data into six categories: personal, family, academic, economic, environmental, and institutional factors as a mechanism by which to organize and analyze the data (see Table 4-7). The emerging themes ranged from participants being hopeful of themselves and working hard despite the odds, to the feeling of isolation in the college setting; the students also reported the influence of poverty in their lives. This approach helped me bring forth the seven final, dominant and overarching themes of academic resilience across the participants. The emerging themes are as follows: 1) College decision and transition 2) College academic preparation and social adjustment 3) Having strong support network 4) General challenges for low-income/first-generation students 5) Sense of obligation to succeed/motivation to graduate 6) Role of advising and other resources and 7) Self-determination and working hard despite the odds. The analysis of the experiences of the participants spoke to the heart or essence of the phenomenon of academic resilience and most importantly, accurately reflected in the literature review (Miles & Huberman, 1994).
<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
<th>Descriptors</th>
<th>Frequency of reference</th>
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<tr>
<td>College decision and Transition</td>
<td>Individual</td>
<td>Thinking about college; Upward Bound program made it easier for me to make a decision; Making my mind about going to college; skills that came with me from HS; it’s always been a goal of mine to go to college; I was going to college; preparation for college; UB introduced me to college life; Bridge program, college courses</td>
<td>All participants</td>
</tr>
<tr>
<td>Self-determination and working hard despite the odds,</td>
<td>Individual</td>
<td>Being determined to succeed; staying focused on goals; encouragement from family and others; expectation from others; working hard and on top of things I cannot procrastinate anymore; I am more dedicated, I want to succeed; confident and hopeful</td>
<td>All participants</td>
</tr>
<tr>
<td>Having strong support network</td>
<td>Family, environmental, and institutional</td>
<td>Caring relationships with others Interest in student’s life Knowing students individually; staying connected with TRIO family</td>
<td>Five participants</td>
</tr>
<tr>
<td>Challenges for low-income/first-generation students</td>
<td>Individual, family, academic, economic, environmental, and institutional</td>
<td>Lack of finances; social challenges; racial discrimination; college climate; lack of resources; worrying about finishing; full time as well as part time employment; feeling of isolation in the college setting</td>
<td>All participants</td>
</tr>
<tr>
<td>Sense of the obligation to succeed/motivation to graduate</td>
<td>Individual</td>
<td>Family expectation; Hope for a better life; focus on a career path; staying positive</td>
<td>All participants</td>
</tr>
<tr>
<td>Role of Advising and other resources</td>
<td>Institutional Resources</td>
<td>TRIO Counselor-Student Meetings; College Counselors</td>
<td>Five Participants</td>
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<tr>
<td>Individual, family, academic, economic, environmental, and institutional</td>
<td>Upward Bound summer program; Bridge program; orientation sessions; leaving in a college dorm</td>
<td></td>
<td>All Participants</td>
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| College Academic Preparation and Social Adjustment | Individual, family, academic, economic, environmental, and institutional | | |
Theme 1: College Decision and Transition

College Decision

Fortunately, TRIO students are given an early start to college life while still enrolled in high school. Therefore, many of the attitudes and educational experiences associated with four-year college attendance are familiar to the students. Exposing all the students to the summer program and Bridge program (for graduating seniors) where all students are on campus for 6-7 weeks every summer is a great educational practice. Most of the students interviewed had made personal decision to go to college as members of TRIO programs. Following are comments from the interviewees.

Jonah commented;

“When I went to Upward Bound Program is when I started thinking about college, everything I wanted to be I started thinking about since then”

Gala said:

“In ninth grade, that's when I started thinking about college and upward bound program reinforced that in me. Being in the Upward Bound program made it easier for me to make a decision.”

Fuji commented:

“When it came to making my mind about college, it was easy for me because of what they (Upward Bound Program staff) kept saying. That college was the way to a good life.”

Fortune said:

“It’s always been a goal of mine to go to college. It was also a goal of my family so it started when I was very young, throughout High school I always knew I was
going to college though I did not know which one. I always knew that I was going to college, being in UB made me realize that dream.”

McIntosh commented:

“I was excited about going to college I knew that I would finish and get a good job. So I was very excited about going to college and accomplishing my goals. I think Upward Bound Program prepared me for what to expect and helped me to get a couple of college credits that I started with”

From these comments, two results stand out. First, the role of TRIO programs is clearly pivotal. Students who saw a TRIO counselor several times in a year to discuss their plans were more likely to attend college, as students were more likely to follow their counselors’ recommendation. Secondly, students who received information about college were more likely than average to attend a four year college. Generally, being members of a TRIO program helped the students in making the crucial decision of attending college.

*College Transition*

For all the students interviewed, the summer program experience served as an effective orientation to the university and the services available there. They benefited from the experience in their transition to the four-year institution as new students. Students who lived in the residence halls during the summer program noted the live-in resident advisor and the connection to other students and TRIO staff members as means through which they were able to obtain information they needed to orient to campus life. The following are comments made by the students about their college transition.

Gala said:

“Upward Bound Program made my transition to college so much easier, without it
could have been so difficult.”

In talking about her experience, McIntosh commented:

“It (Upward Bound Program) taught me to be a little bit more independent; I had to learn how to communicate what I needed. And learn how to take care of myself a little bit more. I found that to be easy because of the experiences I had in Upward Bound. They gave us the chance to mix with students from all walks of life during the summer program and that was helpful when I went to college.”

Fortune said:

“The Upward Bound Program staff prepared me for how it would be when I join college full time. We were given an early start for college experience, I believe the opportunity to experience college while in High school helped I to settle down once I got there. I knew exactly what to do in the library for example, I knew about study groups and it was easy to mingle and make friends. It prepared me for college by helping me with time management. It taught me to be responsible and to have better study habits, different things. It also helped me with study skills, helped me with social skills. During the summer we were introduced to college life, getting on class on time, reading and getting ready for the next day’s class, It gave me the inside scoop of what college life was really like. So finally, when I was there it was easier for me to settle down.”

Granny Smith commented:

“The summer program gave me the socialization skills, living in the dormitory, living away from home and a balance in the academics and social life. That helped me out significantly and like I said the study skills, were a great help. Like
I said I did not experience major difficulties in college because of the skills that came with me from High school.”

Although participants had varying opinions on the orientation experiences they received during the summer program, it is clear that making decision to go to college and the college orientation they were exposed to through TRIO programs, impacted the students’ perceptions and attitudes toward their university in a positive way. Generally, the TRIO summer experiences affected the low-income, first-generation college experience and their college persistence rates positively.

**Theme 2: Having Strong Support Network**

As I conducted the interviews there was frequent reference to the support of family, friends, teachers, TRIO staff and peers when talking about the positive influence of other people that helped cheer and motivate them. People that cared about them, wished, and motivated them to go to and graduate college, surrounded interviewees. Garmezy (1993) refers to students’ positive social networks (protective factors) as providing a complex and multi-dimensional support system, which strengthened their academic resilience.

Social support is a key element in the success of students (Metzner & Bean, 1987). It can increase goal commitment and student success (Cleveland-Innes, 1994; Metzner & Bean, 1987; Pierce, Sarason, & Sarason, 1991) and their ability to perform at high academic levels despite multiple stressors and limited resources (Carlan, 2001). Having a strong support network is said to foster and enhance student self-efficacy. Students that experience a higher degree of self-efficacy set higher goals, persist longer at
difficult tasks, and achieve greater academic success than do those with lower levels of self-efficacy (Bandura, 1993; Zimmerman, Bandura, & Martinez-Pons, 1992).

Furthermore, high levels of self-efficacy mitigate negative influences of failures (Bandura, 1993), which may be especially important for low-income/first-generation students, who sometimes feel that they do not fit in the college environment (Richardson & King, 1998). On campus, support from other students is more likely to be involved with academically or socially related tasks, such as studying together, participating in group projects, or contact with others in the academic activities (Pascarella & Terenzini, 1991). On being asked what roles, if any, others played in helping the interviewees stay academically and socially engaged in college, Jonah reflected on the role of the Upward Bound Program staff, his parents and one security guard in his school who frequently talked to him about going to college,

“A bunch of people, a bunch of people like the security guard in my High school, he always talked to me about going to college, I don’t know whether it’s because he never went himself or what but he always told me to try my best to go. All the staff in UB, everybody who was there they really were on my back to do well. They were like, you need to call me if you need help with this, and they would be checking on me every day. That was worth it and I would say that the office was right everything they said would happen, was actually happening. They really played a big role, they supported me in everything they said, and they had the answer for everything I asked them. I would not be in college, if it were not for them. They played a very big role, I can’t thank them enough. UB staff gave me the passion, the desire to go to college—they motivated me by telling me that
I could do it, that I needed to keep up with the work. They were there, they stuck with me. My parents of course, my friends encouraged me, my teachers encouraged me, my parents, my family, a lot of people they really were concerned. If I do not understand, I ask my friends we are in the same class to help me with understanding what I did not get. I also give my work go them to look at. And sometimes I learn more by them explaining to me.”

Gala had this to say:

“Yes my friends most of whom were in UB with me are happy for me and encourage me. They were in Upward Bound and went through the same thing that I went through. Two of them we are living together now we study together”

Fuji specifically talked about the role his grandmother played in his college experience. His grandmother was the only person who had a college degree having acquired one as a mature adult. Fuji felt obligated to work hard and make his grandma proud.

“My grandma really encouraged me to get a college degree. That is why I feel obligated to finish. That is why I want to go back and finish. I have a great support base in my father and mother.”

Granny Smith talked of the contact he maintained with his High School teachers:

“Fortunately, I had tremendous support from High school teachers that maintained contact with me which gave me that boost so I did connect. Some of them were actually instructors during the summer time, we maintained connection and that is what probably took me through my first year in college the connection was great. It was an additional support. I went to the same university were I had attended UB and so I knew all the staff and they encouraged me. Also my family
especially my parents encouraged me all the time. In college faculty members that
eeh, it was a large university so it was hard to have those strong relationships with
faculty members but there were some that were receptive to a mentoring kind of a
relationship. Most were not. But I made effort to visit them in their offices.
Family especially my parents encouraged me all the time. I connected with the
upward bound program and the support network was there to guide me it was just
the modeling and the mentorship from that program that that boosted my self-
estee.

Fortune reflected on her mother and aunt who supported her:
"My mother and my aunt and I also have friends that motivate and encourage me
to keep working hard…Don’t be discouraged if it does not work out the first time,
keep working at it, use resources, get help from your professors, communicate."
The values friends and family instilled in the students positively affect their ability to
navigate through college. Participants deeply valued their relationships with family,
friends and those who came within their sphere of influence or community. Interviewees
described how TRIO staff and advisors influenced their success in college. The
connections these students formed with TRIO staff members outside the classroom
provided them with additional support through challenging times.

Theme 3: General Challenges for Low-income/First-Generation Students

The literature (Engle, 2007; Orfield, 2004; Orfield, Losen, Wald & Swanson,
2004) supports the challenges and numerous obstacles that low-income/first-generation
students must overcome to graduate from college. These students face obstacles that
range from financial struggles to lack of knowledge of the campus environment (Thayer,
All of the participants experienced obstacles that had an effect on their performance in college.

Financial Challenges

Being low-income/first-generation students, most interviewees cited financial challenges as being an obstacle while in college. Each of the participants in the study qualified as low-income/first-generation in a TRIO program. Participants discussed the important role finances played and the crucial sacrifices families made for them. To qualify as low-income in these programs the family income cannot exceed 150% of the poverty level. For this reason, financial issues posed a challenge to college persistence for each of the participants.

Jonah’s financial situation forced him to get a full time job while in college. He commented thus:

“I had a financial challenge that is why I am working alongside my studies. Since my family was not well off financially, I had to work to get money for upkeep.”

Explaining his reasons for temporarily leaving college, Fuji cites financial reasons apart from a close negative social encounter he had as the cause:

“I ran into financial inability to pay for my college. So now, I am kind of Stuck. “

Granny Smith worried about his chances of finishing college only to realize that there was a way out through scholarships. He stated:

“There was a lot of anxiety about having the finances finishing college, and then I just said it will be whenever it will be. Then when I went to college, I realized that there were no worries. There was a tremendous amount of financial support. It
Responding to the same question about challenges encountered at college, McIntosh commented:

“I had a lot of financial difficulties I had to struggle to pay a certain amount of money to the school or move out.”

