Relationship Between Student Retention and Client Presenting Concern

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Martha E. Reynolds-Adkins
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MARTHA E. REYNOLDS-ADKINS

has been approved for
the Department of Counseling and Higher Education
and the College of Education by

Thomas E. Davis
Professor of Counseling and Higher Education

-------------------------

Renée A. Middleton
Dean, College of Education
ABSTRACT

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This study examined the relationship between seeking counseling and re-enrollment. In addition, the relationship between client presenting concern and re-enrollment was analyzed. The participants were 395 first-time, full-time undergraduate, primarily residential students, at a large, public research university in the mid-western United States. Chi-squared analysis were utilized to determine relationship. Results suggest there is a significant relationship between seeking counseling and retention as well as significance in the client presenting concerns of Legal Concerns, International Students, Anxiety and Thought Disturbance, and Body Image and Retention for those students who sought counseling.

Approved: _____________________________________________________________

Thomas E. Davis

Professor of Counseling and Higher Education
DEDICATION

To my beloved mother and father who modeled obedience to God and taught me the definition of success.
ACKNOWLEDGMENTS

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CHAPTER ONE: INTRODUCTION

Background of the Study

“Education is the great equalizer” (Callan, Ewell, Finney, & Jones, 2007).

Regardless of the socioeconomic level of society that a person is born into, he or she can acquire the skills necessary to succeed through education. A vibrant growing national economy depends partially on the educational level of its citizens (National Center for Public Policy and Higher Education, 2006). As technology continues to advance, people are discovering that continuous learning may not only be desirable but also necessary (American College Testing, 2007). In a technological society with ever-increasing use of the Internet and other modes of commerce and communication, continued learning is imperative in remaining knowledgeable and competitive. Those who will not or cannot obtain the necessary skills to compete in an ever-complex workplace may end up in low-skill, low-paying jobs (Seidman, 2005).

Persistence in higher education can be a challenging endeavor. Even though access to higher education is becoming universally available, many students who start in a higher education program drop out prior to completing a degree or achieving their academic and social goals. Tinto (1993) indicates that there are more students who leave their college or university than students who complete the degree. In 1993 approximately 2.4 million students entered higher education for the first time. Of the 2.4 million, over 1.5 million left their first institution without receiving a degree. In addition, 40% of all college entrants left college without earning a degree. Currently, The National Center for Public Policy and Higher Education (2006) reports that the United States is “under
performing” or exhibiting less success, in the area of higher education. Other nations are growing in levels of college participation and degree attainment that reflects their grasp of the monumental difference a college-educated population makes in the arena of a knowledge-based economy with growing worldwide competition. The United States must persist in gaining knowledge surrounding retention in the area of higher education with the goal of helping student’s succeed.

To increase retention Seidman (2005) reports that colleges have provided programs for the economically disadvantaged, programs for minority students, programs and services for students with disabilities, women, and senior adult as first time students. Regardless, retention from first to second year has not improved over time. The addition of programs and services should improve the retention of students, but in reality this seems not to be the case.

There are a number of areas critical to the retention of students. They include: (1) the relationship between pre-college characteristics (high school GPA, SAT scores) and college success (Murtaugh, Burns, & Schuster, 1999); (2) personal characteristics (family background, race, gender) and withdrawal from college (Braxton, 2004); (3) examining retention and the causes of student attrition; (4) evaluating the recommendations to colleges for interventions to decrease the rate at which students leave higher education before graduating (Astin, 1993; Tinto, 1993) and (5) identifying and evaluating specific campus programs designed and implemented to enhance retention of students (Murtaugh, Burns, & Schuster, 1999).
This study will address two areas. First, this study will examine the relationship of seeking counseling to retention. Secondly, the personal concerns that students report for seeking counseling, and the relationship to retention will be explored. Encompassed in this exploration is the opportunity to gain understanding and insight into the relationship between clinical factors related to retention and students who do pursue mental health counseling. This understanding, will contribute to the development of preventative interventions to decrease attrition of students.

There is limited research surrounding the impact of counseling center services on retention. Cooper and Archer (2002) report in their survey of 168 (of 373) counseling center directors, that performing assessment and evaluation activities is more prevalent than research regarding student characteristics, outcome studies, or basic science investigations. Even so, counseling centers are under pressure to participate in retention efforts and in research (Turner & Berry, 2000). Boyd, Roberts, and Cook (1994) discuss the importance of conducting college center evaluation and research. They believe evaluation and research is necessary for documenting outcomes, demonstrating accountability, providing an understanding of student characteristics, assessing changes in student attitudes and behaviors, and providing a data source for college campuses. Even so, there is little research focusing on the concerns that clients present in counseling and the relationship to retention. Most of the contemporary literature focuses on these areas separately. Kitzrow (2003) did a literature review on the changing mental health needs of today’s college students and Sharkin and Coulter (2005) discussed the increasing severity of client concerns, while Noel, Levitz & Saluri (1985) reviewed
programs and practices for reducing attrition. Studying the relationship between clients seeking counseling and retention and client reasons for pursuing counseling and retention is an un-touched area of research, specifically, for the university where this study is performed. Studying the relationship between client concerns and retention has the potential to provide vital information for fostering student success.

Statement of the Problem

Student attrition is a nationwide puzzle that most universities and colleges must solve (Braxton, Hirschy, & McClendon 2004; Carey, 2004; Tinto, 1993). This concern has captured the attention of institutional practioners, state policy makers, and scholars (Braxton, Hirschy, & McClendon). The National Center for Higher Education Management Systems (2007) reports that students are more likely to drop out of post-secondary education during the first year than any other time, and if policies can be implemented that help to increase retention rates either within institutions or through transfer, students are more likely to persist to graduation.

The United States has been successful in promoting access to higher education. However, research indicates that providing student funding and policy priorities favor access, over college readiness and success. Federal and state funding and policy debates have capitalized more on providing access to higher education than on preparing students to enter higher education or persisting in higher education and completing a degree in a reasonable amount of time (Hauptman, 2007). Therefore, student success is affected.

The numbers of students enrolling in higher education is on the increase, however, once they get there a large number do not stay. In Ohio, over a five-year period,
(2000-2004) on average only 68.6% of “first-time, full-time, degree seeking undergraduates as a % of first-year students” persisted (Ohio Board of Regents, 2006). Thus, it is critical that institutions explore issues impacting retention.

More positively, research indicates that the percentage of first-year students who returned for their sophomore year increased for the fourth consecutive year in 2000 (ACT, 2004). Specifically, in 2000, American College Testing (ACT) found that 74.2% of 1,641 first year students attending four-year institutions returned for their second year, compared to 73.1% in 1996, the lowest figure in the previous ten years. However, ACT also indicates that the percentage earning a bachelor’s degree within five years of graduating from high school continues to decrease and has been on the decline for over 12 years. Currently, 46.9% of students are graduating from public and private colleges in five years or less (ACT, 2006).

The university in this current study (a large public research institution in the mid-western United States) has done an annual retention study for many years (Office of Institutional Research, 2006). This study utilizes existing data from the university's student information system and reports the variables that related to retention and attrition. The study includes the following student characteristics: gender, ethnicity, admission status, residency, living arrangement, academic college and major, aptitude, high school and college academic performance and course enrollment (Williford & Schaller, 2007). The information amassed in the study has been used to identify areas where retention is good and attrition is high. The areas where attrition is high have been addressed by
various retention efforts. An example of that effort is, utilizing responses from the Student Involvement Study (Office of Institutional Research, 2007) to identify potential leavers or individual freshmen who were likely to leave though their academic standing made them eligible to continue. Various intervention methods were implemented throughout the years of the study, usually by Residence Life staff, faculty or academic advisors. Based on the intervention contacts, students were referred to the counseling center, financial aid, or academic advisors (Williford & Schaller, 2007).

In 2003-04, a significant effort was made to either begin or revitalize various retention strategies including, learning initiatives, residential learning communities, student engagement committees, supplemental instruction workshops, and academic probation intervention (Williford & Schaller, 2007). In spite of these efforts, the university has experienced a gradual decrease in first-year retention over the past five years to the current rate of 78% (Office of Institutional Research, 2007).

This data clearly indicates that despite the increase in the number of students entering higher education, retention of these students is not on the increase. Attrition affects numerous students and educational institutions. Moreover, the impact of not completing a secondary degree are more costly in the 21st century, especially in a time when more and more jobs will require the advanced skills and knowledge that a secondary degree provides (Carey, 2004; Tinto, 1993). In addition, with each student who does not persist, the institution loses thousands of dollars (Lundquist, Spalding, & Landrum, 2002; Tinto, 1987). For example, at the University in this study, one retained student is worth $15,000 (estimated tuition and subsidy). Over four years, one retained
student would result in $60,000 for the institution (Ohio University Annual Retention Study, 2006).

Inclusive in the national concern for attrition is the mental health of the students entering college (Coll & Stewart, 2002; Sharkin, 2004; Sharkin & Coulter, 2005). A growing number of students arrive on campus suffering from various emotional disorders, some previously diagnosed and some hidden (Kirn, 2003). Gallagher (2005) indicates that 95% of counseling center directors report an increase in students coming to counseling who are already on psychiatric medication, up from 92% of directors in 2004. Further, a total of 96% of counseling center directors believe that the increase of students with more serious concerns is a concern in their centers. This concern elevates the need for availability of sufficient staff and services to accommodate the student need. Some of the counseling centers directors concerns are: an ever-increasing demand for counseling services, limited resources, pressures for administrative accountability, the necessity for psychiatric medication evaluations and the availability of hospitalization when necessary (Sharkin & Coulter, 2005).

University and college counseling services have served an important role in the overall mission of secondary education for many years (Meadows, 2000). The primary function of college counseling centers continues to be the provision of direct counseling interventions to students whose personal problems interfere with their ability to function within the academic environment. Difficulty in functioning in the academic environment hinders student success. Recent studies (Vermeersch et al., 2004; Whipple et al., 2003) report positive outcomes for studies examining counseling services and student
functioning. Interference in a student’s ability to function within the university environment could increase attrition. An increase in attrition is a negative for the student and for the institution.

In sum, attrition and students’ mental health are primary issues that must be addressed for the success of students and the institutions they attend.

*Research Questions and Hypotheses*

There is little research exploring the concerns that clients present in counseling and the relationship to retention. A review of the literature revealed that despite the potential importance of counseling in the retention of students, there is limited research on the relationship between retention and presented problem (Bishop, 1990; Sharkin, 1997; Sharkin, 2004). Early studies reflected a strong relationship between counseling and academic success (Meeus, 1999) and between counseling and higher graduation rates (Frank & Kirk, 1975). More recent studies reflect concern over the increasing severity of concerns with which students come to college (Gallagher, 2005; Kirn, 2003; Nolan, Ford, Kress, Anderson, & Novak, 2005; Sharkin, 2004; Sharkin & Coulter, 2005). The current study explores the relationship between seeking counseling and retention and the issues that clients present in counseling and retention. The following research questions guided this study:

RQ1: Is there a relationship between seeking counseling and retention?

RQ2: Is there a relationship between client presenting concerns and retention?

The specific statistical hypotheses examined in this study to address the research questions were the following:
There is a relationship between seeking counseling and retention.

There is a relationship between client present problem and retention.

*Research Hypothesis*

For the first question, it is hypothesized that there will be a significant rate of retention for first-year students who sought mental health counseling. This hypothesis was based on previous related research (Bishop, 1990; Bishop & Brenneman, 1986; Gerdes & Mallinckrodt, 1994; Kitzrow, 2003; Turner & Berry, 2000). Following is a summary of what they found.

Bishop and Brenneman (1986) studied 122 students who pursued counseling because they were considering leaving higher education, transferring institutions, or fearful of academic failure. Findings indicated that more than 86% of these students continued their enrollment for a minimum of one semester, and only three of the students counseled chose to leave the institution voluntarily. Gerdes and Mallinckrodt (1994) performed a six-year longitudinal study surveying 387 students to assess anticipated and actual adjustment to college. They focused on three areas as potential predictors of attrition: emotional adjustment, social adjustment, and academic factors. The results indicate that students overestimated their ability to adjust socially and academically to college, and underestimated their ability to adjust personally and emotionally. The findings of the study, also indicate, that personal adjustment and integration into the social life of the university are as important, if not more important than academic factors in retention. Finally, counseling-based interventions are suggested to address the issues that arise with the difficulties in adjustment and integration.
Kitzrow (2003) reviewed the literature on the changing mental health needs of the current student population and the challenges created by both the increasing number of students with serious psychological concerns and the increase in the number of students seeking counseling. Today's college students are increasingly diverse and so are their mental health needs. The challenge to provide counseling for these students includes addressing gender and multicultural issues, career and developmental needs, stress, violence, life transitions and serious psychological concerns. Kitzrow identified a variety of social and cultural factors contributing to the increase in both the severity of presenting client concerns and in the demand for counseling including: divorce, family dysfunction, instability, poor parenting skills, low tolerance to frustration, experimenting with drugs, sex and alcohol early in life, and poor interpersonal attachments. In addition, many psychological disorders such as Depression, Bipolar Disorder, and Schizophrenia present in late adolescence or early adulthood.