Fortune said:

“I struggle financially because, I was raised in a single parent household and I was not assured we can afford it financially.”

**Other Challenges**

Fortune reported that she did not completely fit in with her classmates and with the rest of the student body at the university. These feelings were attributed to being a black student in a white majority college. She vented frustration at the lack of understanding from university professors. Fortune put it this way:

“When you go to talk to the professors, they already know your name, I find it challenging in another way, because our backgrounds is not as great as the majorities background especially in education, so we struggle with some things.”

Fuji and Jonah reported that they had an unpleasant social encounter while in college. Fuji’s social encounter had contributed to his dropping out of college while that of Jonah had provided a teachable moment. Jonah reported:

“I had some social issues, I almost got into a fight but I let that one go, I was like, am I going to put my educational career on the line for this stupid encounter. It was not worth it, my time and I said, whatever, I brushed it off. I just told him we
were not going to be friends any more. I started cutting off more people and started getting more time to focus.”

Fuji said:

“I had a personal encounter with someone which led to my dropping out and add to that the financial problems I had, everything kind off happened at once.”

The college experiences of low-income, first-generation students are characterized by challenges, including, but are not limited to, transitioning into college and related academic difficulties, financial concerns and work commitments. Each of these challenges affects student involvement on campus. As a result of these challenges, low-income, first-generation students do not have the luxury of being as invested in campus life and completely focused on academics as other student populations.

**Theme 4: Sense of Obligation to Succeed/Motivation to Graduate**

Interviewees reported self-responsibility for persisting through college and being able to overcome any challenges they met along the way. Interviewees shared strong personal drives and motivation to attain a college degree despite many challenges. Participants attributed this drive to poverty, family expectations, and career choices made en route to their degrees. Students frequently said in their own words that success comes from perseverance, motivation, self-discipline and determination. These individual protective factors played a big role in their academic pursuits. A belief in one self, family, and religion helped the students in overcoming their challenges. Consequently, they developed self-confidence and the resilience needed to persist. Career aspirations motivated some participants. Jonah noted:
“I wanted to be in criminal justice and I wanted to be a detective and so as a cop, he told me about college and what to take, because I told him. I hope I can make him happy one day that I finished college.”

Granny Smith explained:

“I was a highly motivated college student, I knew that, the alternative was to work in a factory and that was not something I was aspiring to be. So I worked pretty hard in college, I got good grades.”

McIntosh commented:

“I was excited about going to college I knew that I would finish and get a good job. So I was very excited about going to college and accomplishing my goals.”

For another participant, the family investment in his education was not only positively motivating, for him, the family expectation added a huge amount of pressure to succeed. Explaining the pressure he feels to succeed, Gala commented:

“Financially, I hope to get a great job and help my family.”

Fuji identified the financial and emotional support from his family as a huge motivating factor in his persistence. He did not want to let his family down after all that they had done for him. “I think my grandmother went to college when she was in her 30s and 40s and got an associate to work in an office. Rather than that, no one else and I think it’s because they did not have any role models. But they really encouraged me to get a college degree. That is what I feel obligated to go back and finish. My family too especially my grandma, challenged me all the time to keep working hard. That is why I want to go back and finish.”

Voicing a similar sentiment, Fortune spoke about life in her neighborhood and how she
did not want to become another statistic she stated,

“I was raised in a single parent household and I was not assured we can afford it financially. And also because in my neighborhood like in my surrounding, I never, sometimes I doubted whether college was for me because of what my friends were doing and stuff. The program helped me realize that if I joke with my life, I will be just another statistic and that made me realize that I must make a difference in my family and not let those that have encouraged me down especially my mother and aunt. So I work very hard to do well academically.”

Each of the participants in this study identified a strong motivating factor that kept them in college and persisting to degree attainment, even when difficulties arose.

For all of the participants, personal motivation is a key factor that made them resilient and kept them in college.

**Theme 5: Role of Advising and Academic Resources**

A consistent theme among each of the interviews was the role of advising while in college. This advising did not necessarily come from within the college. It came from family members, peers, TRIO personnel etc. Though having experience in TRIO advising, as low-income /first-generation students, some of these students came to college lacking knowledge about college classes, degree programs, services, and the real college experience in general. It is clear from their responses that for the study participants, the quality of their advising and orientation experiences received from the TRIO staff greatly impacted how they felt about their college experience and the university in general. The advising services received from TRIO staff were crucial
elements of their college survival in most cases. Orientation and advising are services that can greatly impact the college experience of low-income, first-generation college students.

**Advising**
For some students, advisors outside and in college provided clear and adequate academic guidance, helping students select their courses and majors and generally stay on track to graduate. In order to receive guidance and support, Jonah developed a strong personal relationship with his teachers.

“I talked a lot to my teachers, about how to do better in tests, and about questions that I may not want to answer in class.”

For Gala, the TRIO advisors continued to help him as a college student. He took advantage of their on campus presence. The TRIO office did not just support the participant’s academic goals, but his personal development as well. As he explained,

“Yes, I go to their offices, and they can help me they show me how to solve problems they know people on campus should I need help. “

His advisors not only supported him in scheduling and course selection, but also actively supported him in his decision making process, listening to his concerns, and connecting him to other advisors.

“Sometimes they contact them for me to provide information about scholarships etc. They can buy you a book you borrow and return it to the end of the semester. They can provide you another advisor.”

**Academic Resources**

Going to and graduating from college was the primary focus of the college experience for
each of the participants in this study. Interviewees found and utilized the academic resources found on campus. Fortune found both the Student Support Services program (SSSP) to provide useful resources, including the additional personal advising, mentors, smaller class sizes, and financial resources provided. Fortune noted,

“I talk to the counselor at the SSSP office and since I am a former TRIO student they help me.”

McIntosh benefited from the Upward Bound Program on campus where she became a Tutor Counselor as alumni of the TRIO family. She commented thus:

“I got involved in the TRIO program at my University as a Tutor and I benefited from the staff there because I would talk to them about any challenges in my academics and also socially. I also maintained contact with the Tutor Counselors that I had interacted with while at Upward Bound and they kept me motivated.”

Granny Smith who had found a job in a TRIO office while in college commented

“The program was still available to me, so whenever I was going through any psychological turmoil, I felt that I had enough resources in the staff.”

Although participants had varying opinions on advising and the other resources that they received, it is clear that advising and any other helpful resources impacted students’ perceptions and attitudes toward their university. The quality of student advising and any other relevant resources are areas that can greatly affect the low-income, first-generation college experience and their college persistence rates positively. Available academic resources were important factors that supported participant academic success. When participants were able to find any meaningful resources or knew that they were available
to them, they took advantage of the resource and found them to be effective support to their academic success.

**Theme 6: College Academic Preparation and Social Adjustment**

One of the major advantages of being a student in some TRIO programs is that they offer students opportunities to be on campus every summer and during the academic year. During this time, students can actually walk on campus and imagine their lives as college students. Once they get enrolled in college, the same students easily develop a sense of connection to the campus from their summer experiences. TRIO programs are mandated to prepare students with the necessary academic resources (tutoring, counseling, educational advisement, and technology) and assist them as they prepare for college. Therefore, college academic preparation and social adjustment was a recurrent theme across the interviews especially when examining the comments about the benefits of TRIO programs. Fortune a female, minority student stated the following about preparation:

“During the summer we were introduced to college life, getting on class on time, reading and getting ready for the next day’s class, It gave me the inside scoop of what college life was really like. So finally, when I was there it was easier for me to settle down. We were given an early start for college experience, I believe the opportunity to experience college while in High school helped me to settle down once I got there. I knew exactly what to do in the library for example, I knew about study groups and it was easy to mingle and make friends. It prepared me for college by helping me with time management. It taught me to be responsible and to have better study habits, different things. It also helped me with study skills,
helped me with social skills.”

Gala commented:

“In High School, they (TRIO staff) kept telling us to study in groups and to consult our teachers in case of questions and for extra help and to make use of the teacher office hours when we go to college. They also encouraged us to seek help from other students and to have some time to relax with friends.”

McIntosh said:

“I was involved (TRIO Upward Bound Program) for four years and from what I remember it was a good experience, we were given a real college experience. I benefited from the counselors talking to us about the future and the encouragement to work hard. Through the exposure, we knew what to expect when time came for us to go to college. Even the Bridge program (a summer transitional program for graduating seniors) itself gave us the opportunity to do a college course and gave us a feel of what to expect in a real college classroom. At upward bound, they always told us to not give up, to believe in ourselves and that is what I did. I was focused on the result and I kept going through the encouragement of family and friends. Our Tutor Counselors had advised us during the Bridge Program to get involved in college activities when we go to college and so when I went to college I did that I think it’s a good program and I would recommend everyone to go through it like I said it really prepares somebody for college at first I was really afraid but with time I had o changed to become a better person. Upward bound Program made me prepared for college I had everything it takes for a new college student because it had prepared me I had
a basic understanding of what it means to be in a college.”

Granny Smith a Caucasian male student stated the following about preparation:

“Without the program I would not have had any study skills, to be successful, the organization, I would not have had the self-confidence, the ability to balance academic and social to deal with the everyday life of a college student and living in a college dormitory, the peer difference, the social economic differences, the same kinds of things my students whom I teach in a boarding school go through. That’s what the UB program gave to me to be able to go in there and practice what they taught us what I had never done before; I had never met minority students only white poor people and suddenly I am in an environment that was totally different.”

**Theme 7: Self-Determination and Working Hard Despite the Odds**

Self-determination can be described as information and skills that foster a person’s capacities for decision making and self-direction (e.g. strategies for planning, achieving goals, developing partnerships with others, and self-management) (Astin, 1983). Self-determination was seen as setting goals, identifying steps necessary to reach goals, and problem-solving barriers along the way. Participants in this study learned how to set goals, identify steps to their goals, and problem-solve from a variety of sources. Gala said:

“Now that I am in College I am very determined to succeed and I have to study a lot. I am doing quite well; I have raised my GPA because I plan to go to grad school. I knew that I would make a great difference to my family because getting
a job would be easier.”

Fuji commented about his plans of going back to school after he had dropped out:

“I now have a reason and enough experience to realize that I want to succeed, I need to do better so that I can improve my life, I need to keep working hard no matter what.”

Fortune said:

“I daily convince myself that I will make it through the day and when I do I rejoice. I also tell myself that I must keep working and looking for help wherever it may be found. So I have had to shun fear and grow a thick skin! I stayed positive and I stayed focused on my goals. And I tried not to let my surroundings determine who I was and I just looked for scholarships and financial aid, all of those things, I guess I used the resources and kept my eye on the price.”

Jonah commented:

“In HS I was like, I am going to do this because I am going to college, so I was working hard and on top of things but now that I am in college, I am more focused, I cannot procrastinate anymore, I am more dedicated, now this is the real deal, now that I am getting closer to my goal, I am like working harder and harder”

McIntosh said:

“I was excited about going to college I knew that I would finish and get a good job. So I was very excited about going to college and accomplishing my goals”

These vignettes denoted determination to work hard for a better future.
Research Question 2

What is the relationship between academic resilience and the experiences of students served by TRIO intervention programs?

The investigator’s intent in introducing this qualitative study was to gain insight into the relationship between academic resilience and academic success through the experiences of students served by TRIO intervention programs. Each interviewee painted a convincing portrait of what it means to be resilient. As a key component of academic resilience is the existence of both risks and protective factors that lead to a positive outcome (Rutter, 1990), academic resilience is clearly present in the lives of the students that participated in this qualitative study. Many of the students noted the assistance of TRIO program personnel as well as their personal factors in their desire and ability to persevere; others concentrated on the influence of parents and peers in their journeys. Others noted their college experiences as being positive in their lives, while yet others spoke of the community’s role in their being resilient.

The emerging themes as discussed earlier, illustrated the students’ experiences, and provided a clearer picture of the role of TRIO programs in the academic resilience of the students. Data gathered from the interviewees suggest that academic resilience is strongly influenced by the interplay of protective factors. The data also supported the notion that academic resilience is the result of individuals’ virtues based in the environment in which they operate. Following are some responses to direct question about what students thought of their TRIO program and whether they thought they had become resilient.

Granny Smith stated,
“Without the program, I would not have had any study skills, to be successful, the organization, I would not have had the self-confidence, the ability to balance academic and social to deal with the everyday life of a college student and living in a college dormitory, the peer difference, the social economic differences, the same kinds of things my students whom I teach in a boarding school go through. That’s what the UB program gave to me to be able to go in there and practice what they taught us what I had never done before, I had never met minority students only white poor people and suddenly I am in an environment that was totally different... I truly believe if it was not for this program I would not be where I am today because of all the support and the mentoring and the connection they gave me. I never take for granted to have participated in this program.”

McIntosh had this to say:

“I think it's a good program and I would recommend everyone to go through it like I said it really prepares somebody for college at first I was really afraid but with time I had o changed to become a better person. Upward bound made me prepared for college I had everything it takes for a new college student because Upward Bound had prepared me I had a basic understanding of what it means to be in a college. I think now I really understand the value of education and I can appreciate all that upward bound program did for me and I know which way not to go and I have learned a lot of things, I have become more academically resilient given the amount of hardships I have gone through. I am looking forward to graduating one day soon.”

Jonah commented:
“The programs are so helpful to students. The friendships established in most cases last a lifetime. The students encourage each other. UB is the best thing to have ever happened. There is great social engagement where students encourage each other. People make you comfortable. I would recommend that program to a lot of students, it does not cost anything but your brain. I really recommend it to teenagers; it keeps them out of trouble too...”

Fortune said:

“The program helped me realize that if I joke with my life, I will be just another statistic and that made me realize that I must make a difference in my family and not let those that have encouraged me down especially my mother and aunt. So I work very hard to do well academically.”
Research Question 3

How did involvement in TRIO intervention program contribute to academic engagement and social engagement in college?

The various experiences of the interviewees were analyzed and organized into seven themes as we have already seen. The seven themes were; 1) College decision and transition 2) Self-determination and working hard despite the odds 3) Having strong support network 4) Challenges for low-income/first-generation students 5) Sense of the obligation to succeed/motivation to graduate 6) Role of advising and other resources 7) College academic preparation and social adjustment. The common themes showing how involvement in TRIO intervention program contributed to academic and social engagement were the role of advising, having strong support network and college academic preparation and social adjustment.

A consistent theme among most of the interviews was the role of advising while in college particularly from TRIO personnel. The quality of their advising and orientation experiences received from the TRIO staff greatly impacted how the students felt about their college experience and the university in general. The advising services received from TRIO program staff were crucial elements of their college survival in most cases. For some students, advisors outside and in college provided clear and adequate academic guidance, helping students select their courses and majors and generally encouraging them to stay on track to graduate. In order to receive guidance and support, Gala remembers the advice he received from TRIO program while he was in High School, he says:

“In High School they advised us to study in groups and to consult our teachers in case of questions and for extra help and to make use of the teacher office hours
when we go to college. They also advised us to seek help from other students and to have some time to relax with friends.”
The TRIO advisors continued to help him as a college student. He took advantage of their on campus presence. They did not just support the participant’s academic goals, but his personal development as well. As he explained,

“Yes, I go to their (TRIO) offices, and they can help me they show me how to solve problems they know people on campus should I need help. “

His advisors not only supported him in scheduling and course selection, but also actively supported him in this decision making process, listening to his concerns, and connecting him to other advisors.

“Sometimes they contact them (other advisors) for me and provided information about scholarships etc. They help by buying you a book to borrow and return it to the end of the semester.”

In order to pay for his tuition and therefore stay academically engaged, Jonah credits the Upward Bound Program for assisting him with looking for scholarships. He says:

“UB introduced me to financial aid and they taught me how to look for scholarships, and assured me that as an American, there were many resources for financial aid. So I was able to get grants to support my college education. “

Fuji remembers the advice he had received from the staff at his Upward Bound Math and Science Program in order to stay academically engaged.

“I had learnt from Upward Bound Math and Science staff that I should not shy away from teachers, so I made a good use of them. I consulted them for things I did not understand in class”
Granny Smith says that without the program he would not have had the skills needed to stay academically and socially engaged in college. He sums it up this way:

“Like I said I did not experience major difficulties in college because of the skills that came with me from High school. There was also support in form of advising which I took advantage of. When I was in college, the TRIO staff was very instrumental in advising and encouraging me to go on. Without the program I would not have had any study skills, to be successful, the organization, I would not have had the self-confidence, the ability to balance academic and social to deal with the everyday life of a college student and living in a college dormitory.”

The second theme, showing how involvement in TRIO intervention program contributed to academic and social engagement, was having strong support network. Social support is a key element in the success of students (Metzner & Bean, 1987). It can increase goal commitment and student success (Cleveland-Innes, 1994; Metzner & Bean, 1987; Pierce, Sarason, & Sarason, 1991). On being asked what roles, if any, others played in helping the interviewees stay academically and socially engaged in college, Jonah reflected on the role of the Upward Bound Program staff,

“All the staff in UB everybody who was there they really were on my back to do well. They were like, you need to call me if you need help with this, and they would be checking on me every day. That was worth it and I would say that the office was right in everything they said would happen, was actually happening. They really played a big role, they supported me in everything they said, and they had the answer for everything I asked them. I would not be in college, if it were not for them. They played a very big role, I can’t thank them enough.”
gave me the passion, the desire to go to college—they motivated me by telling me that I could do it, that I needed to keep up with the work. They were there, they stuck with me.”

Gala had this to say:

“Yes my friends most of whom were in UB with me are happy for me and encourage me. They were in upward bound and went through the same thing that I went through. Two of them we are living together now we study together”

Granny Smith talked of the support he received from his Upward Bound Program staff in the same University he attended:

“I went to the same university were I had attended UB and so I knew all the staff and they encouraged me. I connected with the Upward Bound Program and the support network was there to guide me it was just the modeling and the mentorship from that program that that boosted my self-esteem.”

Fortune reflected on the support she receives from the Student Support Services Program as alumni of the Upward Bound Program.

“I talk to the counselor at the SSSP office and since I am a former TRIO student they help me.”

McIntosh shared how the Upward Bound Program staff calls her occasionally to check on her and to encourage her to remain academically engaged.

“I am in touch with all my friends from Upward Bound, we talk on face book, and yeah they are pretty encouraging. Also I am in touch with Upward Bound staff; they call me once in a while to encourage me to remain on task”

The third theme, showing how involvement in TRIO intervention program contributed to
academic and social engagement was college academic preparation and social adjustment.

Fortune comments on how Upward Bound prepared her for college in order to be academically and socially engaged.

“The Upward Bound Program staff we were prepared me for how it would be when I join college full time. We were given an early start for college experience, I believe the opportunity to experience college while in High school helped me to settle down once I got there. I knew exactly what to do in the library for example, I knew about study groups and it was easy to mingle and make friends. It prepared me for college by helping me with time management and taught me to be responsible and to have better study habits. It also helped me with study skills, helped me with social skills.”

She goes on to say,

“The program helped me realize that if I joke with my life, I will be just another statistic and that made me realize that I must make a difference in my family and not let those that have encouraged me down especially my mother and aunt. So I work very hard to do well academically”

Granny Smith utilized the skills he acquired while at Upward Bound Program to succeed academically and socially while in college. He had this to say,

“Like I said I did not experience major difficulties in college because of the skills that came with me from High school. There was also support in form of advising which I took advantage of. When I was in college, the TRIO staff was very instrumental in advising and encouraging me to go on. Without the program I
would not have had any study skills, to be successful, the organization, I would not have had the self-confidence, the ability to balance academic and social to deal with the everyday life of a college student and living in a college dormitory.”

McIntosh credits the program for how it prepared her for what to expect when she went to college.

“I think it prepared me for what to expect and helped me to get a couple of college credits that I started with. I was excited about going to college I knew that I would finish and get a good job. So I was very excited about going to college and accomplishing my goals.”

Interviewees found and utilized the academic resources found on campus. Fortune found both the Student Support Services program to be useful resources, including the additional personal advising, mentors, and financial resources provided. Fortune noted,

“I talk to the counselor at the SSSP office and since I am a former TRIO student they help me.”

McIntosh benefited from the Upward Bound Program on campus where she became a Tutor Counselor. She commented thus:

“I got involved in the TRIO program at Lincoln University as a Tutor and I benefited from the staff there because I would talk to them about any challenges in my academics and also socially. I also maintained contact with the Tutor Counselors that I had interacted with while at the Upward Bound and they kept me motivated.”

When participants were able to find a support resource, these services supported their academic persistence. Generally, TRIO programs facilitate a culture that fosters academic
and social engagement in its students. The mission and objective of the program is clear to all that are involved (students and staff). Students are taught to take advantage of all the resources available to them once they are enrolled in college. The staff is encouraged to guide and advise the students on how to take advantage of these resources.
Research Question 4

What protective factors other than academic and social engagement influenced participants’ academic resilience while in college?

In order to understand academic resilience, the literature review explained clearly the concepts of risk factors (academic failure, poor preparation, low expectations) and protective factors (familial, institutional, individual and socio-environmental). This study addresses the concept of protective factors from four angles namely institutional, individual, socio-environmental and familial protective factors or environmental factors that reduce the risk of the student. Risk factors are psychological or environmental factors that increase the risk of harm to a student (Masten & Reed, 2002).

The researcher broke down the data into seven recurrent themes, which included 1) College decision and transition 2) Self-determination and working hard despite the odds 3) Having strong support network 4) Challenges for low-income/first-generation students 5) Sense of the obligation to succeed/motivation to graduate 6) Role of advising and other resources and 7) College academic preparation and social adjustment. Three themes that highlight protective factors and which help answer this question are having strong support networks, self-determination and working hard despite the odds, and sense of the obligation to succeed/motivation to graduate. Participants took steps to ensure that people were available for supportive roles in their post-secondary experience.

Firstly, participants expressed a sense of support from their family members (familial protective factors), friends and community members (socio-environmental protective factors). Most of the students discussed their decision to enroll in college with their parents. Some students in this group also received financial support from their
parents. The students expressed a feeling of encouragement to succeed and to obtain college level degrees. Some of the students felt the desire to complete their college degrees and the responsibility to care for their parents. Horn, Chen and Adelman (1998) found in their research of resilient students, that parent and peer engagement indicators were strong influences on whether or not these students enrolled in an institution of higher learning, especially a four year institution. Students who had people inform of family, counselors, role models and peers who frequently discussed school-related matters with them while still in college had better odds of enrolling in college.

Interviewees gave many examples of protective factors that encouraged them to be academically resilient. Responses touching on familial protective factors were common among the interviewees. Fuji appreciated his family’s role in his education and credited them for it.

“My grandma really encouraged me to get a college degree. That is why I feel obligated to finish. That is why I want to go back and finish. I have a great support base in my father and mother.”

Jonah reflected on the role of the Upward Bound Program staff, and teachers and his parents talked to him about going to college. On being asked about who encouraged him he responded,

“My parents of course, my friends encouraged me, my teachers encouraged me, and my parents, my family, and a lot of people they really were concerned.”

Gala had the support of his family and was very happy for him to be in college.

“My parents they always wanted me to go to college. I’m the first person to go to college.”
Asked whether they continue to encourage him, he responded in the affirmative.

Granny Smith talked of the familial support he received from his parents.

“Family especially my parents encouraged me all the time.”

Similarly, Fortune reflected on his mother and aunt who support her.

"My mother and my aunt and also I have friends that motivate and encourage me to keep working hard Don’t be discouraged if it does not work out the first time, keep working at it, use resources, get help from your professors, communicate.”

Responses touching on institutional protective factors were also common among the interviewees. Granny Smith talked of the contact he maintained with his High School Teachers.

“I went to the same university were I had attended UB and so I knew all the staff and they encouraged me. In college faculty members that eeh, it was a large university so it was hard to have those strong relationships with faculty members but there were some that were receptive to a mentoring kind of a relationship. Most were not. But I made effort to visit them in their offices. I connected with the upward bound program and the support network was there to guide me it was just the modeling and the mentorship from that program that that boosted my self-esteem”

Jonah had set his time for visiting his teachers

“they (teachers) say, I am here before and after class, if you have any questions come to me, am available, they give you their numbers too and office hours and I use that wisely too because it helps me a lot. I talked a lot to my teachers, about how to do better in tests, and about questions that I may not want to answer in
class. I have organized it in a way that the time for seeing my teachers is already set. For example during breaks, I see them and after classes. It works out pretty good for me.”

Fortune talked about visiting the SSSP staff for help depending on need and also creating time for her course professors.

“I talk to the counselor at the SSSP office and since I am a former TRIO student they help me. I see my professors twice a week. I go to their office.”