Finally, Turner and Berry (2000) explored the impact of counseling on academic progress and retention, using both objective and self reported measures from the counseling center data-base. The students had received individual or group counseling over a six-year period n = 2,365. The results from this study support the role of counseling centers in increasing student retention on university campuses. This study showed that the retention rates of counseling center students are repeatedly better than the rates for the entire student body. This positive result was achieved in spite of the students at risk status by virtue of their experiencing personal concerns that were hindering their academic progress.
Previous research supports the analysis of initial intake data and reflects that the level of severity of client concerns has increased from the 1950s and 1960s through the early 1990s and 2000s (Kitzrow, 2003; Pledge, Lapan, Heppner, Kivlighan & Roehlke, 1998; Sharkin, 2004). There are a significant number of concerns that students in this study indicate bring them into counseling and contribute to their leaving the university. So, as for the second research question, it was hypothesized that there will be a significant relationship between client presenting concerns and retention.

Kitzrow (2003) did a literature review on the changing mental health needs of college students and the challenges proposed by both the growing number of students with serious psychological concerns on campus, and the increase in the number of students seeking counseling. Pledge et al., (1998) performed a 6-year multivariate analysis at a large mid-western university, utilizing initial client intake data gathered from 2,326 students. The findings of that report indicate that the severity of concerns had intensified from the traditional presenting concerns of adjustment issues and indviduation that were seen for students in counseling center research from the 1950’s and 1960’s through the early 1980’s (Heppner & Neal, 1983). In addition then, Gerdes and Mallinckrodt (1994) concluded that students who experienced more difficulty in adjusting emotionally, socially, and/or personally to college were less likely to persist.

Relevance of the Study

The current study expanded on the contemporary research literature and has the potential to provide vital information for counseling centers, college students and the university. Specifically, this study is differentiated from the previous literature in three
ways. First, this is the initial study examining the relationship between client reported concerns such as loneliness, suicidal thoughts, self-mutilation, anxiety and retention at a large, public, research university in the mid-western United States. Secondly, this study is considering the factors GPA, ethnicity, residence, client presenting problem and gender, that are related to retention, specifically for clients of this university counseling center, which to date has not been done. Finally, and most importantly, the current study responds to the suggestions of other researchers (Coll & Stewart, 2002; Cooper & Archer, 2002; Hodges, 2001; Pledge, Lapan, Heppner, Kivlighan, & Roehlke, 1998; Sharkin, 2004). For example, Cooper and Archer write about counseling centers assessment and evaluation activities being more prevalent in research than client characteristics or outcome studies. In addition, Sharkin emphasized the need to consider counseling contribution to retention for students who present with concerns such as anxiety and depression. Until now, the university’s campus counseling center has not conducted a research study of the relationship of clients seeking counseling and retention.

By addressing these three issues, this study may enhance the personal, social and academic life of students. The study may also increase the understanding of retention and attrition for the university and its students thus fostering student success, while also seeking to broaden the research literature about retention. Examining the relationship between seeking counseling and retention and client concerns and retention may also provide further evidence of the value of college counseling centers and the services they offer to students. Research indicates that the severity of client concerns is increasing, and thus, a study of the relationship between client presenting concerns and
retention is timely (Sharkin, 2004). As stated earlier, the primary goal of institutions is to foster student success. The higher an institution’s level of commitment to students is (that is how well the institution is able to provide help and support) the higher is retention (Williford & Schaller, 2007). A final aspect is students who are retained increase the revenue of the university and students who stay in school and graduate are more likely to find gainful employment.

Student attrition is a worldwide concern that the majority of universities and colleges need to address (Braxton, Hirschy, & McClendon 2004; Carey, 2004; Tinto, 1993). Though this concern has captured national attention, research indicates that funding and policy in the United States has focused more on making higher education available rather than focusing on college readiness or degree completion (Hauptman, 2007). The numbers of students enrolling in higher education is increasing, however, retention is not (National Center for Higher Education Management Systems, 2007). Thus it is critical that institutions explore issues impacting retention. The institution in this study has implemented various intervention methods to increase retention. However, in spite of these efforts there has been a gradual decrease in first-year retention over the past five years (Ohio University Fact Book, 2006).

Inclusive in the national concern about attrition is the mental health of first-year students (Coll & Stewart, 2002; Sharkin, 2004; Sharkin & Coulter, 2005). Students are coming to college with serious concerns and on psychiatric medication. A total of 96% of counseling center directors perceive the increase of students with more serious concerns to be a concern in their centers (Sharkin & Coulter, 2005). Students coming to college
with more serious issues can cause interference in a student’s ability to function and succeed as a student.

Exploring the factors that impede student success and, therefore, impact persistence provides useful information to help students succeed in their pursuit of higher education (The National Center for Higher Education Management Systems, 2007).

Delimitations/Limitations

The scope of this study was limited to the students of one, large, public, research university in the mid-western United States. Therefore, the results of the study might not be applicable to all post secondary institutions, and thus, their generalizability may be somewhat limited. Another limitation was the fact the study utilized a self-reporting questionnaire thus the data are limited to the client’s perception. A delimitation for this study was the data for diagnosis of individual clients were not available on the client questionnaire used in this study, therefore, the study was limited to the individual client concerns for pursuing counseling. Also, this is a study based on pre-existing data collected by the university’s counseling center. As a result, the data is limited to those variables collected and cataloged by the counseling center. In addition, a revised client questionnaire (including the client’s permission to use anonymous data for research purposes) was implemented during one of the academic years’ of data collection (2005-2006) thus limiting a percentage of useable data. Further, the data used were limited to those first-year students who had signed informed consent.

An additional limitation with this current study, as with most social science research, is the potential of researcher bias. There is generally a risk that the attitudes or
belief systems of the researcher might influence outcomes with regard to selection of variables. It is important to note that steps are being taken to ensure that the bias is minimized in this study. The author of this study is required to and will abide by all the ethical guidelines for research as mandated by the American Counseling Association (ACA, 2005). The above delimitations/limitations did not stop the forward progress of the study.

Definition of Terms

For the purpose of this study, the following terms were defined as stated below:

*First-Year Student:* New freshman is defined as a full-time degree-seeking student who (1) has or will receive a high school diploma from a chartered or accredited secondary school, or General Education Development diploma and (2) has not been enrolled for 12 or more quarter hours (or 9 or more semester hours) of coursework at a college or university since completing secondary school (Ohio University Office Fact Book, 2006).

*Reported client concerns:* Items circled or checked to discuss with a counselor on the client questionnaire. The “concerns” were divided into twelve categories as follows:

1. “Anxiety and Thought Disturbance” (Anxiety, Compulsive Behaviors, Fearing Failure, Financial Concerns, Panic Attacks, Stress)
2. “Mood Disturbance” (Death/Grief Issues, Depression, Guilt, Hallucinations, Loneliness, Mood Swings, Self-Mutilation, Shame,
Sleep Concerns, Suicidal Thoughts, Troublesome Thoughts, Impulsiveness),
3. “Relational Concerns” (Family Concerns, Homesickness, Peer Relationships, Romantic Relationships, Social Dating Issues),
4. “Academic Concerns” (Academic Issues, Attention Concerns, Career Issues, Exam Panic, Learning Concerns, Over Responsible,

Seeking Counseling: Students going to the university counseling center and giving their consent for use of their individual intake data.

Student Retention: The percent of students entering the university each fall quarter as degree-seeking first–year students who return the next fall quarter (Ohio University Fact Book, 2006).

Summary

“A strong expanding national economy depends in part on the on the educational attainment of it citizens. However, persistence in higher education can be a challenging endeavor. Regardless of the access to higher education, completion appears to be a problem” (National Center for Public Policy and Higher Education, 2006; Tinto, 1993; ACT, 2007).

Various types of programs have been developed and implemented to increase retention. Seidman (2005) identified programs and services for students with disabilities, women and senior adult programs for first-time students. Still, retention from the first to
the second year has not improved over time (Seidman). This is an issue of national concern.

Of the areas critical to the retention of students, mental health counseling and retention are positively correlated in the research. The research does not address a relationship between seeking counseling, client presenting concerns and retention. This is a vital area of needed research to support student success (Boyd, Roberts, and Cook, 1994; Turner & Berry, 2000; Kitzrow, 2003; Sharkin & Coulter, 2005).

This study seeks to identify whether or not a relationship exists between seeking counseling and retention at a large mid-western university and to explore the relationship between client presenting concerns and retention. Retention is one area of an enrollment management program over which an institution can exert considerable influence and control. If the ultimate goal of a retention effort is improved educational experiences, then the results of this study increases the opportunity for student’s success and decreases the opportunity for attrition. The chapter that follows reviews the relevant literature.
CHAPTER TWO: LITERATURE REVIEW

America, “land of the free and home of the brave,” leads the world in a great many things. For example: geo-political influence, economic output, and popular culture, to name a few (Carey, 2004). To this list we can certainly add higher education. Collectively, US colleges and universities are unparalleled, attracting students and scholars from across the globe. Higher education, and the opportunity it offers has long been the avenue to social mobility and economic progress in our society (Carey, 2004). The action taken by the US reflects a steady increase in our investment in the higher education of the populace. Beginning with the first colleges founded in the 17th Century, to the land grant institutions of the 19th Century, to the G. I. Bill after World War II, the increase in investment in education continues (Carey).

As a result, the United States’ history reflects the best-educated, most productive workforce in the world (Carey, 2004). Our historical national commitment to education has paid fantastic dividends. But now there is a danger that having come to this point, we may conclude that no more substantive progress or fundamental change is necessary. Arriving at the top culminates in the temptation to believe that steady care and maintenance of the current system is all that is needed to keep us there. This would be a big mistake (Carey, 2004).

America’s colleges and universities have a serious problem: a significant number of students who enter our higher education system fail to get a degree. Student attrition from colleges and universities has become a problem of national concern (Carey, 2004; Hackman & Dysinger, 1970).
At the beginning, persistence in college requires individuals to adjust, both socially and intellectually, to the new and sometimes different world of college. Most persons, even the most able and socially mature, experience some difficulty in making that adjustment. For many the period of adjustment is brief, the difficulties they encounter relatively minor, however, some find it so difficult that they quit (Smith, 2005; Tinto, 1993).

Even among the students most likely to succeed, those who begin their college career as full-time freshmen in four-year colleges and universities, only six out of every ten on average, get a Bachelor of Arts degree within six years (Berkner, He, & Cataldi, 2002). This equates to over half a million collegians every year, a group disproportionately made up of low-income and minority students, who fall short of acquiring the credentials, skills and knowledge they seek (Berkner, He, & Cataldi, 2002).

The negative impact of this low completion rate has not been apparent in recent years, because the number of students entering the system has been rising. The number of students going on to two-year or four-year colleges and universities has increased from 7.5 million in 1970 to almost 17 million in 2004, with the biggest gains among female and low income students (U.S. Census Bureau, 2004).

Unfortunately, once they get there, a large number of students do not succeed. A historical study performed by the U.S. Department of Education and the U.S. Census Bureau, has shown that college completion rates have not changed much since the early 1970’s (Adelman, 2004; Barton 2002) with completion rates of 66-67% for 1972, 1982, and 1992 high school graduates who enrolled at a 4-year institution. A more recent
study (1994-2000) by the U.S. Census Bureau reflected no overall change in the 5-year bachelors degree completion rate. This does not appear to be a new problem, however, the consequences of not graduating may have changed (Carey, 2004). Previously, those who pursued a college degree and failed still had the opportunity to find a solid middle-management job and move up the career ladder. Lack of success in college was seen as an individual disappointment, not a national issue (Carey, 2004).

The world has changed since then. The rapidly globalizing 21st Century economy is putting relentless pressure on lower-skill manufacturing jobs that once allowed people without a post-secondary education to stay comfortably in the middle class. This trend appears to be growing. The gap appears to be widening between educational haves and have-nots. People with a four-year degree or higher now earn much more relative to high school graduates than they did 30 years ago, and the gap increases with the level of the degree (U.S. Census, 1975-2001). By contrast, those who enroll in college but fail to graduate, or get an associates degree, have made only slight gains, while the distance between those students and B.A. or advanced degree recipients is growing. Not getting a high school diploma at all, which has never been wise, is more of an economic dead-end now than ever before (U.S Census, 1975-2001; Carey, 2004).

The ranks of those in the “middle ground” of higher education attainment are significant. The latest Census numbers estimate that 19% (almost one in five) of adults age 25-34 fall into the category of “some college, no degree.” This constitutes a huge national problem because as economics in other nations mature and evolve, external job pressure is creeping further and further up the income and skills ladder. Advances in
telecommunications have made possible the “outsourcing” of white-collar jobs in the following areas: computer programming, claims processing, accounting, and medical diagnostics. These jobs have been “outsourced” to countries with a growing labor pool of English-speaking college graduates who are willing to work for far less than the average wage of similar workers in the United States (Carey, 2004). It seems that the rest of the world has seen the success of America’s past investment in higher education, and is now catching up. Recent reports from the Organization of Economic Cooperation and Development (2003) suggest that over the last 10 years, the U.S. has lost its first-place position in the developed world in terms of college-going rates. Similarly, this report charts America as slipping from first in college attainment, measured by the percentage of 25-34 year olds with a four-year college degree. More significantly, every country studied except one, made definite strides in increasing college attainment rates for the current generation compared to the last. The one exception was the U.S., which made no progress at all. College attainment rates in some nations have more than doubled over 20 years. The U.S. rate, alone among its peers, is unchanged (OECD, 2003).