McIntosh got in touch with a TRIO program in her college where she worked as a student and got help. Here is her response

“I got involved in the TRIO program at Lincoln University as a Tutor and I benefited from the staff there because I would talk to them about any challenges in my academics and also socially. I also maintained contact with the Tutor Counselors that I had interacted with while at the Upward Bound and they kept me motivated. I also kept in touch with my friends during the program and we encouraged each other to keep working hard in school. I got a lot of support from teachers I would go and visit them in the offices I felt like I had a lot of support from my teachers they were offering tutoring and other help to make sure that you pass the test. I have professors that were willing to tutor me and also my friends that would tutor me in math etc.”

References to socio-environmental protective factors were also featured in the interviews. These mainly involved peers, and cheerleaders in the community.

Gala had this to say,

“Yes my friends most of whom were in UB with me are happy for me and
encourage me. They were in upward bound and went through the same thing that I went through. Two of them we are living together now we study together.”

Granny Smith talked of the contact he maintained with his high school teachers

“Fortunately, I had tremendous support from High school teachers that maintained contact with me which gave me that boost so I did connect. Some of them were actually instructors during the summer time, we maintained connection and that is what probably what took me through my first year in college the connection was great. It was an additional support.”

McIntosh had this to say about the socio environmental protective factors in her life

“… Some of the church members were willing to send me letters and cards of encouragement and money as well.”

Lastly, interviewees reflected on their individual protective factors as having influenced their academic resilience. Two themes that had a direct connection to individual protective factors were sense of obligation to succeed/motivation to graduate and self-determination and working hard despite the odds. Interviewees took responsibility for individual choices. The participants’ responses speak of a deep desire to graduate and get a job as well as a realization that self-responsibility is key to academic success. Participants reported self-responsibility for persisting through college and being able to overcome any challenges they met along the way. Interviewees shared strong personal drives and motivation to attain a college degree despite many challenges. Participants attributed this drive to poverty, family expectations, and career choices made en route to their degrees. Students said success comes from perseverance, motivation, self-discipline and determination. These individual protective factors played a big role in
their academic pursuits. A belief in one self, family, and religion helped the students in overcoming their challenges. Most of the participants in this study identified a strong motivating factor that kept them in college and persisting to degree attainment, even when difficulties arose. Consequently, they developed self-confidence and the resilience needed to persist.

Granny Smith explained,

“I was a highly motivated college student, I knew that, the alternative was to work in a factory and that was not something I was aspiring to be. So I worked pretty hard in college, I got good grades.”

He went on to say,

“Without the program I would not have had any study skills, to be successful, the organization, I would not have had the self-confidence, the ability to balance academic and social to deal with the everyday life of a college student.”

For most of the participants, personal motivation is a key factor that keeps them in college. Gala commented; “Now that I am in College I am very determined to succeed and I have to study a lot. I am doing quite well; I have raised my GPA because I plan to go to grad school.”

Fuji commented: “I now have a reason and enough experience to realize that I want to succeed. I need to do better so that I can improve my life; I need to keep working hard no matter what.”

His response on what he would advise his fellow TRIO students was as follows:

“Well, the first thing that comes to mind towards helping people go to college, is that the greatest determination and strength really comes from an individual, if an
individual is not really determined or dedicated in going to college, they probably will not get there.”

Fortune commented:

“I daily convince myself that I will make it through the day and when I do I rejoice. I also tell myself that I must keep working and looking for help wherever it may be found, so I have had to shun fear and grow a thick skin, I stayed positive and I stayed focused on my goals. And I tried not to let my surroundings determine who I was and I just looked for scholarships and financial aid, all of those things, I guess I used the resources and kept my eye on the price.”

Jonah commented:

“In High School, I was like, I am going to do this because I am going to college, so I was working hard and on top of things but now that I am in college, I am more focused, I cannot procrastinate anymore, I am more dedicated, now this is the real deal, now that I am getting closer to my goal, I am like working harder and harder.”

Given the unique challenges TRIO students often face and the ways in which these challenges may threaten their sense of their own ability to succeed in college, support from those who care is a variable resource for their success. These individual protective factors are potential buffers against some of the stressors associated with pursuing an academic degree. However, they need to be nurtured through protective resources.
Research Question 5
How have the participants dealt with circumstantial challenges (i.e. risk factors) affecting them while in college?

Low-income/first-generation students typically face a variety of challenges while in college including, but are not limited to, transitioning into college and related academic difficulties, family responsibilities, financial concerns and work commitments, and racial differences. Each of these challenges affects student involvement on campus. As a result, of these challenges, low-income, first-generation students are not completely focused in campus life and academics as other student populations. Despite the challenges, the study participants took a variety of actions to successfully counter them.

For Granny Smith, the combination of the different type of workload and the feeling that faculty members were less accessible and not ready for a mentoring relationship contributed the challenge of transitioning from high school to university level. He however put effort to meet the professors in their offices. He explained,

“In college faculty members that eeh, it was a large university so it was hard to have those strong relationships with faculty members but there were some that were receptive to a mentoring kind of a relationship. Most were not. But I made effort to visit them in their offices.”

Being a minority (African American) Fortune encountered a challenge of a different kind. This student grew up in a primarily African American inner city neighborhood. Here is her response to a question about whether being a minority made a difference in college,

“Alright I think at the University of Pittsburg sometimes for example, When you go to talk to the professors, they already know your name, I find it challenging in another way, because our backgrounds is not as great as the majorities
background especially in education, so we struggle with some things.”

Here is what Fortune responded after being asked how she dealt with this challenge:

“I work hard to overcome this stereotype and to proof to them that my name is just a name it is not my mental power.”

Other challenges affecting Fortune had to do with academic transitioning, she explained,

“Academically, I am doing better than I was doing the first year; it is because I went to a larger school. In the way of learning especially in a larger school it was a difficult transition from High School to college.”

This is how she dealt with this challenge:

“I daily convince myself that I will make it through the day and when I do I rejoice. I also tell myself that I must keep working and looking for help wherever it may be found. So I have had to shun fear and grow a thick skin.”

Similarly, McIntosh struggled trying to fit in college. Here is her response

“Sometimes I did not feel like I was focused enough but I would talk to my former Tutor Counselors at Upward Bound Program and they would motivate me to keep going. Also, sometimes I found the classroom environment very unfriendly, sometimes I felt out of place. But I quietly listened and minded my own business.”

Asked why the environment was unfriendly, she responded:

“ I think because everybody seemed to be struggling with something. There was a lot of suspicion and competition.”

In order to keep going she went by what she had learned at Upward Bound program,

“At Upward Bound they always told us to not give up, to believe in ourselves and
that is what I did. I was focused on the final result and I kept going through the encouragement of family and friends.”

All the interviewees cited financial challenges in their college journeys. This was not surprising given the low-income characteristics of most TRIO students. To qualify as low-income in TRIO programs, the family income cannot exceed 150% of the poverty level as stipulated by the US Department of Education for that year. Therefore, financial issues posed a challenge to college persistence for each of the participants. To try to solve their financial challenges, participants relied on financial aid including loans and grants.

In order to support himself through college Jonah said,

“I had a financial challenge that is why I am working alongside my studies. Since my family was not well off financially, I had to work to get money for upkeep.”

Difficulty finding and accessing financial resources caused Fuji to be frustrated with the college experience and temporarily leave college.

“I kind of ran into financial inability to pay for my college. So now I am kind of stuck.”

McIntosh reported,

“I had a lot of financial difficulties I had to struggle to pay a certain amount of money to the school or move out. So that was stressful. “

Responding to how she did this, here is what she said,

“I got financial aid from PHEEA-an institution that gives students loans.”

Fortune too had some financial struggles. She explained,

“Sometimes I struggle financially because, I was raised in a single parent house hold and I was not assured we can afford it financially. And also because in my
neighborhood like in my surrounding, I never, sometimes I doubted whether college was for me because of what my friends were doing and stuff.”

Responding to how she responded to this challenge, she said,

“I stayed positive and I stayed focused on my goals. And I tried not to let my surroundings determine who I was and I just looked for scholarships and financial aid, all of those things, I guess I used the resources and kept my eye on the price.”

Apart from financial challenges, two interviewees were also faced with social challenges with friends. Fuji explained,

“I had a personal encounter with someone which led to my dropping out and add to that the financial problems I had, everything kind off happened at once.”

Jonah explained his situation:

“I had some social issues, I almost got into a fight but I let that one go, I was like, am I going to put my educational career on the line for this stupid encounter.”

After this social encounter, Jonah explained that he decided to cut off some people and thereby had more time to focus. Here is what he said:

“It was not worth it, my time and I said, whatever, I brushed off. I just told we were not going to be friends any more. I started cutting off more people and started getting more time to focus.”

These personal recollections contained in the vignettes of selected participants are a portrayal of the diverse backgrounds of the students and underscore the extraordinary challenges some of them faced as they entered college. Though set within a context of
shared characteristics and experience such as being low-income and being first in their family to attend college, their family dynamics and pre-college educational experiences are unique.

**Summary**

The aim of this mixed method study was to determine the relationship between academic resilience and the experiences of students served by TRIO intervention programs. A quantitative survey and qualitative interviews of selected students were used to capture the essence of academic and social experiences that influenced and continue to influence each participant’s academic resilience. $T$-test scores of the CRQ survey showed that females scored significantly higher when compared to males on the CRQ Academic Resilience protocol. The significant findings showed that females have greater academic resilience than males. This result confirms the descriptive statistics as seen earlier which found females to have scored better than the males in the academic resilience scores. This chapter also presented findings of the qualitative study. The themes generated from the qualitative data which helped to answer the qualitative study questions were: (a) College decision and transition. (b) Having strong support network. (c) General challenges for low-income/first-generation students. (d) Sense of obligation to succeed/motivation to graduate. (e) Role of advising and academic resources. (f) College academic preparation and Social adjustment and (g) Self-determination and working hard despite the odds emerged from the data. Accounts of how involvement in TRIO programs contributed to academic and social engagement in college and the role of protective factors in shaping their academic resilient were explained. The chapter also presented answers to how
students dealt with some of the circumstantial challenges affecting them while in college. In general, participants reported a range of interactions that made a difference in their academic success. It is evident that students achieve differently under similar circumstances, because of how they deal with the impact of risk factors to enhance their capacity for academic resilience. Protective factors including TRIO programs have been shown to facilitate students’ ability to convert social relationships into academic gains. More importantly, they have been shown to influence academic resilience in low-income/first-generation students.

A discussion of the significance and implications of the findings as well as recommendations for further research are included in Chapter 5. Essential conclusions of this study and their implications for educational practice are also included.
Chapter 5

Discussion

Chapter 4 summarized the findings of the study, according to the themes that emerged from the data and from responses to research questions, which guided the study. This chapter discusses the findings concerning the relationship between academic resilience and college success, and compares the results of this study with the findings of other research. Findings indicate a relationship between TRIO programs and the academic resilience of the students served. This study also finds greater social and academic engagement among females. Females also exhibit greater academic resilience than males. Results show that a combination of protective factors encourages academic resilience and are important elements for academic success. The academic resilience results of this study are important for the study of degree attainment in low-income/first-generation students. The academic resilience concept provides an untapped resource for educators and practitioners trying to identify characteristics that can promote college completion for low-income/first-generation students in general.

Academic Resilience

The results of this study support research (Benard, 1993; Chase-Lansdale et al, 1999; Garmezy, 1991; Giordano et al., 1993; Kenny & Donaldson, 1991; Masten, 1994; Rack & Patterson, 1996; Werner & Smith, 1982) that showed protective factors as elements of academic resilience, could provide support to buffer or protect students from
the detrimental effects of psychosocial conditions that place them at-risk for academic failure. Apparently, much of the support arises from institutional, familial and individual protective factors, and involvement in the TRIO intervention program. That involvement was pivotal for encouraging academic resilience. In addition, quite evident from the research is that participants incorporated their individual strengths of tenacity and motivation to accomplish academic goals of attending college and attaining graduation whether from High School or from College.

**Factors Influencing Academic Resilience**

As discussed in the literature review, four key protective factors relate to academic resilience: institutional, individual, familial and socio-environmental factors. According to the data analysis all of them largely affect academic resilience. The summary of findings is according to those categories.