“It seems as if our historical forward momentum is slowing, our international lead is slipping, and the timing is not good. The aging of the baby boom generation means that the proportion of the U.S. population of working age will decline. Over the next 50 years, the percentage of persons age 20-64 is projected to drop from the current 59%, to 53%” (U.S. Census Bureau, 2004). Even as proportionately fewer people are in the workforce, more and more jobs may require the advanced skills and knowledge that higher education provides. The U.S. Department of Labor (2004) reports the need for
millions of new jobs requiring a four-year degree or more in the coming decade. Whether our higher education system is able to meet this challenge will make a big difference in our future prosperity (Carey, 2004).

The former Federal Reserve Chairman Alan Greenspan noted: “By the time that the United States entered World War II, the median level of education for a seventeen-year-old was a high-school diploma—an accomplishment that set us apart from other countries…. We need to be forward-looking in order to adapt our educational system to the evolving needs of the economy and the realities of our changing society…. More broadly, our system of higher education bears an important responsibility for ensuring that our workforce is prepared for the demands of economic change” (U. S House of Representatives, 2004). This suggests that low college graduation rates are something our economy cannot afford and our society must not tolerate.

Attrition and/or Retention Theories

The college campus climate is changing, and professional college counselors must remain aware and prepared to effectively serve the needs of their clients. College students have various needs related to retention. Many college campuses are putting a strong emphasis on retention (Davis & Humphrey, 2000). In order to reduce attrition and increase retention it is necessary to understand the contributing factors and the preventative factors. Following is a review of the various theories proposed and the empirical studies completed that offer insight into student attrition and retention.
Initial Theories

The early major theories and models attempted to explain college student retention and attrition. By 1970, retention had become an increasingly common topic within and among college and university campuses. The concerns about student dropout and satisfaction became increasingly solidified throughout the 1960’s and the 1970’s and ushered in greater efforts to systematically identify causes and solutions to the puzzle of retention (Berger & Lyons, 2005; Seidman, 2005). Tinto (1987) described the early models and theories as being too simplistic and focusing heavily on individual weaknesses and/or psychological traits. The focus of much of the early research on attrition identified factors that caused students to leave school at the undergraduate and graduate levels (Summerskill, 1962). The focus was not directed on the processes that caused individuals to drop out or the quantitative impact of the factors involved. Early research was not adequate in the development of better understanding of college student dropouts nor did it succeed in substantially reducing high attrition rates (Summerskill).

Spady’s (1970) and Tinto’s (1975) models began focusing on causality. Spady was the pioneer in attempting to provide an explanation for dropout behavior. He based his model on Durkheim’s (1961) concept that establishing social support could reduce suicide. Durkheim’s work was considered groundbreaking and influenced the attrition research of Spady, Tinto, and Pascerella (1980).

Spady’s sociological model began to explain the student departure process as an interaction between the student and the college environment. Throughout this interaction a student’s attributes (values, interests, skills, attitudes, etc.) are exposed to norms of an
environment (faculty, peers, administrators). If the student and the environment are congruent in their norms, the student will assimilate both socially and academically, increasing the odds of persistence (Sideman, 2005). Not long after Spady introduced his model Tinto built upon and enhanced Spady’s model. Other theorists followed and below are an in-depth review of the various theories.

*Tinto's Theory.*


Based upon his research, Tinto (1993) identified eight major reasons for student departure from college. The identified causes were (1) intentions, (2) commitment, (3) adjustment, (4) academic difficulty, (5) congruence, (6) individual isolation, (7) obligations, and (8) personal finances. He divided these into factors that the student possessed when he or she entered college (intentions and commitments), and what the student encountered and experienced after starting college (adjustment, academic difficulty, congruence, and isolation). After identifying the eight reasons, Tinto (1987) formulated his interaction model of attrition.
Adjustment then was defined by Tinto (1993) as a student’s ability to integrate into the intellectual and social areas of a college. Congruence referred to how well the students perceived themselves to be a part of that intellectual and social life of the college (Tinto). Tinto (1987) then defined individual isolation as “the absence of sufficient contact” (p. 55-56, 1987) between students and other members of the social and academic areas of the university community. Obligations (employment, immediate or extended family) and personal finances were external factors that might affect the student’s experience in higher education. Tinto based his interaction model on Emile Durkheim’s sociological theory of suicide and the work of Arnold Van Gennep, an anthropologist. Tinto utilized two of Durkheim’s (1961) concepts (as cited in Tinto, 1993). First he drew a comparison between suicide and the departure from higher education as they both involve people voluntarily withdrawing themselves from a community unit. He also saw similarities in Durkheim’s egotistical suicide and student attrition. Egotistical suicide (one of the four types of suicide established by Durkheim) happens when individuals are unable to become socially and/or academically integrated and establish membership within the communities of society. Tinto (1993) proposed that students leave an institution of higher learning when they did not become socially and intellectually woven into the community.

Van Gennep (1960) perceived people’s lives as a series of passages. Tinto (1993) rolled that over into students having to process a similar series of passages to stay in school. Tinto identified three stages or passages: (1) separation (from before college groups or communities), (2) transition (working out the differences between the old and
new groups and their norms), and (3) incorporation (adopting and maintaining the new
norms or behaviors). Thus students have to navigate the physical, the social and the
academic spheres of collegiate life (Von Zuben, 2004).

Tinto’s (1993) integrates the paradigms of Durkheim (1961) and Van Gennep
(1960) into his causes of attrition. A student transitions into the college community with
their own goals and intentions and the student and their experience are affected by the
separation from the previous community. They apply these intentions/goals and
commitments to their new community. The intentions and goals may or may not disrupt
the transition to or incorporation into the university community. Depending on the
student’s experience they may experience Tinto’s causes of attrition. These factors
contribute to students subsequently persisting or leaving. A student’s understanding of
the difficulty affects their degree of social and academic integration (Von Zuben, 2004)
The fluency of integration impacts and changes the student’s intentions and goals and
then influences his/her decision to persist or depart from higher education. According to
Tinto, (1975) there are two aspects of academic integration-structural and normative.
Structural academic integration refers to one’s ability to meet the institutional standards.
Normative academic integration is about how well the student identifies with the norms
of the system. The next theory for review is John Bean’s (1980) model.

Bean’s Theory

John Bean’s (1980) model suggested that college leavers were analogous to
employee turnover and that students leave college for the same kinds of reasons that
employees leave their jobs. Bean’s model built upon the work of Price (1977) and incorporated four categories of variables (1) leavers (dependent variable), (2) satisfaction and institutional commitment (intervening variables), (3) organizational determinants, and (4) background variables (SES, size of hometown, high school performance, distance to home state residency, family approval and approval of friends). Bean also proposed that organization factors such as routinization, communication, commitment to goals, and institutional quality will affect satisfaction levels and eventually affect turnover for employees and attrition rates of students. Similar to Tinto’s model, Bean supports a level of interaction between students and institution.

Bean’s (1980) model emphasizes the importance of behavioral intentions as predictors of persistence behavior. It presumes that a process shapes these intentions whereby beliefs shape attitudes, which in turn influence behavioral intentions. It is further presumed in this model that beliefs are affected by a student’s experiences with overall campus quality, academics, and friends (Von Zuben, 2004). External factors (family approval and encouragement of friends) and the role they play in affecting student attitudes and decisions during college are significant. The model’s results supported the presumed role that organizational, personal, and environmental variables play in forming attitudes and intentions; they also suggest the importance that non-cognitive variables such as family approval and the college environment play in a student’s decision to leave or persist (Harvey-Smith, 2003).

Bean’s (1980) model has similarity to Tinto’s (1993) only in that it also reflects that successful retention is gained over time and is complex, it also stresses the
importance of the marriage between the student and the university, and it recognizes the impact of factors brought with them to college on retention. Differently from Tinto, Bean theorizes that external factors have a greater role in retention and suggests that attrition may be impacted by gender (Von Zuben, 2004). Bean also thought traditional and nontraditional students leave college for different reasons (Bean & Metzner, 1985). Several other researchers began their investigations into the influences on student attrition and student persistence.

Astin’s Model

Alexander Astin’s (1984) theory of student involvement is a college student development model. His theory is behavior based and was derived from a longitudinal study about attrition that he published in 1975. The results of his study indicated that a student’s involvement or the lack thereof contributed to their persistence or departure from school. Astin defined involvement simply as the amount of physical and psychological energy that students invest in the college experience.

Astin’s (1975) longitudinal study indicates the most important and pervasive, significant environmental factor to involvement, is where the student lives. Obliviously, students who live in residence halls have more time and opportunity to get involved in all aspects of campus life. Similar results have been obtained in earlier studies (Astin, 1973; Chickering, 1974) and have been subsequently replicated (Astin, 1977, 1982). Astin (1984) says a student’s withdrawal from school is the “ultimate form of noninvolvement” (p. 303). The longitudinal study also showed that students who join fraternities or sororities, participate in extracurricular activities, are enrolled in honors programs,
involved in ROTC, participate in research projects, or have a part-time job on campus, 
are less likely to leave.

In comparison to Tinto’s (1975) theory, Astin’s (1984) theory is based more in a 
student’s behavior. Astin purports an emphasis on the behavioral aspects of involvement 
which he believes to be critical: “It is not so much what the individual thinks or feels, but 
what the individual does, how he or she behaves, that defines involvement” (p. 519). 
Tinto (1993) focuses on isolation and incongruence as factors leading to student 
departure while Astin focuses on a student’s lack of involvement. In addition, Tinto 
discusses a student’s pre-college experiences and transition to higher education while 
Astin does not. The detailed theoretical structure proposed by Tinto provided researchers 
with the opportunity to study student change and to develop additional models for 
investigating influences on student persistence, therefore, a theoretical foundation was 
established for empirical research (Metz, 2004). A commonality in both theories is the 
importance of student interaction whether it is intellectual or behavioral.

Milem & Berger (1997) did a study resulting in support for an integrated 
model in which student behaviors and perceptions interact to influence the development 
of academic and social integration. In performing this study, Milem and Berger, 
discovered a paucity of empirical evidence examining the relationship between Tinto’s 
(1975,1993) interactionalist model of student departure and Astin’s (1984) theory of 
involvement. They incorporated Astin’s behavioral measures of involvement into Tinto’s 
(1975) longitudinal model to create their integrated model.
The model indicates the level of a student’s behavior or the lack thereof creates certain beliefs about institutional and peer support, which then impacts future behavior (Von Zuben, 2004). Findings indicate early involvement is key to persistence. The extent to which students become involved during their first six to seven weeks are significantly related to persistence. Early involvement with faculty was found to be highly significant with a positive correlation in the persistence process. Involvement or noninvolvement behaviors effect student academic and social integration. Berger & Milem’s model (1999) also includes student entry characteristics, and institutional commitments, which are parts of Tinto’s model. Berger & Milem studied 718 first-year freshmen students for a full year at a private university. They used path analysis to test and their findings supported their combined model.

There are several limitations to this empirical research. The persistence measure captured only one year of a multi-year process. In addition, the measure of persistence was based on students, assessments, and not directly on institutional data signifying that these students had enrolled for the subsequent academic year. A third limitation concerns the behavioral measures. The involvement measures were self-reported responses to items contained on the surveys. Direct observations of these behaviors could produce different patterns of findings than did self-reports of the same behaviors (Von Zuben, 2004). Combs (1959) contended that although individuals believe there are providing an accurate report of their behaviors when they self-report behavior on a survey, they often unconsciously misrepresent their actual behavior in order to conform to expectations and protect self-esteem. Future studies of this type might involve direct observation of
behaviors in order to gain further information about the nature of involvement behaviors (Berger & Milem, 1999). Two researchers who continued their investigations into the factors of retention and attrition are E.T Pascarella and P.T. Terenzini.

Pascarella and Terenzini’s Model

Pascarella & Terenzini (1980) expanded the works of Spady, Tinto, Astin, and Bean. Social and academic integration formed the basis for Pascarella and Terenzini’s emerging theories on student intent and persistence. Both men outlined student involvement theory from the perspective of student interaction with faculty and peers. They provided a causal relationship model addressing both direct and indirect effects of student involvement and interaction.

In a separate model, Pascarella, Terenzini, & Wolfle (1986) went beyond Tinto’s (1975) single institution model and began addressing multi-institutional perspectives. Pascarella and Terenzini (1980), in another study, focused on the interactions and interrelationships between students and faculty. The model purports student-faculty informal contact and examines the process of how a student’s characteristics fit or interplay with institutional characteristics to effect persistence. These characteristics are said to have the power to influence the amount of informal contact that students have with faculty. Pascarella’s model has some similarity with Tinto’s model in identifying that students bring to college a series of characteristics, for example, ethnicity, secondary school achievements, family support and encouragement, and socioeconomic status, that influence initial levels of commitment to the institution and effect persistence.
Empirical Studies of Various Theories

Tinto, Astin’s and Bean’s theories have been tested by many studies (Lundquist, Spalding, & Landrum 2002; Milem & Berger, 1997; Pagan & Edwards-Wilson, 2003; Smith, 2005). Smith performed a study with 991 students at a four-year public institution in the northeast and found that a sense of connection and student-institution fit play an important part in student attrition or departure. Milem & Berger studied students at Vanderbilt University, and found evidence for Tinto and Astin’s models. Specifically, they found through a path analysis that student’s early involvement with peers, in social activities, in the fall semester would influence their perceptions about their experience at the university and increased the likelihood of persisting. They discovered that social involvement lent support to retention more than academic integration (Von Zuben, 2004).

Pagan & Edwards-Wilson (2003) did a study at an urban public college where the effects of mentoring intervention on academic performance and retention were measured. The goals of the project were to help students on academic warning or probation to improve their grades and increase the retention rates at the college. Mentors were recruited from a list of opportunity program students who had GPA’s of 3.00 and above and students at the college who had volunteered to be mentors. Mentors were assigned caseloads of 5 to 8 mentees. Mentors were trained and the mentoring program implemented several activities to accomplish programmatic goals. The findings of the study support the contention that mentoring programs (connecting with peers/faculty) assist students in staying at a university and can lead to some improvement in GPA’s. This contention concurs with the findings of Astin (1984) and Tinto (1993).
Lundquist, Spalding, & Landrum (2002) performed a study with the purpose of extending the preponderance of research that corroborates Tinto’s “path analysis model” which identifies four fundamental factors of retention: socioeconomic demographics of students; academic preparedness and standing; social support and integration; and the student’s persistence in attaining a degree. Their study expanded the faculty attitudes and behaviors that may influence student dissatisfaction that may lead to premature departure. They surveyed 729 students and presented evidence indicating faculty attitudes and behaviors do affect retention.

A 2005 study by the Policy Center on the First Year of College and the Higher Education Research Institute (HERI) surveyed 41,000 first-time, full-time, first year students from 144 colleges and universities. The 2005 administration of “Your First College Year” represents the largest and most representative first-year sample that HERI has collected to date. The highlights of their findings indicate that close to one-third of the students surveyed felt intimidated by their professors in the first year of college.

In regard to student adjustment, the majority of respondents felt “completely successful” in developing close friendships with other students; less than half felt completely successful about understanding professors’ academic expectations and adjusting to the demands of college in general. Less than one third were completely successful at utilizing campus services, developing effective study skills, managing their time effectively, or getting to know faculty. However, the vast majority of students were at least “somewhat successful” in each of these areas.
Porter & Swing (2006) did a survey of almost 20,000 first-year students at 45 four-year institutions combined with institutional-level data to understand how aspects of first-year seminars affect early intentions to persist. The survey used to collect data was the First-Year Initiative. The purpose of the survey was to give institutions formative evaluations of their first-year seminars in a way that would encourage continuous improvement. The researchers used a multi-level modeling approach to estimate the impact of specific elements of first-year seminars on intent to persist. Porter and Swing found students with better grades in high school as well as females, are more likely to express an intention to return to their institution the next year, while students who work a lot of hours during the week are less likely to say they will return. They also discovered that study skills and academic involvement, and health education, have substantial impact on early intention to persist.

Lastly, Light (2001) discovered, “there is a clear relationship between participation and satisfaction with college” (p.30). Specifically, he found that first-generation students and students of color, encouraged participation in campus organizations. Light also identified an unwillingness to seek help and isolation as two factors of students in trouble. He described the isolated students as… “not involved in any extracurricular activities….not members of a study group in any of their courses” (p.35). The student’s response to poor grades was to continue isolation and study alone.

The individual theories of Bean (1980), Astin (1984), Pascarella (1980) and Tinto (1993) do not completely explain student loss. They do provide foundational thought into
the reasons for attrition. Tinto stressed that students bring to college a series of
c Characteristics (ethnicity, secondary school achievements, family support and
encouragement, and socioeconomic status) that influences initial levels of commitment to
the institution and promotes attendance and graduation. Tinto believed that these pre-
college traits/influences and levels of student commitment directly affected the degree of
integration into a campus’s academic and social communities thus influencing the
persistence rates of students. Bean concurs with the necessity of integration as he stated,
“Retention rates are related to the interaction between the students attending the college
and the characteristics of the college” (p.171). He also stresses that students’ beliefs
(which subsequently shape their attitudes) are the predictor of their persistence. Students’
beliefs are affected by the interaction between students and different parts of the
institution similar to the interaction between employees and corporations. In addition,
external factors (parental support, encouragement of friends) significantly influence
retention. Astin focuses on student’s behaviors while at college. Finally, Pascarella &
Terenzini expanded the works of Spady, Tinto, Bean, and Astin. These men formulated
the theories based on social and academic integration and the effect on student intent and
persistence. In combining these theories a developmental progression evolves on how a
student may decide to persist or leave college.

Empirical Studies of the Factors Related to Retention

Much research has been done to pinpoint factors that contribute to students “at
risk” status. The causes of student loss, however, are intricate and involve a many
variables (Higher Education Research Institute, 2005; Sharkin, 2004). Much study is
needed in this area to ever grasp the intricacies of attrition. Tinto (1993) said, “Clearly the task of completely describing….is more complex than is commonly recognized” (p. 12). The U.S. Department of Education (2000) performed a longitudinal study and identified seven factors that place students at risk for leaving post-secondary education. They were not having a regular high school diploma, delayed entry by more than one year after high-school, enrolling as a part-time student, working full-time while enrolled, beginning as a financially independent (self-supporting) student, and/or as a student with children, and single parenthood.

Upcraft, Gardner, & Barefoot (2005) explored the need for current information on first year students and a majority of the causes of retention. They state that student retention involves a complex set of variables for both the institution and the student. These variables include academic factors (high-school grades, SAT/ACT, study skills, GPA) and non-academic factors (socioeconomic status, ethnicity, student involvement, place of residence, isolation, interaction with faculty, working while in school, and extracurricular activities). To follow is a review of specific studies about these and other factors that influence retention and attrition.

Academic Factors

ACT/SAT Scores and GPA

Academic factors consist of high school grades, standardized tests (ACT/SAT), college readiness, student commitment, GPA, and study skills. High school GPA is a good predictor of college academic performance, as well as performance on standardized achievement tests (Tinto, 1993). Hu and St. John (2001) did a study consisting of 26,537
college students at public universities in Indiana. They proved that college students with below a “C” average (African Americans, Hispanics, and Caucasians) dropped out more often than “B” average students, between the fall semester and the end of spring semester. Also their study indicated that African American college students with “C” averages were 43 to 49% less likely to persist than African American college students with “B” averages. Ishitani (2006) performed a study to investigate the timing of certain events, specifically, dropout and graduation. He utilized the National Education Longitudinal Study: 1988-2000 to develop a sample. He discovered that high school class rank and high school academic intensity had significant effects on college attrition behavior. Students from lower high school class rank were more likely to dropout of college. Finally, ACT (2007) suggest implementing an early alert, assessment, and monitoring system based on high school GPA, ACT scores, course placement tests, first semester college GPA, socioeconomic information and attendance records to identify and build comprehensive profiles of students at risk of dropping out.

Daugherty & Lane (1999) tracked 382 male, first year, college students for four years and discovered that lower SAT scores were associated with greater risk for attrition. Galicki & McEwen (1989) followed 529 black and 5,034 white freshmen at the University of Maryland for eight semesters. Their results state that students with higher SAT scores remained in college at a significantly higher rate than did those with lower scores. Ishitani & DesJardins (2002) examined the causes of attrition for 3,450 U.S. citizens who enrolled at four-year institutions between August of 1989 and October of
1989. They found that students with higher total SAT scores were less likely to leave college.

Other studies have concluded that SAT scores are not as predictive of retention. ACT (2007) reports high school GPA and standardized test scores account for approximately 25% of the variance in predicting the first year. Using multivariate analyses, Adelman (1999) and the U.S. Department of Education (2001) reported that SAT scores were not related to college student persistence until first year GPA was added to the analysis. They utilized a survival analysis to study 8,867 students who enrolled as first-time freshman at Oregon State University between 1991 and 1995. Their results suggested that high school GPA had “superior predictive value” (p.369) over SAT scores for student retention. An additional academic variable is college readiness.

College Readiness

Tinto (1993) indicates there are other factors that contribute to academic difficulty, such as, students’ intentions and commitment, study skills and study habits. These factors fall under the umbrella of “college readiness.” College readiness involves understanding student characteristics and skills within the context of college and is one of seven national education priorities (U.S. Department of Education, 2000). Byrd and MacDonald (2005) performed a qualitative study exploring the nature of college readiness from the perspectives of first-generation college students. Their findings indicate academic skills, time management, goal focus, and self-advocacy are important for college student success. Increasingly, decisions about college readiness are made by standardized assessments (Byrd, & MacDonald). Standardized-test-based admissions
may overlook nontraditional students historical and cultural backgrounds that might include strengths as well as deficits related to readiness for college. Some of the essential academic skills for college readiness are: reading, writing, math, technology, communication, and study skills (Byrd, & MacDonald).

McCabe (2000) reported 41% of entering community college students and 29% of all entering college students, are under prepared in at least one of the basic skills of reading, writing, and math. Since the 1980’s colleges have increasingly required placement testing to determine college readiness and offered or required developmental or remedial education for students placing below college level (Byrd & MacDonald). Some universities are implementing a measure to address the area of college readiness.

**Study Skills**

A measure utilized by universities is The Learning and Study Strategies Inventory (LASSI). LASSI is an assessment of study skills that can be used by colleges for several purposes: (a) for diagnosis and remediation of studying weaknesses; (b) to evaluate the success of study strategies courses; and (c) as a counseling instrument in colleges orientation courses (Nist, Mealey, Simpson, & Kroc, 1990). Research also shows that the LASSI measures improvement in studying and affective behaviors for both at-risk populations and regularly admitted students (Engle, Reilly, & Levine, 2003).

In examining the academic variables of retention, ACT (2004) reports three main categories responsible for the greatest contribution to retention in four year public colleges in the area of academics: (1) academic advising; (2) integration/first year programs and (3) learning centers. Academic advising includes advising interventions
with selected student populations, utilizing increased advising staff, and implementing academic advising centers. Integration of academic advising with first-year transition programs and centers ensures that combined advising and counseling (with career/life planning) will occur at a vulnerable time in the life of a first year student. First-year programs are quite extensive and include offering freshman seminar/university 101 for credit as well as non-credit freshman seminar/university 101. Also mentioned are learning communities, and integration of academic advising with first-year programs. Learning support is the third category and includes supplemental instructions, a comprehensive learning assistance center/lab, reading center/lab, summer bridge program and a tutoring program. The above studies indicate that academic integration and preparation are primary features of successful college retention. In addition to academic preparedness there are non-academic factors which impact retention. Following is an exploration of some of those variables.

Non-Academic Factors

*Individual Intentions/Commitment/Student Involvement*

Non-academic risk factors include: individual intentions/goals, commitment, student involvement, adjustment to college (place of residence, extracurricular activities, working while in school), isolation, students of different ethnicity and social class (Houser, 2005; Martin & Sheckley, 2000; Paul & Brier, 2001; Terenzini, Cabrera, & Bernal, 2001; Tinto, 1993). Individual intention, goals and commitment refer to important personal dispositions with which individuals enter institutions of higher education. These concepts help set the boundaries of individual attainment and influence
the individual experiences within the institution after entry. Generally speaking, the higher the level of one’s educational or occupational goals, the greater likelihood of college completion. This is especially true when the completion of college is seen as part of a wider career goal. The stronger the links between the goal of college completion and other valued goals, the greater the likelihood that the former goal will be attained (Martin & Sheckley, 2000; Pintrich & Zusho, 2002; Tinto, 1993). Martin & Sheckley offered information from a retention literature review, and indicate that identification of and commitment to career/educational goals are an important contribution to retention.

Hackman & Dysinger (1970) performed a study, examining whether the commitment of a student (and the parents) is important in determining persistence or dropout during the first-year of college. The data were collected from 1407 students enrolling in three mid-western liberal arts colleges and from the parents of 1331 of those students. Four categories of students were defined: persisters, transfers, voluntary withdrawals, and academic dismissals. The results indicated the commitment of a student and his/her parents to obtaining a college education (measured before actual enrollment in college) significantly relates to whether or not the student persists beyond his freshman year.

Individual commitments, whether expressed as motivation, drive or effort, are obviously related to the persistence necessary to completing a degree. Commitment includes a willingness to invest time, energy, and often-scarce resources to meet the academic and social demands required of students. It seems apparent that not all entering students possess that commitment. There are among any cohort of entering students some
who are not willing or not able to commit to the task of college completion and expend
the level of effort required to complete a degree program (Pintrich & Zusho, 2002; Tinto,
1993). Pace (1984) created the “Quality of Student Effort” scale, which measures the
extent to which students engage in higher-level activities frequently, associated with the
“serious” or highly motivated student. Pace concludes that quality of student effort is
more important than background factors.