**Institutional and Socio-Environmental Protective Factors**

Current study shows that some low-income/first-generation participants relied significantly on their social networks while away from home. Often parents were not adequately able to support students emotionally or financially, so the students chose people in their lives to provide foundational support. Still other participants cited the support of parents who placed high-value on education since the elders never had a college-level opportunity. Adults working with low-income/first-generation students need reminding to assume occasionally, the role of parents depending on the situation. Some of the students’ backgrounds may include dysfunctional homes, which compromises parents’ roles. The role of peer support, frequently mentioned, is the consequence of
students in this study, being away from home, depends on the social network of friends, people with either similar backgrounds or comparable academic goals. Relationships with peers emerged as an academically important social process that helped students become resilient. When feelings of impending failure occurred, participants agreed that they gained emotional support from a social network. Most students agreed that these friends played significant roles, personally and academically. Participants formed close bonds with other students who shared the same social and academic goals. For example, one of the respondents, McIntosh, commented, “I also kept in touch with my friends during the program, and we encouraged each other to keep working hard in school.”

Gala commented, “They [friends] were in Upward Bound and went through the same thing that I went through. Two of them are living together now; we study together.” By forming these close ties, the students were able, on a regular basis, to gain support and encouragement, which are important elements of academic resilience. The participants indicated that having reliable friends, conversational partners, and supporters for sharing academic concerns and successes, even on Facebook, significantly influenced decisions to accomplish college goals. For example, in the present study McIntosh quipped, “I am in touch with all my friends from Upward Bound; we talk on Facebook, yeah, and they are pretty encouraging.” Fortune, received encouragement not only from by her mother and aunt, but also from friends. She said, “I have friends that motivate and encourage me to keep working hard; don’t be discouraged. Also I am in touch with Upward Bound staff; they call me once in a while.” Granny Smith connected with the program as a college student; he commented, “I connected with the Upward Bound Program and the
support network was there to guide me through it.” Findings support research by Benard (1993) and Kenny and Donaldson (1991) who found that peer relationships contribute to a student’s social, cognitive development, and socialization. From experience with two TRIO Programs, UB and UBMS, students became candid about their friends’ encouragement. Within the same social network, students, sharing the same characteristics and clearly understanding that without a degree the future would be bleak, recognize that friends’ encouragement to work hard and to be academically resilient may allow relief from the effects of poverty. People need different levels of social activity to be productive and happy. To this end and for support continuity, most participants maintained contact with TRIO program staff that encouraged concentrated focus on academics. TRIO intervention staff’s relationships encouraged students to strive towards their educational goals, to maintain tenacity, and to exercise personal initiative. All of the services, programs, and experiences provided by TRIO programs promote these goals; therefore, inherent in the program, is the staff’s high expectations for the students and providing the motivation and skills needed to succeed and persist in college. As a result, students developed academic resilience and adopted high expectations. Arising from the relationships with TRIO staff, students felt a sense of obligation to excel; the motivation resulted in positive outcomes, and consequently, students felt encouraged to continue.

These findings present administrators with information that may be valuable when recruiting and responding to the needs of low-income/first-generation students.

A theme repeated during the interviews also included having a strong support network from faculty-student interactions. Findings confirmed research by Astin, 1993; Borman and Rachuba, 2001; McKeachie and Pintrich, 1986; Nettles, 1988; and
Pascarella and Terenzini, 1991 regarding the positive impact of faculty on the lives of students. These researchers found that the methods faculties use to present information, make assignments, evaluate student work, and interact with students outside the classroom impact students’ learning of subject matter, self-esteem, critical thinking skills, grade point averages, retention, and graduation. Supporting the notion of close association between student and faculty, participants mentioned that they made an effort to see their professors and ask questions during the professor’s office hours. These interactions led to academic resilience and encouraged persistence in college life. Students, to gain greater support, fully accessed the services offered by tutors, peer mentors, faculty, and resident advisers, as well as off-campus mentors. Granny Smith commented that while in college, he connected with some of his high school teachers who kept him focused. He said, “I had tremendous support from high school teachers that maintained contact with me and gave me that boost.” This study’s findings also indicate the importance of staff’s building relationships with students. Universities and colleges can benefit by creating a campus atmosphere, which encourages staff-student and faculty-student relationships. Such interaction can enhance low-income/first-generation students’ feelings of support on campus; that atmosphere is an important element for academic resilience. Literature on academic resilience suggests that caring relationships, especially between teachers and students and between students and their peers, relate to resilience and encourage academic success (Glasser, 1993; Testerman, 1996).
Familial Protective Factors

The current study reflects the importance of familial influences, since the participants described being from close-knit families, receiving financial support from their families, and turning to their families for moral support and encouragement. Data shows that participants relied heavily on parents as a source of motivation. Despite being low-income/first–generation college students, participants in the study received parental advice, praise, and expressions of career expectations that supported the student’s college experience. Frequently, students cited parents as reasons for persisting in college. Participants were also convinced that their parents wanted them to graduate college, and achieve career objectives higher than their own. Data from the study supports other study findings (Hauser, Vieyra, Jacobson & Wertlieb, 1985; Rutter, 1985) that showed the family is an important variable in encouraging academic resilience. Relationships within the family appear to be one of the most important influences in students’ success in college (Tinto, 1975). The present study’s data supports these findings through participants’ expressions of the positive roles families assumed for encouraging focused attention in college. Apparently, the family appears to have a positive influence on academic resilience for the participants.
Individual Protective Factors

Some of the participants spoke of their personal determination and discipline that led them to academic success. Having considered students’ personal strengths, the motivation for completing college was the most influential factor in aiding persistence. One participant (Fortune) shared her story of self-encouragement in the midst of challenges: “I stayed positive, and I stayed focused on my goals. And I tried not to let my surroundings determine who I was.” The same student related overcoming the negative racial stereotypes on a campus with a Caucasian majority: “I work hard to overcome this stereotype and to prove to them that my name is just a name; it is not my mental power.”

Identifying individual protective factors, provided by this academic resilience study, offers educators and practitioners some students’ attributes which are easier to shape, such as self-confidence, personal determination, positive perception of school success, and attitudes toward finishing college. Individual protective factors are important elements for academic resilience. Students claimed looking beyond their circumstances encouraged their determination. Reflecting on this, Fortune commented, “I stayed positive and I stayed focused on my goals.” On the same issue Granny Smith commented, “I was a highly motivated college student.” These students knew that their efforts determined their fates. In addition to looking beyond their circumstances, some had a plan for the future; having a goal meant having a plan. According to Tinto (1975), the plan’s interpretation might be a career plan, or an educational plan. He theorized that the higher the level of the plan, the greater the likelihood the student would persist. Granny Smith, one of the participants, remarked, “I was a highly motivated college student, I knew that, the alternative was to work in a factory and that was not something I was
aspiring to do. So I worked pretty hard in college.” On the same topic, McIntosh commented, “I was excited about going to college; I knew that I would finish and get a good job.” Clearly, these two participants had goals of attending college, graduating, and becoming successful. Once the participants set their goals on completing college, they were resourceful in finding ways to accomplish this task. This is a true indication of their resilience and persistence. Generally, low-income/first-generation students face many challenges and barriers throughout their college experiences. These students maintained phenomenal qualities of perseverance, matched with an eagerness to succeed in life despite earlier adversities. In the present study, as college students, the interviewed participants experienced challenges that could have prevented them from attaining their degrees. Each of the participants in the study came from a low-income family and proposed financial issues as an area of concern; many wondered how they would pay their college tuitions while still in high school. Financial issues did not hinder their decisions to stay in college and complete their degrees despite parents’ being unable to contribute, financially. While some students opt to use the lack of finances as an excuse not to attend college, these students agreed that they found ways to fund their college educations utilizing the resources available to them: Pell Grants, Federal Student Loans, and employment. The present study found that TRIO programs provide opportunities for building academic resilience through caring, educational environments. Jonah commented,

“UB staff gave me the passion, the desire to go to college—they motivated me by telling me that I could do it, that I needed to keep up with the work”

The individual inner strengths from self-esteem, personal faith, optimism, being a self-
starter, tenacity, and personal initiative are powerful individual protective factors linked to academic resilience. Fortune commented,

“I stayed positive and I stayed focused on my goals.”

Generally, the students discerned appropriate actions and behaviors that worked to their benefit. For example, they maintained contact with their own social networks and, understanding their own strengths and shortcomings, they could liaise with, reach out to, and coordinate with those resources, thereby obtaining necessary help for tuition and living expenses. Several studies support these findings (Bernard, 1993; Pascarella & Terenzini, 1991; Wang, Haertel & Walberg, 1998). These researchers concur that positive self-concept and a positive mental outlook among undergraduates tend to enrich their college experiences. In addition, these studies link academic resilience to the individual inner strengths of optimism. University and college administrators, counselors, intervention programs directors etc. must, therefore, encourage these inner strengths and maintain high expectations to develop an environment for students’ academic success. The study’s findings confirm the effect of the TRIO intervention programs especially for the transition to college academics.

**College Transition through TRIO Intervention Programs**

This study confirms the importance of TRIO programs, known to encourage social and academic engagement that smoothes students’ transition to college. Generally, the summer program allowed students to experience college life while still in high school. This helped the students with transition from high school to college. Involvement in the
TRIO summer program resulted in a positive transition to college because students engaged the opportunity to explore college services and discuss college expectations with other students. Students gain encouragement to form social networks with others, to maintain motivation, and to encourage success. Through TRIO programs, the study’s participants fully engaged in college both socially and academically. The responses to the CRQ instrument and in the interviews both depict the results. Data supported the Astin (1984) theory of involvement, which posits that students learn more when they have greater involvement in both the academic and social aspects of the collegiate experience.

For TRIO intervention programs, the amount of student learning and personal development is directly proportional to the quality and quantity of student involvement in that program. For the Upward Bound Program and the Upward Bound Math and Science programs in particular, participation in the summer sessions assisted the students, in multiple aspects of student’s college enrollment. Students experienced life in the dorms first-hand and discussed college life with residential advisors. McIntosh commented, "Our tutor counselors had advised us during the Bridge Program to get involved in college activities when we go to college.”

Fortune said, "The staff prepared me for how it would be when I join college full-time.” Granny Smith commented, “I did not experience major difficulties in college because of the skills that came with me from high school.”

The TRIO program had impacts on students’ academic and social skills. Reflecting on his experience, Jonah spoke of learning how accommodates others and how
to be a team player: “I learned how to be respectful to others, how to approach people, how to talk, how to act, how to engage in a conversation and how to get along.” Granny Smith commented, "The summer program gave me the socialization skills for living in the dormitory, living away from home, and a developing balance in the academics and social life." All the skills learned impacted academic success. From the perspective of the only alumni among the interviewees, Upward Bound created a framework for impacting students’ success and that alumnus became an advocate for TRIO Upward Bound program by recommending it to others. Granny Smith commented, “I recommended the program to other students; I spent a lot of years lobbying for more funding for the programs.” McIntosh maintained contact with the Tutor Counselors (TCs); she commented, “I also maintained contact with the Tutor Counselors that I had interacted with while at the Upward Bound Program and they kept me motivated.” According to the mandate of the program, all participants in the TRIO programs received preparation for the environment they would encounter when they went to college. This made the students feel comfortable on the college campus. The summer program also gave them familiarity with not only the campus layout (for those who would eventually enroll there) but also availability of support services. Data from the present study helps to confirm that funding from the federal government in support of TRIO programs’ efforts should continue. Data also challenges TRIO staff to continue easing students’ transition to college, especially for low–income, first-generation students, because the efforts appear to be worthwhile.

In addition, tutor counselors whom participants mentioned often receive employment to work with the students during the summer program, are college students
with GPAs of at least 3.0 and maintain excellent standing in college. While Tutor counselors are not professional counselors, they provide encouragement and guidance to students. TCs understand that students may be unfamiliar with the college environment and culture; therefore, they are readily available to guide them during their short time in college and how it would be when they go to college.

Tutor counselors and advisors are important in the lives of low-income, first-generation students because of their encouraging the students to be tenacious in their academics. Consequently, college staff should be encouraged to maintain close relationships with their students and support students’ focus and effort for their academic work. During the summer program or during the Saturday sessions, advisement came from tutor counselors, instructors, program staff, tutors, volunteers, other college students, and anyone else who met the students including invited guest speakers. Unsurprisingly, students and staff shared concepts or discussed college life during a meal in the dining hall. This formal and informal sharing of knowledge allowed students to discover the nature of real college life.