Adjustment to College

Paul & Brier (2001) state that the difficulty in making the transition to college
arises from two sources: separation and difficulty with social integration. They
performed a study where friendsickness (preoccupation with and concern for the loss of
or change in pre-college friendships) was seen as a significant source of distress for
college students, affecting college adjustment. These researchers performed a short-term
longitudinal study of college students and examined the relationship between
friendsickness, pre-college predictors, and dimensions of college adjustments 10 weeks
into the first semester. Their study indicates that friendsickness has been associated with
pre-college social concerns, discrepancy between pre-college expectations and college
experiences, more pre-college friends in the college social network, and loneliness and
poor self-esteem in college.

Difficulty in transition may also arise from the individual’s need to adjust to the
new and often more challenging social and intellectual demands which students
encounter at college (Shelley, 2005; Tinto, 1993). How students deal with the adjustment
issue depends on intentions and commitments, personality and past experiences (Tinto; Shelley; Ogren, 2003). Another factor in adjustment is the university environment.

*Place of Residence*

Fleming, Howard, Perkins, & Pesta (2005) did a literature review defining the characteristics of a university and how these traits affect enrolled students. A key component was a campus’s climate. Several questions were posed to provide the necessary information to show the relationship between the individual and his/her environment. Questions such as: Does the campus feel open and accessible to students? Is there a sense of community and pride shown by faculty, staff, and students? Is there a sense of security or safety for all cultural groups on campus? The answers to these questions help in understanding the link between the formal characteristics of the university and the feel of its surroundings.

In addition, residence halls become an important focus within the physical environment for several reasons. First, students spend a lot of time within them studying, interacting, and sleeping. If the residence hall is not able to provide an environment in which these activities can take place, the result can be negative to the students living there. Aitken (1982) performed a study presenting four equations, theoretical model of student satisfaction, performance, and retention. The theoretical model is based on the premise that a student’s decision to remain at a specific university or college is directly determined by major aspects of the student’s experience. Living satisfaction was determined to be one of the major aspects of the student’s experience. Aitken discovered that peer relationships were clearly dominant in terms of relative importance. Liking
people on the floor, satisfaction with the behavior of other students in the residence hall and roommate satisfaction were all highly significant in student satisfaction and retention.

Ware & Miller (1997) conducted a literature review on the role that campus residential life plays in the life of college students. While some researchers have concluded that living on-campus or off-campus has little affect on student academic achievement (Bowman & Partin, 1993; Bliming, 1989), others have reported that on-campus living produces students with better critical thinking skills (Pascarella et al., 1993).

Thompson, Samiratedu, & Rafter (1993) reached a similar conclusion to that of Pascarella et al. (1993). These researchers studied 2,500 to 2,800 freshmen at a public university. They concluded that progress and retention were higher among students who lived on campus, regardless of race, gender, or condition of admittance.

Kanoy & Bruhn (1996) performed a study that showed that peer relationships formed by the students who participated in a living/learning residence hall program may have helped them to adjust to college. Their academic performance and involvement were enhanced, which lead to higher grade point averages and persistence rates than for students not participating in a living/learning residence hall. In addition to living satisfaction student’s involvement in extracurricular activities has an impact on retention.

**Gender**

Ishitani and DesJardins (2002) utilized a nationwide sample of 3,450 U.S. citizens (ages 18 to 25) who enrolled in college between August of 1989 and October of 1989. They tracked the students for five years and the results indicated that the attrition risks for
men and women were not statistically different. Pepe (2002) performed a study with 143 participants from a community college in central Florida, to determine if gender had a significant impact on retention levels. Multiple regression analysis was conducted and gender was not found to be significant in retention. Murtaugh, Burns and Schuster (1999) utilized survival analysis to study 8,867 first-year freshmen at Oregon State University and found that gender was not significantly associated with attrition. However, other studies reflect different results. Roweton and Bare (1991) studied significant precollege predictors of retention for two freshman classes in a rural college in Nebraska. Discriminant analysis was performed on each class, on gender subgroups, and on three ACT ability levels. Results indicated that females were more likely than males to stay in school after one or two years. Payne, Pullen, and Padgett (1996) surveyed 320 students who did not re-enroll at a medium-sized southern university and discovered that males were significantly more likely than females to leave the school.

Extracurricular Activities

The link between activities outside the classroom and retention seems pervasive throughout the literature in studies (Light, 2001; Mahoney, Cairns & Farmer, 2003; Pike and Kuh, 2005) and in theories (Astin, 1984; Milem & Berger, 1997). As mentioned earlier, the theories of Astin and Milem & Berger stressed the wisdom of student involvement in extracurricular activity. Pike & Kuh performed a study with 1,127 first and second-generation students. They found involvement in activities, both inside and outside of the classroom, increased learning opportunity and integration into university life, thus enhancing retention. Light performed more than 1,600 interviews with college
students and discovered that first generation and minority students benefited greatly from involvement in a campus organization or group. Lastly, Mahoney, Cairns, & Farmer did a longitudinal study with 695 students. The students were interviewed annually to the end of high school and again at age twenty. Family economic status, interpersonal competence and educational aspirations during adolescence were used to assess educational status at young adulthood. Consistent extracurricular activity participation was associated with high educational status at young adulthood, including college attendance and persistence.

**Working While in School**

What are the external forces that might influence students’ behavior and put them at-risk? Obligations may limit one’s ability to meet the demands of college. Obligations can include employment, families, children, siblings, and grandparents (Houser, 2005; Ogren, 2003; Tinto, 1993). Many students have to work while in college. Financial-aid needs are a big issue, particularly, for non-traditional students. They can become ineligible for state grants because while they work longer hours, usually at minimum wage, to keep up with rising tuition rates, they are left with less time to take the number of credits needed to remain eligible for state grants. These students, many with families or other responsibilities, are often left with few options for financial help (Strout, 2005). Generally speaking, employment can limit the time an individual has for studies and opportunities for interactions with students and faculty. A potential consequence is difficulty in social integration and academic performance (Tinto). Non-traditional students often face multiple life responsibilities, which may increase the at-risk status,
however, the impact of work and family obligations may not be the same for all students (Smith, 2005).

Most students work and work a lot while enrolled in college. The U.S. Department of Education (2003-04) conducted a study using data from the National Postsecondary Student Aid Study. The results indicated during the 2003-04 academic year, 78 percent of undergraduates worked while they were enrolled in college. Working while enrolled is perhaps the single most common major activity among America’s diverse undergraduate population. Regardless of age, gender, race/ethnicity, dependency or marital status, enrollment status, type of institution attended, or even income or educational and living expenses, 70-80 percent of students work while they are enrolled in college.

There was predictable variability in the amount of time students spend working, with part-time students, older students, low-income students, and students from underrepresented minority groups spending more time at work than others. Despite this variability, surprisingly large shares of white and upper-income students work more than 20 hours a week. About one-quarter of full-time students work full time. One-third of working students describe themselves as employees who also are taking classes. These individuals (most of whom are older and attend college part-time) continue working the jobs they had prior to enrolling into college. Most of the remaining two-thirds of working students state that their primary reason for working is to pay tuition, fees, and living expenses, with upper-income students more likely to work in order to earn spending money or gain job experience (U.S. Department of Education, 2003-04).
Pascarella & Terenzini (2005) report that part-time employment (ideally in a position related to one’s academic interests) positively affects persistence and degree completion. Unfortunately it appears most undergraduates do not hold such positions. Only one-third of working students spend 20 hours or fewer per week on the job. In addition, only 10% of all working students have work-study or assistantship positions, and half of these students hold a “regular job.” The vast majority of students work off-campus (91%), with students who work being slightly more likely to work on-campus than employees who study (American Council on Education, 2006).

**Interaction with Faculty and Peers**

A student’s social and interpersonal environments, which include peers and faculty, are important factors in student persistence. Braxton, Hirschy, & McClendon (2004) found a strong connection between social integration and retention. Research indicates that the absence of sufficient contact between the individual and other members of the social and academic communities of the college results in isolation. Isolation is the single most important predictor of student departure (Shelley, 2005; Smith, 2005; Tinto, 1993). Isolated students, for various reasons, fail to establish a significant personal tie with someone on campus, either faculty or student. This isolation puts the student at risk.

Peers have a powerful influence on a student’s academic success (Astin, 1993). Peers tend to influence social integration and have a stronger positive influence on women persisting in school than men. Pascarella & Terenzini (1979) indicate the quality of the peer relationships is more important to women than men. The values and attitudes portrayed by the various peer groups are important in predicting student persistence.
(Pantages & Creedon, 1978). Peer norms have direct and indirect effects on student persistence (Bank, Slavings, & Biddle, 1990).

Next to peer relationships, student-faculty relationships exert a major influence over a student’s intellectual and personal growth (Astin, 1993). Lundquist, Spalding, & Landrum (2002) performed a study surveying 729 students in regard to faculty attitude, behavior and student persistence. Their findings indicate the specific behaviors that impact retention are: being supportive of student needs, being approachable, and returning telephone and/or e-mails in a timely fashion. The frequency and quality of students’ interactions with peers is positively associated with persistence and reduces the at-risk status (Pascarella & Terenzini, 1998).

Minority Students

The change in the ethnic makeup of the United States population is well documented (Maton et al., 2006). The percentage of whites in the United States decreased between 1990 and 2000 from 75.7% to 69.4%. The percentage of persons of Hispanic origin increased from 9% to 12.6%, surpassing that of African Americans 12.2%. The percentage of Asian Americans also increased, from 2.8% to 3.8%. Non-Hispanic individuals identifying with two or more races and Native Americans represented 1.2% and 0.8% of the U.S. population, respectively (U.S. Census Bureau, 2002, 2005). It is surmised that every aspect of U.S. society (including higher education) has been influenced by the rapidly increasing diversity in the country.

The national fall undergraduate enrollment in degree-granting institutions reflects that students of color represent 31%. Of the 31%, African Americans represent
12%, Latinos 11%, Asian-Pacific Islanders 7%, and Native Americans 1% (NCES, 2004). While more minority students are enrolling in college, the percent actually walking out with degrees is troublingly low. Among students who began school during the 1995-1996 academic years, Asian American Students had the highest rate of attaining a bachelor’s degree, 62.3%, by July 2000. Meanwhile, 30.1% of black students had dropped out of school (Hayes, 2006). Research indicates, the transition to higher education seems to be more difficult for minority students than for white students (Gloria & Rodriquez, 2000; Rankin & Reason, 2005; Seidman, 2005; Tinto, 1987).

Gardner (2005) did a literature review and reports a number of barriers affect the success of minority students in their pursuit of a nursing education. The data suggest that minority students may feel lonely, alienated, and isolated, experience discrimination and believe classmates lack understanding and knowledge about cultural differences. They may also experience difficulty academically and with the English language.

Lavin & Crook (1990) examined ethnic differences in retention and found that minority students demonstrated less academic success and were far more likely than whites to leave college without any degree. They found that half of the black and Hispanic students attending community colleges never earned a certificate or a degree. Black and Hispanic students receiving diplomas were more likely to earn associate degrees than were whites. In addition, 40% of whites went beyond the associate level compared to one-third of blacks and Hispanics. The authors also discovered that it typically took minority students longer to earn an undergraduate degree. They concluded that a process of cumulative disadvantage is occurring that is partially derived from
differences in high school experience. Blacks and Hispanics reported receiving lower grades in high school and more frequently came from nonacademic high school tracks.

Several studies have focused on black students using surveys and quantitative data analyses. These studies provide information about the general experiences of black students at predominately white institutions (PWIs) and at historically black colleges (HBCUs) and universities. Allen (1992) and Jones (2002) report students experience exclusion, racial discrimination and alienation on predominately white campuses. In contrast, at HBCUs, students report feelings of engagement, connection, acceptance, and encouragement. Feagin, Vera, & Imani (1996) report the black students felt that white faculty, students and staff did not view them as “full human beings with distinctive talents, virtues, interests, and concerns” (p. 14). black students attending PWIs often feel fear and anxiety at being the minority in a particular environment (Smedley, Myers, & Harrell, 1993). This anxiety can mean that black students look for the increased company of other black students for their support. Feagin and colleagues also reported “a recent survey of black students at mostly white universities found they were so concerned about intellectual survival that they were unable to devote as much attention to their personal, social, and cultural development as they should” (p.75).

Smedley, Myers, & Harrell (1993) addressed the strains of the student role and the stresses of life events and minority status that may affect a student’s successful psychological and academic adjustment to college. They report that the “more debilitating minority status stressors were those that undermined students’ academic confidence and ability to bond to the university” (p. 448). They discovered that these
stressors come from internal sources as well as from the social climate and composition of the institution. Bynum & Thompson (1983) did a study supporting Smedley’s research and examined the issues of student departure at four different institutions. Their findings indicate that students of any race (Native American, African, or white) who are in the minority on campus are more likely to drop out of college prior to graduation than students in the racial majority.

Murtaugh, Burns & Schuster (1999) used a survival analysis to examine undergraduate student retention at Oregon State University between 1991 and 1996. These researchers tracked the academic progress of 8,867 freshmen. The results of univariate analyses suggested that blacks, Hispanics, and American Indians were at a higher risk of leaving school than whites. However, a multiple-variable analysis reflected little difference for American Indian, Hispanic, black and white students of similar ages, GPA, and residency. In fact, according to the multiple-variable analysis, black students were less likely to withdraw than white students.

Murtaugh et. Al., (1999) and Adelman’s (1999) findings were closely matched. Adelman, using a U.S. Department of Education nationwide study of 8,395 college students, used logistic regression to research what kept students from completing their undergraduate degrees. Race did not show as a significant variable. Adelman was quoted as saying that his study tried to prove race as a variable many times, but it just did not rise to the level of “statistical significance” (p.3).

So in summary, in the literature, there does not appear to be agreement on whether or not race influences attrition. The research does seem to indicate that students
of color have more difficulty in transitioning into higher education and are less likely to persist than white students. The research also indicates that students of color experience the campus environment as less supportive and are more likely to feel alienated in a PWI.

In lieu of the increase of diversity on American university and college campuses, researchers in the counseling field have turned their attention to the counseling needs of racial and ethnic minority students (Atkinson, Morten, & Sue, 1998; Ponterotto, Casas, Suzuki, & Alexander, 1995). It is imperative for higher education counseling center staff to be more prepared to understand and serve traditionally under-served and under-represented populations. Davidson, Yakushka, & Sanford-Martens (2004) performed a study on the utilization of a university counseling center’s services by non-international racial and ethnic minority students. This study was conducted at a large public, predominately European-American, mid-western university. Using archival data, and a total of 242 participants, the data was examined by utilizing ANOVA, bivariate correlation, and chi-squared analyses. Results reflect a very low percentage of racial and ethnic minority students (2.4%) sought counseling center services at the university. The total number of students for the 5 years studied indicates that less than 3% of all minority students came in for counseling.

The literature suggests that minority students, specifically African Americans, Latino Americans, and American Indians, do not use university counseling center services (Atkinson, Morten, & Sue, 1989; Ponterotto, 1987; & Sanchez & King, 1986). Atkinson et. al. (1989) discuss the underutilization of university counseling centers and focus primarily on contrasting worldviews and racial identity development. Some reasons
provided for minority student’s lack of patronizing university counseling services include
the lack of ethnically similar counselors, the lack of culturally sensitive treatment
approaches, the focus on individual rather than on environmental forces, and the staff’s
unfamiliarity with cultural differences.

Duncan & Johnson (2007) administered a help seeking survey that measured
socioeconomic status, cultural mistrust, and African American self-consciousness to 315
college students, to study attitudes toward counseling and counselor preference. Multiple
Regression analysis indicated that gender, cultural mistrust and socioeconomic status
were statistically significant predictors of attitudes towards counseling with lower
socioeconomic class, lower cultural mistrust and female being associated with more
favorable attitudes toward seeking counseling.

In summary, minority students appear to be underutilizing university counseling
center services. Increased understanding of and attention to the worldview and counseling
concerns of all ethnicities and races is essential. Because counseling centers have a
responsibility to every student seeking their services there may need to be a shift in their
training focus or current services in order to accommodate the needs of all students.

University Counseling Centers

When students enter college they experience both exhilarating and challenging
events. Those individuals who experience more challenging events than exhilarating
ones may leave (Tinto, 1993). Adjusting to college socially and emotionally are a couple
of those challenging areas. Gerdes & Mallinckrodt (1994) performed a longitudinal study
of 112 students from a large northwestern public university looking at the impact of
social and emotional characteristics on college retention. Prior to initial enrollment, undergraduates completed surveys assessing expectations about their college adjustment and later completed an additional survey assessing actual adjustment. Results indicated students expected an easier time of adjusting socially in college. This finding was similar to Holmstrom, Karp, and Gray (2002) in identifying the differences between student’s expectations and their actual experience. Holmstrom, Karp, and Gray (2002) who demonstrated that despite student’s explicit understanding of what the transition to college entails, they failed to comprehend the degree of complexities and changes associated with going to college. Paul & Brier (2001) found that students who were more preoccupied with their pre-college friendships experienced friendsickness at college and had a more difficult transition to college. Missing their friends affected their social decisions, and their expectations about having fun and meeting new friends were not met.

College and university counseling services have fulfilled a vital role in higher education for a long time (Bishop, 1990; Boyd, et al., 2003). Research reflects a dramatic increase in the last 30 years, in the number of campus counseling services provided and the multiplicity of functions that are performed (Boyd, et al). Counseling services are an integral part of the educational mission of the institution and support the mission in numerous ways such as consultation, teaching, preventive and developmental interventions, and treatment. The accreditation standards for university and college counseling centers (Boyd, et al) list three essential roles for the counseling service:
1. Provide counseling and/or therapy to students experiencing personal adjustment, vocational, developmental and/or psychological concerns that require professional attention.

2. Second, is the preventative role of helping students in identifying and learning skills that will enable them to be effective in accomplishing their educational and life goals.

3. The third role includes supporting and enhancing the healthy growth and development of students through consultation and outreach to the campus community. Each role is vital to the overall service of the campus community. Cosby (1966) indicates the developmental approach to counseling has historical roots and addressing a student’s emotional concerns can enhance both academic success and satisfaction with the institution.

College counseling professionals are interested in college student success. It is an exciting profession offering varied opportunities to support the healthy personal, academic, and social development of postsecondary students. Counseling services may include, but are not limited to, individual, couples, and group counseling; assessment; treatment planning; consultation; outreach programming; and teaching, training, and supervision of counselor trainees and paraprofessionals (Davis & Humphrey, 2000).

Today, college counseling is firmly rooted in the developmental perspective. The developmental approach is defined as viewing students within the context of life transitions rather than from the standpoint of psychopathology. Understanding students from a developmental perspective provides new ways of serving them (Davis &
Humphrey). Lewis et al., (2005) performed a longitudinal study on the developmental levels of cadets attending a selective four-year institution, The United States Military Academy. The findings indicate that most traditional-age college students and perhaps nonmilitary college students understand their early college experience in terms of concrete rewards and personal achievements. A lot of the time they do not think abstractly; their relationships with others are based on exchange rather than mutuality; they are not psychologically minded or introspective; and they have difficulty keeping a focus on their long-term interests.

Identity development is a key developmental task associated with young adulthood (Johnson, Buboltz, & Seemann, 2003; Snarey & Bell, 2003). Johnson et al., performed a study examining the relationship between identity development and differentiation levels in young adults. There were 259 students surveyed. The results showed that each identity status had a unique effect on the various aspects of differentiation.

Building on Erikson’s identity versus role diffusion psychosocial stage, Marcia (1966) created a developmental paradigm for identity formation. His model addresses the psychosocial functional methods by which people acquire identity. He proposed that adolescents and young adults could typically be categorized as being in one of four ego identity statuses: identity achievement, foreclosure, moratorium, and diffusion. Position in each identity status is determined by the degree of personal exploration and commitment related to ideological and interpersonal issues. Those who attain identity achievement have struggled through their own exploration process before arriving at a
place of commitment. Those in foreclosure commit to an identity that is largely based on their parents’ beliefs without exploring alternatives of their own. Those in moratorium are actively searching and exploring but have not come to a place of commitment. Last, those in diffusion are neither searching nor are they committed to an identity (Marcia).

*Traditional/Nontraditional Students*

Effective college counselors are knowledgeable about developmental stages, issues, and transitions that commonly occur for traditional and non-traditional college students. College students do not always fit into neatly defined groupings. Factors such as race, ethnicity, gender, sexual orientation, social and economic status, and disability also influence development. For example, the developmental transitions of a traditional-age college student who is multiracial should be viewed in light of racial identity development (Davis & Humphery, 2000). Researchers, college administrators, counselors and others must maintain a flexible viewpoint regarding the diversity of characteristics and then how they impact the college student and retention.

What are the characteristics of traditional and non-traditional students? Traditional college freshman are typically beginning to differentiate from their families of origin and define self. This “separation-individuation” relates to characteristics discussed in Tinto, Bean, Astin, and Pascarella’s theories of retention. This separation task involves moving away from the predictable, know factors of a student’s life and into the less predictable world (Johnson, Buboltz, & Seemann, 2003). Specifically, sophomores tend to struggle with achieving competence, desiring autonomy, establishing identity, and developing purpose. Freshmen focus on defining themselves as separate
from their families. Sophomores focus on defining themselves as separate from their peers (Davis & Humphery, 2000). Juniors become increasingly more committed to their personal and academic lives. The junior year is marked by an increased focus on career, enhancement of job opportunities, or preparation for graduate school (Davis & Humphery). The greatest task facing seniors is graduation and the realization that the real world is just around the corner. Traditional-age college students coming to the end of their undergraduate years often experience ambivalence. As they reflect on their accomplishments and sometimes their regrets, they are challenged to make peace with their college experience (Johnson, Buboltz, & Seemann; Snarey & Bell).

Non-traditional students’ developmental needs, issues, and stressors differ considerably from traditional-age students. Adult students are more likely to have families of their own, the financial responsibilities that come with families, time constraints and other interpersonal commitments. In addition, the financial impact of returning to college may be greater for adults who must pay for college themselves while maintaining mortgage payments and family support (Davis & Humphrey, 2000; Ogren, 2003). Adult learners tend to be achievement-oriented and relatively independent with special needs for flexible and alternative schedules and instruction appropriate for their developmental level. Wortley & Amatea (1982) identified four primary areas of adult development (career, family, intimacy, and inner life) with each area characterized by challenges of balancing multiple roles and responsibilities and reconciling values and ideals with reality. Davis & Humphery suggested that non-traditional students also deal with examining their internalized roles and assumptions about life, while coping with a
sense of alienation from traditional social expectations, being aware that others may be discontented about changes in their lives, building a sense of competence and self-confidence in new roles, and acquiring knowledge and skills needed to implement new plans. Similar to culture shock, there appears to be a period of adjustment or transformation that occurs for non-traditional students both before and after they enter higher education.

At-risk students, traditional and non-traditional, experience key developmental issues and specific at-risk factors, which can hinder their success in higher education. Effective college counselors and administrators will be aware of the responsibilities and challenges that these students face. With the awareness lies the responsibility to help institutions pay increasing attention to modifying their existing philosophies and approaches to instruction, administration, and services to empower students to be successful.

Client Concerns and Retention

There are a myriad of studies about the impact of college counseling services on retention. Many studies have reflected that college students who receive mental health counseling, on-campus, have higher retention and graduation rates than their classmates who do not receive counseling (Bishop, 1990; Bishop & Brenneman, 1986; Coll and Stewart, 2002; Gerdes & Mallinckrodt, 1994; Turner & Berry, 2000).

Bishop and Brenneman (1986) studied 122 students who sought counseling because they were considering dropping out of school, transferring to another institution or concerned about academic failure. More than 86% of these students continued their enrollment for at least another semester, and only three of the counseled students
voluntarily chose to leave the institution. Coll and Stewart (2002) conducted a study involving a partnership between the faculty coordinator of a multiple-section Introduction to Education course, who identified students who were at risk of academic failure, and the Counseling Education Department, which provided customized counseling services to the at-risk students to increase their academic and social integration. Expanding the role of traditional counseling services, the intervention emphasized prevention and interagency collaboration based on Tinto’s (1993) model of college student retention. The results of the study provide evidence that counseling services contribute to greater integration and goal commitment enhancing student success.

Turner & Berry (2000) explored the impact of counseling on academic progress and retention using both objective and self-reported measures from 2,365 counseling clients in a general student body of 67,026 over a 6-year period at a western state university. The results from their study support the role of counseling centers in increasing student retention and graduation rates. Finally, DeStefano et al., (2001) surveyed 173 university students attending a large southwestern university. The purpose of the study was to compare student’s adaptability to college and to assess the effect of counseling on their perceptions of adjustment to college. The results suggest that counseling is a valuable intervention for students, improving personal, social and emotional adjustment. These factors have been shown to be important to the academic success and retention of college students (Gerdes & Mallinckrodt, 1994). All of these studies support counseling and the positive relationship to academic success and retention.
However, there is a scarcity of research on client concerns and retention. Wilson, Mason, and Ewing (1997) reviewed the academic records of 562 students at a large, public land grant institution with an enrollment of approximately 25,000 students. The purpose of the study was to determine if receiving counseling for personal, psychological concerns resulted in the re-enrollment of counseling center clients. The results indicate that receiving psychological counseling can have an impact on a student’s likelihood of succeeding in college. Students who sought counseling had a 14% retention advantage over the general population.

The majority of the research reflects a relationship between counseling and academics and a growing concern about the prevalence of mental health concerns among today’s college students (Sharkin & Coulter, 2005). This concern has been the subject of attention in national media (Kirn, 2003; Shea, 2002; Young, 2002) as have high profile cases of college student suicide (Sontag, 2002; Tavernise, 2003). Concern about mental health on college campuses has led to legislative action. The Campus Care and Counseling Act (2003, 2004) was introduced in the U.S. House of Representatives (H.R. 3593) and in the U.S. Senate (S. 2215) to amend the Higher Education Act to provide funds for programming for campus mental health service centers. The bill was subsequently incorporated into the Garrett Lee Smith Memorial Act ([H.R. 4799] 2004a, [S. 2634] 2004b), which President Bush recently signed into law. Congress appropriated funds for 2005 authorizing competitive grants to enhance services for students with mental and behavioral health concerns that can lead to school failure.
Is there reason to be concerned about the presenting concerns of today’s college students? Are the mental health concerns of college students increasing in severity? Results from Gallagher’s national surveys of counseling center directors over the past several years, including the most recent one (Gallagher, 2005), indicate that the perception of 90.3% of the counseling center practitioners is yes in answer to these questions.