To overcome social and academic challenges, most of the students relied on the TRIO programs’ professional mentors who guided students throughout their college experiences. Findings attest to what TRIO programs are doing to encourage college bound students to interact and to take full advantage of the college experience. This kind of interaction is essential for the actual academic setting encountered in college. The informal educational sessions, from TRIO, could actually prove to be more valuable than formal ones, because the former tend to be more relaxed and students can share more with anyone willing to listen. Intervention program administrators need to find ways of
incorporating informal sessions in their programs during which staff interacts and
mingles freely with students. Ultimately, students may benefit and share more than, if the
situations are too formal.

**Gender and Academic Resilience**

Academic resilience, as measured by independent samples *t*-test of gender on a
0.05 significance level, revealed significant differences between males’ and females’
social engagement, academic engagement, and academic resilience (see Table 4-5).
Results of the study show that females are more academically resilient than males. This
result concurred with findings in previous literature, which indicated that females had
higher levels of academic resilience compared to males (Belenky et al., 1986; Gilligan,
1982; Hu & Kuh, 2001; Flacks & Thomas, 1998; Kuh, Hu & Vesper, 2000; Rau &
Durand, 2000; Smith & Pino, 2003). The results of the present study, as well as past
research, indicate a pattern in which success for females relates to relationship building
and being resilient in academic matters. Also, females in this study appear to be more
socially and academically engaged than their male colleagues. Prior studies illustrated
that females seek social engagement activities while male students are disadvantageously
skilled in accessing social engagement activities. Perhaps, females accept academic
advice seriously as evidenced by their higher mean scores in academic engagement
compared to males in the study. Gender differences in academic and social goals suggest
that males and females define success differently. As shown in Chapter 4, the highest AE
mean score of 5.00 was for female respondents, and this was slightly higher than for the
male respondents’ score of 4.84. Further, the lowest mean score for females was 3.37

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compared to the lowest mean score for males, 1.84. Research shows females appear to be more socially engaged because they pursue responsibility goals and intimacy/relationship goals more often than males.

In addition, females pursue goals that appear to be obtainable. For example, many studies (Anderman & Anderman, 1999; Kalsner & Pistole, 2003; Kollmuss & Agyeman, 2002; Kuh, Hu & Vesper, 2000; Oesterle, Johnson & Mortimer, 2004; Patrick, Anderman, & Ryan, 1997) illustrated that gender has an impact on students’ access to social networks. In the present study, the results may be so because, as participants of TRIO programs, all students receive encouragement to seek academic as well as social support. Female members of TRIO programs in this study were more likely to use various support services and participate in social activities. Unsurprisingly, McIntosh affiliated herself with the TRIO program on campus, and as a former TRIO student, she became a tutor-counselor for the program. Fortune sought support services from the SSSP TRIO program to campus. Although the males did participate in a wide range of activities, their levels of participation were comparably low. A possible explanation is that males seek institutional support less than their female peers, and males tend to prefer to do things on their own (Hu & Kuh, 2001; Flacks & Thomas, 1998; Kalsner & Pistole, 2003; Stanton-Salazar, 1997, 2001). Also in most cases, females shared some home and community roles with their male counterparts (Rubenfield, & Gilroy, 1991; Thomas & Neal, 1978) because society and most cultures have begun to encourage women to adopt leadership roles. This encouragement could be the reason for females’ apparent behavior. Females are also likely to choose belonging, and maintain goals for caring, approval, support, assistance, advice, and social support more frequently than males (Cowan &
The results seem to suggest that in the last few decades, the images and roles of females have changed, globally. Women have, in increasing numbers, entered traditionally male dominated areas (King, 2000), and they recognize that survival and success depend on inner strength and resilience. This recognition, perhaps, has become engendered in female students. Female students in particular stated that their backgrounds, preparation, and a level of motivation influenced them to stay focused. In addition, experience from the Upward Bound Program indicates that students in the program received constant reminders to work hard in academics, to seek support, and to persevere. Gender may have an effect on academic achievement due to the differences in perceptions toward minority males and females in school settings. Teachers seem to hold more negative attitudes toward male students and lower expectations for low-income males than for females in the similar categories (Ross & Jackson, 1991). Females, perceived more positively, seem to confront a less hostile environment than males (Erin, Bezek, & Lukomski, 2010; Rubenfield & Gilroy, 1991; Wilson, 2000; Whiting, 2006). Coming from a culture where academic protective factors were few for female students, in most cases most female students rely on their individual protective factors to progress academically. As Fortune commented during the interviews, “The program helped me realize that if I joke with my life, I will be just another statistic, and that made me realize that I must make a difference in my family.”
Aspects of Comparative and International Education

This section addresses a comparison, in an educational context, of resilience among low-income/first-generation minority children (primarily black) in South Africa (SA) and the USA. Findings of the present study suggest that protective factors are indeed important ingredients of academic resilience. In addition, findings suggest that females are more academically resilient than males. Several reasons make South Africa an interesting case study for examining academic resilience because the perceptions and experiences of low-income/first-generation college students in South Africa are remarkably similar to those for US students. First, the effects of slavery are still life in the USA, in the same way as the effects of apartheid in South Africa (Deacon, 1991; Mahalingam, 2003; Snyman, 2005; Verkuyten, 2003; Yzerbyt, Rocher, & Schadron, 1997).

Second, most of the resilience studies in SA consider minority populations as the subjects of study, something that is also common among the USA resilience studies. A comparison of the findings of the present study on resilience in the two countries (South African and United States) indicates that both countries are clearly rich with diversity, which represents a range of worldviews. The process of resilience for people from both countries is a life-long process of developing abilities to confront difficult situations and solve problems. An international perspective for comparing academic resilience in both countries seems appropriate to determine similarities and differences in order to determine ways to promote academic resilience. In particular, comparing the role and dynamics of culture/ethnicity for developing resilience factors clarifies differences in resilience promoting behavior among low-income/first-generation students.
Comparison of Results with South Africa Resilience Studies.

In South Africa, the challenges students must overcome are risk factors found in urban residential areas (townships) and community environments, including informal settlements, which have the potential for forming key barriers to learning. Even after gaining independence from colonial rule in 1994, South African students, especially those from shantytowns represent high drop-out rates and a dramatic under representation at college graduations (Pranitha, Kaufman & Richter, in Hunter & May 2001). The risk factors preventing greater representation in schools/colleges include socio-economic deprivation, poor access to basic services, unemployment, crime and gangs, inaccessible and unsafe residential environments, poor parental involvement in educational matters, poor human resource development in schools, constraints of language and communication, and HIV/AIDS prevalent in many families (Department of Education, 2001). Coinciding with the present study, the concept of academic resilience in South African education provides hope for historically disadvantaged communities whose circumstances are difficult, because resilience indicates that protective factors can outweigh risk factors.

Of the several findings of the present study, two findings are of value for comparison purposes. They are: 1) a combination of protective factors encourages academic resilience and is an important element for academic success. 2) Females are more academically resilient than males. These are interesting results to compare in order to learn from the findings of other researchers on a different continent in addition to adding strength to the current study’s findings. A review of studies (Gunnestad, 2003; Grotberg, 1995; Kumpfer, 1999; Masten,, 2001; Rutter, 1990) on resilience in children in
South Africa and USA identify a number of protective factors that promote children’s resilience. This resilience appears to be contingent on familial, individual, community, and/or cultural protective resources.

**Familial Protective Factors in South African Context**

Results of the present study reveal that family protective factors are crucial elements for academic resilience. Similarly, in a review of 23 academic journal articles (1990–2008) that document resilience among South African youth, family protective factors appear to be very important in encouraging resilience (Dass-Brailsford, 2005; Germann, 2006; Kruger & Prinsloo, 2008; Grotberg, 1993; MacDonald, Gillmer & Collings, 1996; Theron, 2007; Mampane & Bouwer, 2006). In addition, a study exploring the dropout phenomenon in South Africa documented participants’ valuing support received from one or both parents and/or other family members. Participants indicated that they relied on such support and guidance for decisions involving friendships and whether or not to complete schooling. Such support appeared to serve as motivation for these participants to attend and complete their studies (Govender & Kilian, 2001). Several other studies, Theron, 2004; Ebersöhn & Maree, 2008) supported the results.

**Individual Protective Factors in South African Context.**

Many of the findings in the present study corroborate the results of earlier South African studies that found individual protective factors to be important elements of academic resilience. Several studies (Kruger & Prinsloo, 2008; MacDonald, Gillmer & Collings, 2003; Theron, 2004) identified personal traits of conscientiousness and the
ability to self-regulate, extroversion, enthusiasm, and assertiveness encourage academic resilience. Apparently, individual protective factors arise in childhood through families and schools. In addition, the study revealed that the individual factors such as ability to elicit positive response from others play a critical role in determining the survival of learners when faced with difficult socio-economic challenges. Similarly, a study exploring resilience among black youth in SA found participants willing to accept responsibility for the direction of their lives and their choices (Dass-Brailsford, 2005). Participants reported that they had the autonomy and conviction to actively structure their lives and direct their futures with self-confidence and self-determination.

In another study analyzing the criteria used to evaluate students as being resilient or non-resilient in a South African township school in Northern Sotho, Mampane and Bouwer (2006) found that the participants who were resilient mostly experienced multiple risk factors and demonstrated independence, responsibility, assertiveness, sense of control, self-efficacy, planning, and resourcefulness in their problem solving. In comparison to the present study, participants recognized their needs, acquisition of solutions to their needs, and viewed their problems as challenges to be overcome. Therefore, individual protective factors have an international affect and have the potential to benefit everyone so long as nurturing occurs. In this regard, administrators and educators have a challenge to help students nurture their individual strengths, which will make them academically resilient.
Cultural Protective Factors Anchored in the Community in South Africa.

The present study found that institutional protective factors are crucial elements of academic resilience. Although in South Africa (SA), these protective factors represent community resources, they serve the same purpose in both situations. In several of the 23 journal articles that studied resilience in SA, a community resource most emphasized was schools (Barbarin, Richter & De Wet, 2000; Govender & Kilian, 2001; Johnson & Lazarus, 2008; Smukler, 1990; Ward, Martin, Theron & Distiller. 2007; Van Rensburg & Barnard, 2005). Teachers, in particular, gained identification for being supportive, fair, and non-discriminatory, motivating, inspiring role models, encouraging, helpful, and caring. In addition, well-resourced schools, and those maintaining academic excellence, attractive campuses, and life-skills curricula seem to contribute significantly to encouraging resilience.

In other cases, support related to communities: (1) support from adults who could be respected and who supported youth success, and (2) encouragement and active support from peers and teachers. Peers’ resilience primarily arises from affording social acceptance, development of positive identities, values, and accessibility for peer-level discussions of troubling matters and trustworthy help for any problems. Communities encouraged resilience when they provide youth with opportunities to enjoy participating in activities that allow sustaining a sense of competence, or by providing access to recreational resources (e.g. libraries and sports teams). Communities also encouraged resilience when they provided youth with a sense of security, comfort, and belonging.
Gender Differences

In a study that sought to find resilience promoting behaviors in many nations (including South Africa), females appeared to represent greater resilience than males (Harper, 2004). Females drew on trusting relationships and accepted help to become autonomous more than males. Girls drew on internal factors: being lovable, autonomous, having self-esteem, feeling confident, and showing empathy more than males. Females in the study relied more on communications, problem solving, and relating to others than did males. Generally, males appeared to draw on fewer resilience factors to deal with adversities, while having the same overall percentage of resilience promoting responses as females.

Cultural/Ethnic Similarities and Differences in the US and South Africa.

Culture plays a significant role all over Africa. This section explores resilience relationship to culture in South Africa in comparison to the US and identifies differences in the cultural and ethnic promotion of resilience factors in the US and South Africa. Data from a sampling of the two countries provide examples of these similarities and differences in the promotion of resilience. The similarities involve some common factors such as providing loving support, role modeling, seeking help, and recognizing a child's need to be responsible for individual behavior. The differences include wide variations in age-related expectations, the ability to encourage a sense of autonomy in children, the degree to which punishment strengthens children, community involvement, the available resources, the presence of cultural values, skills in communication, and problem solving.
In the comparison of resilience in South Africa and the US, resilience arises in different ways and from different sources in the African context compared to the US context. For example, family networks seem to be an important protective factor in the US and South Africa. While in the US, the family network mostly contributes emotional support, the family network seems to offer broader support in South Africa. This support can include food, community fundraising for school fees, sometimes staying with a relatives, prayers, and emotional support. In the US, a developed social security system compensates for the need for nutrition or payment of school fees among the poor. Furthermore, the meaning of family or the segment of family involved may differ.

In South Africa, a child belongs to the whole village and all adults in the village have the responsibility of upbringing. Adult neighbors, uncles, and aunts may administer punishment to children deemed doing wrong; this is a duty because the children are a community responsibility. In US, the nuclear family, comprising mother, father, and siblings is most important. Sometimes grandparents provide practical support if the young people live close by (e.g. physically caring for grandchildren). Therefore, the notion of familial protective factors encompasses the whole community in South Africa while in the USA it comprises the nuclear family, but also the extended family to some ways.

The US places less emphasis on religious support, while in the resilience studies in South Africa, evidence exists of a wider religious influence (Phasha, 2010; Werner, 1996). This contrast reflects that in US, for many people, religion is not an open topic for discussion. In South Africa, religion seems to be a strong and functional support, which plays an important role in encouraging resilience. Apparently, the cultural existence of
resilience promotes general resilience. Generally, protective factors in a culture contribute to resilience according to how important that specific factor is in each culture.

In comparing the findings of the present study and SA studies, the differences are largely in the number of academic resilience factors used, with US students using more factors than South African students. For example, South Africa does not yet have academic resilience nurturing programs like the TRIO programs found in the US. Compared to South Africa, the affluence of the US economy allows financial support for such programs.

In the US, individualism is the norm and the emphasis is more on parents’ supporting the child’s own choices and independence; while in South Africa, the advice and opinions of parents and the extended family are very important even for young people’s choosing careers, marriage, employment, etc. Therefore, resilience in the US arises from having supportive parents, who accept children’s choices and the children’s dedication to those choices. The resilience of South Africa children may come from having discussions with caring adults. The cultural differences inherent in both countries do not prevent the promotion of resilience in individuals.

Summary

Generally, the findings from this study attest to the fact that TRIO programs provide a significant service for encouraging low-income/first-generation students to enroll in college and complete the academic requirements for a degree. The CRQ survey tool and the interviews provide data showing that the participants were resilient. The presence of various protective factors in the students’ lives influences resilience. Evidence of the participants’ resilience appears from the CRQ scores and in the data
collected through the interviews. The presence of family, caring adults and individuals met in TRIO programs contributed to participants’ resilience. The findings are encouragement for the federal government (the funders of TRIO programs) to continue funding the programs. Results indicate that funding produces valuable results and accrues many favorable returns for the investment. Thousands of low-income/first-generation students would otherwise never have an opportunity to attend a college if these programs did not exist.

In addition, through the findings of this study, college administrators must determine and provide a conducive climate that is crucial for low-income/first-generation students to thrive and succeed. This is possible through the creation or the strengthening of college policies that encourage staff, with caring hearts, to expend effort and assist students, especially low-income/first-generation students, who come to their offices. The results also should encourage the creation of similar college intervention programs that would help students with similar characteristics to persist in college. The next chapter (Chapter 6) offers recommendations for enhancing the experiences of low-income/first-generation college students not only in the US but also in SA. In addition, the discussion includes implications of the research findings for future policies and research in the USA and in SA.
Chapter 6

Conclusion

The purpose of this mixed method study was to examine the relationship between academic resilience and the experiences of students served by TRIO intervention program. A comparison of results of this study documented experiences of students from South African resilience studies providing further depth. Interviewees’ shared insights, experiences, and suggestions that serve as examples for other low-income/first-generation students who are entering college, not only in the USA, but also in other countries.

Summary of the Findings

Data analysis for the study utilized descriptive data, $t$-tests and recurring themes from the interviews to answer the study’s questions. Findings revealed the following:

1) Females appear to be more resilient than males. Similar results arise from the $t$-test used in quantitative analysis.

2) Low-income/first-generation students in TRIO Programs appear to be highly resilient, and that resilience relates to protective factors in their lives. Familial, institutional, individual, and socio-environmental protective factors encourage academic resilience and hence academic success.

3) TRIO programs appear to have a significant influence on academic resilience of the students served. Largely, involvement in the summer program affected students’ preparation for colleges’ academic expectations. The TRIO experience instilled strong academic and social ethics, study habits, and skills necessary for college success.
4) The study concludes that both academic and social engagements are major components of academic resilience.

Collectively, these findings show that academic intervention programs such as TRIO programs have the capacity to impact students’ academic resilience. Efforts by university and college administrators, counselors, intervention programs directors, etc. can positively impact students’ ability to develop their individual protective factors such as strong social competence, problem-solving skills, autonomy, and a sense of purpose. For the students who participated in this study, TRIO programs equipped them for what to expect once they arrive at college. Participants confirmed that TRIO intervention programs provided tools important for shaping and encouraging persistence. The present study’s results lend support for TRIO intervention programs, which colleges and universities can use as a model to help low-income/first-generation students achieve graduation.

**Recommendations**

The recommendations offered in this chapter emerge from, and respond to, the student data discussed in Chapter 5. Higher education administrators are constantly seeking ways to boost the retention rates for all students, but especially low-income/first-generation students who are mostly from minority populations. The assumption is that these recommendations provide suggestions for college administrators and faculty to better support first-generation/low-income students as they navigate college. Suggestions for college administrators and faculty, suggestions for college intervention programs,
implication for better educational practices internationally; implication of results to other countries and implications for future research are also highlighted.

**Suggestions for College Administrators and Faculty**

The challenges interviewees faced may differ from those of others with similar characteristics, just as the most useful support services may be different. Nevertheless, the results of this study remain useful to student affairs practitioners and university administrators. The findings may influence the daily practice of those professionals who serve this population. College education administrators and policy makers at government levels have the responsibility for initiating ways and means that help low-income/first-generation students to master the skills of academic resilience that they need for success in college.

Institutions for higher learning must establish environments, which allow students and their families to become comfortable and engender a sense of belonging upon arrival on campus. In addition, an organized, structured session with parents should provide information that outlines the specific services available to low-income/first-generation students. College administrators can also encourage parents to urge their children to take advantage of success enhancing services.

Families involved in college exploration and selection processes become more comfortable with the student’s transition to college. With this kind of atmosphere, particular challenges in students’ backgrounds can be addressed collaboratively, among families and institutions. Data from this study supports the findings that, low-income/first-generation students particularly, benefit from having parents or family
members as supporters of students’ ambitions for college degrees (Gandara, 2001; Tierney, Corwin, & Colyar, 2005). Parents should, therefore, become aware of, and provide assistance for understanding the many admission and financial application forms, particularly, financial aid.

Undoubtedly, faculty members are an important protective factor for a student’s persistence in college. The study takes particular note of students’ mentioning faculty’s role. For policies, college administrators should provide all students with the opportunity to succeed by ensuring that academic departments’ dealings with low-income/first-generation students are well staffed and equipped. College and university faculty and staff must become aware of the needs of students from low-income/first-generation backgrounds. If faculty is attentive to the struggles the students encounter before and after enrollment in college, students may find a more empathetic atmosphere. Moreover, low-income/first-generation students, who do not have parents or mentors to assist in the college experience, one-on-one time with professors or academic advisors within the college campus are alternatives. Since relevant advice is to be found only on campus, students need opportunities to interact with advisors, mentors and faculty to gain insight and information about careers, internships, developmental workshops, research opportunities and other activities.

Results show that social engagement and academic engagement are crucial for low-income/first-generation students. At the same time, the study shows that intervention programs have the potential for developing academic resilience in students. A concerted effort by colleges through college preparation programs could positively impact students' abilities to develop strong social competence, problem-solving skills, autonomy, a sense
of purpose, and academic resilience. In order to accomplish these, college administrators
must understand the factors that contribute to academic resilience including being
engaged socially and academically and actively support those programs that keep
students engaged. Administrators must also provide meaningful opportunities and
activities that build low-income/first-generation students’ self-confidence, self-efficacy,
and sense of purpose. Data shows that individual participants took initiatives to be
resilient and to maintain academic success despite the odds. Individual protective factors
need to be encouraged since the individual student is ultimately responsible. Special
sessions with motivational speakers and life coaches covering topics such as, issues about
self-esteem, personal responsibility, resilience, sense of purpose, social competence, etc.
are valuable organized activities for students. These sessions, appropriately geared,
encourage students to be more proactive in their academic matters. Individual protective
factors are readily available to all students if the factors receive attention and students
understand their value.

Suggestions for College Intervention Programs

Through experiences of TRIO students, the research explored the relationship
between academic resilience and college success. The suggestions posted in this section
relate directly to low-income/first-generation students and the academic, social and
resilience factors that contribute to the ability to succeed in college. Although the
findings of this study are not generalizable, they can provide insight into how individuals
can adjust practices and how institutions can make structural changes to serve, better,
low-income/first-generation students.
The suggestions may guide other college intervention programs in making a concerted effort to impact student persistence and the development of academic resilience for degree completion. With the TRIO program offerings, students have an opportunity to experience college life and prepare for the college-level expectations, with the ultimate result of a degree’s improving careers and professional opportunities. Consequently, an examination of the effect of an increase in TRIO programs, prior to a student’s acceptance to college is in order.

**Implication for Better Educational Practices Internationally**

Typically, comparative studies provide insights that single case studies cannot illuminate. Future research of TRIO programs should emphasize comparative contexts to assist in implementation of better educational practices, internationally, and to understand how culture may influence gains by students, cross-culturally. Administrators of various groups serving the youth in SA need to understand better, how context and culture influence resilience-promoting behaviors among South African youth. In order to be effective, administrators need to collaborate with communities and community representatives in efforts to understand what encourages resilience. Many similarities exist between South African and the USA explorations of resilience, as mirrored in international studies. Largely, South African resilience researchers discussed resilience as the product of individual, cultural, and familial protective factors. Protective factors embedded in families, communities, and cultures, reportedly cultivate resilience. While the current study considers no other cultural antecedents of resilience, institutional protective factors received emphasis. In comparison to the USA, research stresses the
importance of institutional protective factors; South African research lacks a similar focus, and that research would benefit from serious consideration.

The challenges from Apartheid in South Africa clearly indicate urgency for the educational system to provide an enabling environment that empowers learners’ coping with adversities. The importance of international collaboration and dialogue, in resilience studies, cannot be overemphasized when considering effective methods to encourage students to graduate from college.

**Cross-Cultural Influence**

The US has richness in diversity, with many racial groups maintaining their cultures. The US resilience researchers, whose studies lack a cultural component in the investigation of resilience, need to borrow from the South African resilience researchers for greater depth. South African researchers need to consider researching college students to discover how they have been shaped by life to reach their accomplishments. South African researchers need to explore and develop data-generation strategies that spring from the local cultures and contexts of South African people.

Findings in South African studies suggest that differences in environmental context (e.g. cultural differences) are considerations when dealing with a diverse body of students (as in doing research or advising students). Finally, more research to explain the relationship between academic resilience, individual protective factors, and their utilization for students’ benefit is necessary both in the USA and in SA.

Several studies (Katz, 1997; Werner, 1994, 1993) found that religion plays a
major role in nurturing resilience. Many people who successfully rose from dire situations cited religious faith as being extremely important because it provided hope. These researchers interviewed people who confessed that without faith in their God, they would not have been successful. Perhaps the time has come for administrators to welcome discussions of incorporating faith in their institutions for general benefit.

**Lessons Learned**

Several lessons have arisen from the process of preparing this dissertation. To begin, protective factors are extremely important not only for academic success but also for life in general. People need to care more for each other because through caring others gain motivation to excel. Any attempt to improve the prospects of these students should consider the importance of caring relationships in supporting academic outcomes. Practices that enrich supportive relationships among families, peers, and institutional-based adults, including fostering nurturing, safe environments, creating advisory groups, and the like, would serve to enhance both the relational and the academic resilience of low-income/first-generation-students all over the world. Second, the findings suggest that efforts to understand and bolster low-income/first-generation students’ academic resilience are likely to yield important academic dividends. By viewing low-income/first-generation students as resilient, researchers and educators have a more positive context from which to view these students, and offer them better interventional services. Third, this study provides more support for the inclusion of academic resilience-building in school curricula, teacher preparation programs, classroom teaching techniques, and in interventional programs. Fourthly, although researchers in both SA and the US currently
play an important role in resilience research, more needs to be done to show the important role academic resilience can play in both countries to contribute to students’ successes in school. Finally, if any country is to remain competitive within the global economic environment, researchers and educators of higher education must provide global perspectives in their research, and access international contacts that will benefit students at various levels.