Though the literature indicates an increase in the severity of client presenting concerns (Benton, Robertson, Tseng, Newton & Benton, 2003; Gallagher, Sysko, & Zhang, 2001; Kitzrow, 2003; Lucas & Berkel, 2005; Nolan, Ford, Kress, Anderson, & Novak, 2005; Pledge, Lapan, Heppner, Kivlighan, & Roehlke, 1998; Stone & Archer, 1990; Turner & Berry, 2000), there is a paucity of empirical evidence (Benton et al., 2003; Cooper & Archer, 2002; Sharkin, 1997; Sharkin & Coulter, 2005).

What constitutes the paucity of empirical evidence surrounding the increase in severity of client presenting concerns? What specifically, contributes to the challenge researchers face in empirically demonstrating a trend of increasing severity in client presenting concerns? Cooper & Archer (2002) indicate a lack of research is one problem. They developed a three-page survey titled College Counseling Center Evaluation and Research activities. This survey was completed by 168 of (373) directors. The survey assessed a wide range of counseling center services. Results indicate that assessment and evaluation activities are more prevalent than is research about student characteristics, outcome studies, or basic science investigations.
Sharkin (1997, 2004) report inadequate methodologies as the reason for studies falling short in one way or another. Much of the research about increasing severity has relied on the perceptions of counseling center directors and staff members (Gallagher, 2005). However, such perceptions may not be an accurate way to gauge changes in severity of client concerns. Sharkin reports that in the attempt to use data more objective in nature, researchers have tended to rely on one form of assessment as opposed to multiple measures to assess client problem type and severity. Even the most recent studies have relied on either client self-report of symptoms (Pledge, et al., 1998) or counselor diagnosis of client concerns (Benton et al., 2003). Considering the potential for discrepancies between the clients self-report and the counselor’s rating of problem severity, it might be wise to use both methods of assessment rather than one or the other.

Wilson, Mason, and Ewing (1997) attribute the ambiguity in empirical studies on counseling and retention to how counseling is defined. Various studies refer not to psychological counseling but to facets of counseling (advising, tutoring, residence hall issues). Thus these studies are addressing student services in general rather than assessing and reporting the efficacy of counseling interventions in particular. Other studies focus specifically on students presenting with academic concerns. Frank and Kirk (1975), for example, compared counseled and non-counseled students and found a 10% increase in graduation for counseled students. Of the students counseled, 80% were seen for academic and vocational reasons. Thus only a small proportion of students sought counseling for the kinds of personal issues and life problems that comprise psychological
counseling. Various researchers have studied the increase in severity of personal issues and those are reviewed as follows.

Pledge et al., (1998) performed a 6-year multivariate analysis at a large midwestern university, utilizing initial client intake data gathered from 2,326 students. Findings indicate that the level of severity of problems was much greater than the traditional presenting concerns of adjustment issues and individuation that were seen for college students in counseling center research from the 1950’s and 1960’s through the early 1980’s (Heppner & Neal, 1983). During the 6-year period studied, clients needed help with issues of suicidality, substance use, history of psychiatric treatment or hospitalization, depression, anxiety, and high subjective ratings of distress (Pledge et al).

Kitzrow (2003) did a literature review on the changing mental health needs of college students and the challenges proposed by both the growing number of students with serious psychological concerns on campus and the increase in the number of students seeking counseling. Lucas and Berkel (2005) investigated psychological distress and vocational concerns presented by university students seeking help at a large mid-Atlantic mostly white university. Of the 597 students surveyed, Black students perceived barriers when pursuing their vocational goals, and Asian American students were unclear about their vocational identity. White students vocational difficulties correlated with psychological distress, and for women in particular, anxiety and depression symptoms and perceived vocational barriers related how well they functioned in school.

Benton et al., (2003) examined counseling center client concerns across 13 years from the perspective of the treating counselor at the time of therapy termination.
Participants were 13,257 student-clients who pursued personal counseling at a large Midwestern university. Overall results indicated that students who were seen in counseling services in more recent time periods (1996-2001) frequently had more complex concerns that included both the normal college student concerns, such as difficulties in relationships and developmental issues, as well as the more severe concerns, such as anxiety, depression, suicidal ideation, sexual assault, and personality disorders. In particular it was reported that problems of depression and suicidal ideation increased significantly over the course of the three time periods examined (1988-1992, 1992-1996 and 1996-2001).

Fortunately, the perception of “increase in severity” in client’s presenting issues has prompted the design and implementation of new programming. Here is one example:

Nolan, Ford, Kress, Anderson, & Novak (2005) created a comprehensive campus wide identification and intervention program titled “The New Diversity Initiative” to help college counselors and student personnel staff address students with severe mental disorders. This multi-disciplinary team, headed by the counseling center staff implemented this program in response to the increase in number and severity of issues being presented by students, dialogue with college counselors at various schools, and a review of the literature. More research is needed in this area.

Summary

America’s colleges and universities have a serious problem: a significant number of students who enter our higher education system fail to get a degree. This is a problem that we must address and not ignore. Even among the students most likely to succeed, full
time freshman in four-year colleges and universities, only six out of ten of them, on average, get a B.A. within six years (Carey, 2004). The individual retention theories of Tinto (1993), Bean (1990), Astin (1984), and Pascarella, Terenzini, Wolfle, (1986) provide insight into the reasons/causes of attrition.

Academic, non-academic factors and retention are positively correlated in the literature. Specifically, ACT, GPA, student involvement, place of residence, isolation, working while in school, ethnicity, and social class have a positive relationship to retention. A facet of the campus environment addressing these issues is the campus-counseling center. Counseling services are an integral part of the education mission of institutions. Many counseling centers approach student concerns from a developmental perspective. However, many college centers may be moving away from the traditional developmental approach to diagnosing and treating issues such as clinical depression and major mood disturbances (Schwartz, 1998). This increase in severity in client presenting concerns encourages the understanding of the relationship between client concerns and retention.

This study seeks to understand the relationship between seeking counseling and retention and client’s reported presenting concerns and retention at a large mid-western university. Increased understanding may contribute to new design and implementation of services to enhance student mental health and retention.
CHAPTER THREE: METHOD

This chapter outlines the operational definition of variables, sampling plan, instrumentation, data collection procedures, and data analysis procedures. This study explores the relationship between seeking counseling and retention. Specifically, issues which students present in counseling and the relationship to retention are explored. The data for this study was pre-existing data collected by the university counseling center.

All students seeking counseling services are required to complete a client questionnaire prior to the initial appointment. The intake questionnaire provides valuable information about the client. The information gathered for this study, began with characteristics and continued with client’s GPA, and self-reported presenting concern or difficulty. Additional pertinent information on the questionnaire, not included in the study, included the client’s background information (the history of prior counseling, how the client was referred, disabilities, parent’s relational status, mental health history of family members, and description of current relationship with the family). The questionnaire continues with a list of 55 concerns or difficulties for the client to choose from in clarifying what he or she wants to discuss with a counselor. The client is also provided with the opportunity to briefly write a subjective perspective of the concern or difficulty that prompted him or her to seek counseling. Then the client is provided with a list of behaviors to choose from if they are struggling with an eating behavior or experiencing symptoms of depression or anxiety. Next is a section to determine alcohol and/or drug use and resulting legal actions that occurred as a result of alcohol or drug use. Also there is a section that asks questions pertaining to client’s self harm including past
and current thoughts and/or past and current attempts. Finally, the questionnaire defines confidentiality, the center’s policy on recording of the sessions, consultation with health clinic physicians, consent to use questionnaire data for research purposes and seeks client’s consent to participate in counseling. The client questionnaire was revised to include the client’s permission to use data anonymously in 2004, therefore, this study reviewed the data of individual students enrolled in the academic years 2005 and 2006.

Operational Definitions of the Variables

*Gender:* “Female” or “Male” as designated on the client intake questionnaire.

*Ethnicity:* “Asian American,” “African American,” “Hispanic,” “International,” “Native American,” “Caucasian,” and “Unknown,” as indicated in the university’s student information system.

*GPA:* “Overall Grade Point Average” as indicated in the university’s student information system.

*Residence:* Where students live. “Residence Hall,” “Greek,” “Off Campus,” and “Home,” as reflected on the client intake questionnaire.

*Reported Presenting Concern:* A categorical variable that identifies a student’s reasons for seeking counseling as measured on the client questionnaire. The 53 variables used for this study were divided into categories and the categories were analyzed.

*Retention:* A student was defined as retained if he or she continued enrollment at the university one year after first enrolling. For example, a student who began attending the university in the fall of 2005 and re-enrolled in the fall of 2006 was considered retained. Retention was measured and reported by university’s student information system.
Attrition: Was defined as any student who did not re-enroll at the university.

Identification of the Population

The target population for this study is first-time, full-time undergraduates who first enrolled at the university’s main campus between September of 2005 and June of 2007. The university is a large, public research university with six campuses, located in a rural area of the mid-western United States. In the fall 2005, there were 19,833 students (full-time, part-time, and continuing education) enrolled. This figure is comprised of regular students (undergraduates and graduates) and Lifelong Learning Students (On campus). In the fall of 2005, 4,165 were first-year students, of the 4,165, 283 were first-year students who sought counseling. In the fall of 2006, 4,084 were first-year students. Of the 4,084, 229 were first-year students who sought counseling. For this study, the client questionnaires of 512 first-year students were reviewed. Of the 512 students, 283 were from the academic year 2005-2006. Of the 283, 24 students did not give consent to use anonymous data, 14 of those students were consultations which did not include a consent form, 23 of the client questionnaires were a form which did not include a consent form and 9 client questionnaires were not located or available for analyzing. The total of useable data analyzed for the year 2005-2006 was 208. The total records reviewed for the year 2006-2007 was 229. Of the 229, 27 students did not give permission to use anonymous data, 15 of those students were consultations and did not include a questionnaire, and 3 client questionnaires were not located or available for analyzing. The total of useable data analyzed for the year 2006-2007 was 185.
Sampling Plan

The data set for this study was created with the help of the authorized personnel of the university counseling center. The data set included non-identifying demographic data (gender, ethnicity, residence) GPA and reported presenting concern or difficulty. These variables were collected for two groups, those who enrolled the following year and those who did not. The two groups were created from the students who sought counseling. The students who did not consent to participate in research on the client questionnaire were excluded from the data set.

Non-identifying demographic data and presenting concerns or difficulties for the two groups, those who enrolled the following year and those who did not, were assigned random numbers for the purpose of this study. Therefore, every student in the study was an anonymous participant. Thus the data set used for all statistical analysis did not have any identifying student information and, therefore, was a secure data set. The University’s Institutional Review Board approved the method for this study and did not require participant consent or compensation (see Appendix B). The client questionnaire does include an explicit informed consent providing permission to use anonymous data for research purposes.

Instrumentation

History

The university counseling center began in 1964. The original staff included a director, seven counselors and one secretary. The initial secretary had five years experience as an Electroencephalograph Technician at state mental institutions prior to
being hired as Administrative Staff at the university. During the transition of the director to the university’s counseling center the secretary was responsible for establishing the paperwork for the center. Utilizing the intake form from her last place of employment, Columbus State Mental Hospital, an intake questionnaire was adapted to use with clients at the university C. Koker, (personal communication, November 10, 2007). Access to the original form was not available.

Over the next 43 years several modifications to the client questionnaire occurred. The original questionnaire consisted of approximately a hundred concern or difficulties and student clients gave one, two or three checks on a short line that preceded each item to indicate the severity of that concern or difficulty. Initially, the content of the checklist was somewhat random. For example, there would be an item about difficulty in concentration followed by an item on family concern or difficulties. The first modifications were initiated by the length of time needed to complete the questionnaire. The first major alteration on the form involved paring it down to approximately 70 items. Some of the limitations of this initial questionnaire included limited demographic options including ethnicity and sexual orientation. Other limitations included a lack of room on the form for assessing a student’s use of alcohol or drugs or what consequences might have accrued to using those substances F. Weiner, (personal communication, November 05, 2007).

The next major modification was implemented in 1999-2000. The full-time staff evaluated the form as inadequate in item options and demographics and began the process of making changes. The revisions began with the demographic options and they
were expanded to include a wide choice in the areas of ethnicity, sexual orientation, and relationship status. The revisions continued, by expanding the item options. For example, items for prior counseling were implemented and included choices of psychiatrist, community agency, inpatient drug/alcohol rehabilitation, private therapist, other college counseling and other. The revised intake also included items assessing, disabilities, family psychological history and family relationship status. The 70 items of concern or difficulties were pared down to 55 and an additional page was added to assess behaviors rather than topics of concern or difficulties. Items assessing a client’s intent or action in harming self in the past or present were also implemented S. Young, (personal communication, October 11, 2007). Finally, the last revision occurred in 2004 with the addition of requesting client permission to share “best practice findings” anonymously.

The most recent client questionnaire provides clinicians with concerns or difficulties that clients identify for seeking counseling at the current time. The demographic portion of this questionnaire includes items regarding gender, residence, ethnicity, relationship status, sexual orientation and religious/spiritual affiliation. Clients are given the opportunity to self-report the severity of their concern or difficulty and the urgency. Background information is requested from the client and includes items assessing prior counseling, history of their referral, disabilities, parent’s marital status, family psychological history and family member potentially diagnosed, and current family relationship status with the client.