**Implications of Results for Other Countries**

A large number of students in most parts of the world, especially in Sub-Saharan Africa are low income/first generation. They faced insurmountable academic challenges that mostly have to do with poverty. Education has the greatest potential to rescue them from this quagmire because it empowers the people to help themselves and those around them. A concerted effort for academic matriculation at the college level, not to mention primary and secondary education, appears to be the most promising route from poverty and to development. Students need to be encouraged and helped to nurture their individual protective factors. Encouraging and nurturing academic resilience in students should start at early ages because social class, ethnicity and gender affect educational achievement. The present study confirmed key factors that contribute to academic resilience. Such factors include those found within the family (familial protective factors); those found within institutions (institutional protective factors); those found within the community (socio-environmental protective factors); and those found within individuals (individual protective factors).
Future Research

Future studies should take in consideration study design to broaden the sample size to include a control group, address the limitations of the current methodology, and incorporate lessons learned and implications for other countries.

Study Design

This study paves the way for further research and structural change to the manner in which institutions of higher education serve this population of students for degree attainment. Furthermore, an increased sample size would accommodate a larger number of low-income/first-generation students. For further research, a broadened sample would include a control group of low-income/first-generation students who have never been members of an intervention program. That would show any differing perceptions of students’ experiences in comparison to those served by TRIO programs. The results of this study show that the family has the potential for being a valuable source of influence for low-income/first-generation students. In some cases, families were not fully committed to the academic lives of students. More research is necessary to examine strategies that would compensate for this shortfall in ways that can translate into instrumental support for the students. Future studies of other college preparation programs could enhance the literature related to students’ academic resilience and persistence and further outline the role college preparation programs play in contributing to academic success of low-income/first-generation students. Furthermore, future studies of TRIO programs could consider one program at a time (e.g. UBMS or UB) to capture the uniqueness of the program studied and not TRIO programs comprehensively.
A clear need exists for more initiatives designed to assist low-income students (Nettles, 1988). The nation’s economy is changing and the number of minorities is expanding; an imperative exists for universities and colleges to prepare for diverse student populations (Keller, 2002). Therefore, research needs to consider universities’ and colleges’ initiation of best practices and strategies to begin significant improvements in the achievement of low-income/first-generation students’ academic endeavors. For example, schools could determine which protective factors work well, and which specific combinations of factors address the needs of low-income/first-generation students. In addition, higher education educators should prepare culturally competent individuals with the ability to work effectively with people from different backgrounds (Carnevale, 1999; Smith & Schonfeld, 2000).

**Addressing Limitations of the Current Methodology**

The current methodology, although sufficient for collecting and analyzing the data to answer the questions, could have been enriched by other forms of data analysis. The present study generated data from several groupings based on gender, age, ethnicity, language and TRIO eligibility. Therefore, with these groupings, different types of data analysis could reveal different findings. Two types of data analysis methodologies could have given different results and significances to the sample. For example, a procedure known as the Analysis of Variance or ANOVA tests the hypothesis that the means among two or more groups are equal, under the assumption that the sampled populations are normally distributed. This data analysis procedure could be used in future resilience studies. In addition, future studies can also consider using correlation efficiency as a
method for data analysis. Variables arranged in a matrix, provide a way of easily comparing correlations. The correlation matrix is basic to many kinds of analysis. It contains much useful insight and can offer the degree and direction (sign) of the correlation between the row and column variables among other aspects.
References


Weis, J. S. (1990), The status of undergraduate programs in environmental science, *Environmental Science and Technology, 24*(8), 1116-21.


Appendices
Appendix A

SurveyMonkey Email Contact Request

Dear Participant,

I am a graduate student at Penn State University doing a dissertation study entitled: Relationship between Academic Resilience and College Success: Cross-National Experiences of Low income/First Generation Students.

I am contacting you to request your participation in my research study. You have been chosen to participate in the study because of your participation in one or more of the following academic programs: Upward Bound; Upward Bound Math and Science; Talent Search Program; Student Support Services Program or Ronald E. McNair Post Baccalaureate Achievement program. At this stage of my research, I ask that you answer the set of questions below. At the conclusion of these questions, I invite you to volunteer for a follow-up interview. I hope you will consider this interview request seriously, because it is important for me to hear your stories. Please feel free to contact me at 717 871 0292 or email me at mmm137@psu.edu if you have any questions before answering the questions below. Thanks for your time.

Sincerely,

Margaret Mbindingo
Title of Project: Relationship between Academic Resilience and College Success: Cross-National Experiences of Low income/First Generation Students.

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Advisor: Dr. Ladi Semali
Keller Building
Penn State University
University Park, PA 16802
(814) 865-2239
lms11@psu.edu

1. Purpose of the Study: The purpose of this mixed method study was to examine the relationship between academic resilience and the experiences of students served by TRIO intervention program. The results would be compared with known experiences of students from South African resilience studies.

2. Procedures to be followed: You will be asked to answer 27 questions about your college experience. It will take about 20 minutes to complete the survey. Following the survey, you will be invited to voluntarily participate in an interview about your college experience. You will be asked to provide contact information if interested.

3. Statement of Confidentiality: Your participation in both the survey and interview will be confidential. The interview data will be stored and secured at my home under lock and key. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared. Your confidentiality will be kept to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet by any third parties.

4. Right to Ask Questions: Please contact Margaret Mbindingo (see above) with questions or concerns about this study.

5. Voluntary Participation: Your decision to participate in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to
answer. Your completion and submission of the online survey implies your consent to participate in this research.
You must be 18 years of age or older to take part in this research study.
Please print this form to keep for your records.
Appendix C

CRQ Survey with Demographic Questions

Below, please take a minute to tell me about yourself.

1. Pre-college/College Program(s) attended (check all that apply)
   A. Upward Bound
   B. Upward Bound Math and Science
   C. Talent Search Program
   D. Student Support Program
   E. Ronald McNair Post Baccalaureate Achievement Program
   F. ACT 101 program

2. Please check all characteristics that made you eligible for the program(s):
   A. Low College entry scores______
   B. English as Second Language (ESL) _____
   C. First-generation College student _____
   D. Low-income____
   E. Other____

3. Please provide your score(s) (if any) on the following college entrance tests:
   A. SAT Verbal______ Math______ Written______
   B. ACT ______

4. College attended/attending: _________________________________________

5. Dates of college attendance:___________ (M/D/Y) _____________ (M/D/Y)

6. Please describe yourself racially/ethnically: ________________________

7. Age ________

8. Sex/Gender: Male_____ Female_____ Other _____

++++++++++++++++++++++++++++++++++++

Below, please indicate how accurately each statement describes you with respect to your own college academic success. Use the five-point scale shown below. If the statement is/was always true, please indicate five (5). If the statement is/was never
true, please indicate one (1). [Note that because some respondents are STILL enrolled while others have either graduated or stopped out of college, each statement includes both PRESENT/PAST TENSE language.]

<table>
<thead>
<tr>
<th>Always False</th>
<th>Usually False</th>
<th>Neutral</th>
<th>Usually True</th>
<th>Always True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I never give/gave up at college
2. I actively pursue/pursued my educational goals
3. I have/always had good friends to talk to at college
4. I am/was a self-starter on my assignments
5. College excites/excited me
6. I am/was very optimistic about my education
7. I have/had high self-esteem about college
8. I learn/learned from tests
9. I expect/expected to do well in college
10. I make/made friends in classes easily
11. I make/made the best of each educational experience
12. I know/knew how to get homework done
13. I am/was able to connect with others in my classes
14. I get/got along well with others at college
15. I am/was a good problem solver on academic things
16. I make/made good things happen in my education
17. Nothing blocks/blocked my educational path for long
18. I like/liked to take charge of my education
19. There are people in college who really believe/believed in me
20. I adapt/adapted easily to new courses
21. I have/had a lot of faith in how I will/would do at college
22. I have/had someone who encourages/encouraged me to do well in college
23. I keep/kept going when things are/were tough in classes
24. I feel/felt difficult courses make/made me a stronger person
25. I like the student/person I have become
26. My family encourages/encouraged me to continue my college education
27. My close friends encourage/encouraged me to continue my education

If you are willing to participate in an interview with me, please provide the personal information below (please print or type). If you are selected for an interview, I will ask you to sign a consent form that, among other things, guarantees your confidentiality. Again, thank you for your participation!

Last Name: ___________________ First Name ____________
Telephone Number: __________________________
Email Address: _____________________________
Appendix D

Interview questions

1. Which TRIO program were you involved in? Tell me a little bit about your life as a TRIO student?

2. How did the TRIO program assist you to become academically and socially engaged as a college student?

3. How did your involvement in TRIO program help to support your time as a college student?

4. What roles, if any, did OTHERS (family, friends, community members, teachers or counselors, etc.) play in helping you stay academically and socially engaged in college?

5. Was your experience as a college student in any way complicated by any challenges? How did you deal with those challenges?

6. How did the program help you in being academically resilient?
Appendix E

TRIO Programs

<table>
<thead>
<tr>
<th>Year Founded</th>
<th>Program Name</th>
<th>Program Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>Upward Bound</td>
<td>Upward Bound provides fundamental support to participants in their preparation for college entrance. The program provides opportunities for participants to succeed in their pre college performance and ultimately in their higher education pursuits. Upward Bound serves: high school students from low-income families; high school students from families in which neither parent holds a bachelor's degree; and low-income, first-generation military veterans who are preparing to enter postsecondary education. The goal of Upward Bound is to increase the rate at which participants complete secondary education and enroll in and graduate from institutions of postsecondary education.</td>
</tr>
<tr>
<td>1965</td>
<td>Talent Search</td>
<td>This program identifies and assists individuals from disadvantaged backgrounds who have the potential to succeed in higher education. The program provides academic, career, and financial counseling to its participants and encourages them to graduate from high school and continue on to the</td>
</tr>
</tbody>
</table>
postsecondary institution of their choice. Talent Search also serves high school dropouts by encouraging them to reenter the education system and complete their education.

The goal of Talent Search is to increase the number of youths from disadvantaged backgrounds who complete high school and enroll in postsecondary education institutions of their choice.

1972

Educational Opportunity Centers Program

The Educational Opportunity Centers program provides counseling and information on college admissions to qualified adults who want to enter or continue a program of postsecondary education. An important objective of the program is to counsel participants on financial aid options and to assist in the application process. The goal of the EOC program is to increase the number of adult participants who enroll in postsecondary education institutions.

1986

Ronald E. McNair Post baccalaureate Achievement Program

This program prepares participants for doctoral studies through involvement in research and other scholarly activities. Participants are from disadvantaged backgrounds and have demonstrated strong academic potential. Institutions work closely with participants as they complete their undergraduate requirements. Institutions encourage
participants to enroll in graduate programs and then track their progress through to the successful completion of advanced degrees. The goal is to increase the attainment of Ph.D. degrees by students from underrepresented segments of society.

<table>
<thead>
<tr>
<th>Year</th>
<th>Program Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>Upward Bound Math-Science</td>
<td>The Upward Bound Math-Science program allows the Department to fund specialized Upward Bound math and science centers. The program is designed to strengthen the math and science skills of participating students. The goal of the program is to help students recognize and develop their potential to excel in math and science and to encourage them to pursue postsecondary degrees in math and science.</td>
</tr>
<tr>
<td>1998</td>
<td>TRIO Dissemination Partnership Program</td>
<td>This program provided grants to enable TRIO grantees to work with other institutions and agencies serving low-income and first-generation college students but that did not have TRIO grants. The goal of the TRIO Dissemination Partnership Program was to increase the effectiveness of the TRIO programs, through the replication and adaptation of successful TRIO program components, practices, strategies, and activities at institutions and agencies that do not have a federally funded</td>
</tr>
</tbody>
</table>
The program provides opportunities for academic development, assists students with basic college requirements, and serves to motivate students toward the successful completion of their postsecondary education. Student Support Services (SSS) projects also may provide grant aid to current SSS participants who are receiving Federal Pell Grants (# 84.063). The goal of SSS is to increase the college retention and graduation rates of its participants and help students make the transition from one level of higher education to the next.

VITA

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