The directions for the instrument read as: “Please check all of the following items which are concerns or difficulties at this time. Circle those you want to discuss with a
There are 55 potential items listed as follows: Abortion, Anxiety, Compulsive Behaviors, Death/Grief issues, Eating Concern or difficulties or, Family Concern, Guilt, Impulsiveness, Medical Concerns, Peer Relationships, Romantic Relationship, Sexual Concern, Time Management, Academic Concern, Attention Problem, Crime Victim, Depression, Emotional Abuse, Fearing Failure, Hallucinations, Judicial/Legal Concern or difficulties, Mood Swings, Physical Abuse, Self-Mutilation, Sexual Harassment, Social/Dating Issues, Troublesome Thoughts, Alcohol Use, Body Image, Culture Shock, Discrimination, English as 2nd Language, Financial Concern or difficulties, Homesickness, Learning Problem, Over-Responsible, Pregnancy, Sexual Abuse, Sexual Orientation, Stress, Violent Behavior, Anger, Career Issues, Dating Violence, Drug Use, Exam Panic, Gambling, Immigration, Loneliness, Panic Attacks, Religion/Spirituality, Sexual Assault, Shame, and Suicidal Thoughts.

Clients complete the questionnaire before the intake process at the university counseling center. All clients are required to complete the questionnaire prior to their first counseling session. The counseling center provides an intake/testing room where the client may complete the questionnaire. The clinician reviews the questionnaire prior to an appointment with the client and the document is also reviewed with the client in the intake session.

Face validity has been supported by the DSM IV-TR. The DSM IV-TR currently defines mental disorders as “clinically significant behavioral or psychological or biological syndromes that are associated with present distress, disability, or significant impairment in important areas of functioning.” The items listed in the client questionnaire
are symptoms used to diagnose and treat students seeking services. The client questionnaire has been revised and used successfully in the counseling center from its origin in 1964 until the present. Professionals created the client questionnaire and continued to work on revisions. This consistent revision process by mental health professionals increases the content validity of the client questionnaire in that it reflects the current issues present for university students receiving counseling. It is used by professionals in data collection and therefore there is no established reliability for this instrument. The instrument was constructed to serve as a measure within the university setting.

Data Collection Procedures

A data collection strategy was provided by the university counseling center’s research coordinator and was as follows:

1. The researcher collected the data from the university counseling center. The data collected was for Freshman students from 2004-2005 and 2005-2006 who sought counseling, completed a client questionnaire, and signed consent to use their questionnaire data for research purposes. The data was individual student data with personal identification numbers attached (no name, date of birth, or social security number).

2. Using the sample created, the university counseling center research coordinator (with the help of support staff) identified the students who dropped out during the year or at the end of the year using the university
student information system. After the two groups were divided the personal identification numbers were removed and a random number was assigned.

3. The researcher received a data set of two groups (re-enrolled and dropped out) without personal identification numbers or any other identifiers

See appendix for a copy of the data collection protocol provided by the university’s counseling center research coordinator.

Research Design

This study is correlation research and Chi-Squared analysis will be used on pre-existing data. The client questionnaire provided the categories for the predictor variables. There were five variables in this study: (1) gender, (2) ethnicity, (3) university GPA, (4) residence and (5) reported presenting concern or difficulty. The variables gender, ethnicity, GPA, and residence were analyzed from pre-existing data. The client presenting concerns were thematically categorized by a clinical judgment panel of one researcher and two mental health clinicians for simplicity of analysis. The reported presenting concern or difficulty consisted of 13 categories and 53 predictor variables: (1) Anxiety and Thought Disturbance (Anxiety, Compulsive Behaviors, Panic Attacks, Hallucinations, Stress, Fearing Failure) (2) Mood Disturbance (Death/Grief Issues, Depression, Guilt, Impulsiveness, Loneliness, Mood Swings, Self-Mutilation, Shame, Sleep Concern or difficulties, Suicidal Thoughts, Troublesome Thoughts), (3) Relational Concern or difficulties (Family Concerns, Homesickness, Peer Relationships, Romantic Relationships, Social Dating Issues), (4) Academic Concern (Academic Issues, Attention Problem, Career Issues, Exam Panic, Learning Problem, Over-Responsible, Time
Management), (5) Sexual Concern (Abortion, Pregnancy, Sexual Orientation), (6) Substance Use (Alcohol Use, Drug Use), (7) Body Image (Body Image, Eating Problem), (8) International Students (Culture Shock, English as a 2nd Language, Immigration), (9) Concern or difficulties Related to Abuse, Violence, or Harassment (Anger, Emotional Abuse, Physical Abuse, Sexual Abuse, Sexual Harassment, Violent Behavior), (10) Legal Concerns (Crime Victim, Judicial/Legal Concern or difficulties), (11) Medical Concerns (Medical Concern), (12) Religion/Spirituality (Religion/Spirituality), (13) Financial Concern or Difficulties (Financial Concern or Difficulties). There was one criterion variable: (1) retention.

Research question one examined the relationship between seeking counseling and retention. Research question two looked at the relationship between client presenting concern for seeking counseling and retention.

Data Analysis Procedures

Research Question One: Is there a relationship between seeking counseling and retention?

It was hypothesized that the students who sought counseling were retained at the university. The retention rate for first-year university counseling clients was analyzed. A Chi–Squared goodness of fit analysis was completed to determine if there was a significant difference between the students who sought counseling and their retention at the university. The chi-squared procedure is one of the most widely used nonparametric tests (Best & Kahn, 1993). It is frequently used to test hypotheses about the independence of frequency counts in various categories. Chi-squared analysis allows a
person to estimate the probability that observed frequencies differ from expected frequencies through chance alone. The basic idea behind the chi-squared goodness of fit test was to divide the range of the data into a number of intervals. Then the number of points that fell into each interval was compared to the expected number of points for that interval. The analyses determined whether the frequency distribution for the categorical variables were consistent with what was expected. Statistically equal numbers were expected (50% retention). Cross-tabulations were run of the “re-enrolling” variable by each of the other variables: gender, ethnicity, GPA, and residence. These procedures were run for both years combined and then for each year separately.

The research hypothesis examined with the goodness of fit was:

\text{Ho1: There is no relationship between seeking counseling and retention.}

\text{Ha1: There is a relationship between seeking counseling and retention.}

\textit{Research Question Two: Is there a relationship between client presenting concern and retention?}

It was hypothesized that there was a relationship between the reasons students report in counseling and retention. This research question was addressed by Chi-Squared test for independence. The client presenting concerns or difficulties were thematically categorized by a clinical judgment panel of one researcher and two mental health clinicians for simplicity of analysis. The 53 variables, which comprised the “reported presenting concern or difficulty” were divided into 13 categories. The categories were as follows: 1. “Anxiety and Thought Disturbance” 2. “Mood Disturbance,” 3. “Relational Concerns,” 4. “Academic Concerns,” 5. “Sexual Concern,” 6. “Substance Use,” 7. “Body
The Chi Squared test for independence was used to examine the relationship between the distribution of scores for the categorical variables. The chi-squared test determined whether the scores on the variables were independent or related (Best & Kahn, 1993). The Pearson’s chi-squared is by far the most common type of chi-squared significance test. This statistic was used to test the hypothesis of no association of columns and rows with nominal data and categorical data. The analysis did not measure the degree of relationship, but was used to estimate the likelihood that some factor other than chance accounted for that relationship. An alpha value of .05 or less was selected.

The research hypothesis examined with the Chi-Squared was:

\[ H_0 \text{: there is no relationship between client presenting concern and retention.} \]
\[ H_1 \text{: there is a relationship between client presenting concern and retention.} \]

**Summary**

This chapter outlined the operational definition of variables, sampling plan, instrumentation, data collection procedures and data analysis procedures. The variables researched in this study were gender, ethnicity gpa, residence and reported presenting concern. The population studied was first-time, full-time, undergraduates at a large, public research university in the mid-west. The sampling plan utilized pre-existing, secure data from the university counseling center for the two academic years 2004-06 and 2006-07.
the university counseling center’s client questionnaire was utilized in data collection. The research design utilized chi-squared analyses to answer the question:

RQ1. is there a relationship between seeking counseling and retention?

RQ2. is there a relationship between client presenting concern and retention?
CHAPTER FOUR: RESULTS

This chapter will overview the student characteristics and then present the analyses for the research questions. Chi-Squared test were conducted on a combined sample of first year students for 2005-2006 and 2006-2007 as well as for each distinct academic year.

The purpose of this research study was to explore the relationship between students who sought counseling and retention and to examine the relationship between client presenting concerns and retention. Two Chi-Squared analyses were computed to assess the relationship between students who sought counseling and the problems that brought them into counseling and retention. Chi-Squared analysis addressed four independent variables that were categorical (gender, client presenting concern, GPA, and residence) and one dependent variable, namely retention. There were not enough participants of different races to run analysis on the variable, ethnicity. The Chi-Squared was used to assess the relationship between the categorical variables (Best & Kahn, 1993). The Chi-squared addressed one independent variable (client presenting concern) and one dependent variable (retention). The Chi-Squared was run to assess the relationship of results with the nominal variables, specifically, to assess the likelihood that the observed spread across the nominal responses matched the expected frequency of responses (Best & Kahn, 1993). All statistics were reported with an alpha level of .05.
Description of the Sample

The population for this study was the first-year students who sought counseling at a large, public, university in the mid-west. The sample was taken from the students who sought counseling at the university and who identified themselves as first-year students. The sample originally consisted of 512 subjects. Fifty-one students of the original sample were removed because they did not give consent for their data to be used anonymously. Thirty-four participants were removed because they sought counseling services for consultation and did not include a consent form. Twenty-three participants had completed an intake form that did not include a consent form, and thus they were removed. Finally, nine participants records were unavailable for analysis. Therefore, the sample utilized for the present study had 395 participants. This sample represents 4.79% of the overall first year students.

Data used in the statistical analysis consisted of 395 participants who were identified as first-year students and had utilized at least one session of counseling services. Analyses were run for the academic years 2005-2006 and 2006-2007 combined and separately. Frequency distributions of the study sample are included below.

Frequency for Academic Years 2005-2006 and 2006-2007 Combined

Sample Demographics

The sample size for this study is 395. Two hundred eight (52.7%) were from the academic year 2005-2006. One hundred eighty-seven (47.3%) are from the academic year 2006-2007. Of the 395, 250 (63.3%) were female and 142 (35.9%) were male. The students were predominantly Caucasian (N = 363, 94.5%), while African American was
the second highest race or ethnicity at (N = 7, 1.8%), Native American consisted of 1 (.3%), Asian American was 1 (.3%), Hispanic was 4 (1.0%), International students were 3 (.8%), and 5 (1.3%) were unknown. The majority of students utilized on-campus housing (N = 383, 97%). One hundred eighty six students, 48.3% had a GPA of 3.00 or above.

Chi- Squared analysis was used to determine whether a significant relationship exist between seeking counseling and re-enrollment for first-year students. The following sections review the results of the analysis for academic years 2005-2006 and 2006-2007 combined. The results are then reviewed separately for each academic year.

Research Question One

RQ1. Is there a relationship between seeking counseling and retention?

It was hypothesized that there was a significant relationship between first-year students who sought counseling center services and re-enrollment. To test this hypothesis, the records of 395 first-year students were compared to retention. The 395 first-year students were from the cohort years 2005-2006 and 2006-2007. Of the first-year students who used counseling center services, 395 records were analyzed, 10 were missing, resulting in a valid sample of 385. Two hundred and eighty (72.7%) of these students re-enrolled the following fall. A Chi-Squared was run to assess whether the observed proportions of students re-enrolling differed from the hypothesized proportions. There was a statistically significant relationship between seeking counseling and re-enrollment for first-year students. ($\chi^2 = 79.545 (1, N = 385)$, $p < .05$). See Appendix F for contingency table.

Cross-tabulations were run on the “re-enrolling” variable by each of the following variables: gender, residence, and GPA to determine if there were a relationship between gender and re-enrollment, residence and re-enrollment, and GPA and re-enrollment.

Gender as a Variable

The cross-tabulation computed using gender and re-enrollment included 384 participants. The total sample was 395, eleven were missing, which left 384 for analysis. Of the three hundred and eighty four, 142 (36.2 %) identified themselves as male, and 250 identified themselves as female (63.8%). There was not a significant relationship between the distribution of males and females per re-enrollment, \( \chi^2 = .011 \) (\( df = 1 \), \( N = 385 \)), \( p > .05 \). See appendix F for contingency table.

GPA as a Variable

GPA was calculated from 0 to 4.0. A cross-tabulation was computed using GPA and re-enrollment to determine if there was a relationship. The results indicate that students with a GPA of 3.00 or higher were more likely to re-enroll (\( N = 186 \), 48.3%). There was a significant relationship between GPA and re-enrollment, \( \chi^2 = 44.180 \) (\( df = 4 \), \( N = 384 \)), \( p < .05 \). See Appendix F for contingency table.

Residence as a Variable

Residence included the options: residence hall, off campus housing, Greek housing, or home. Two hundred seventy-four participants (97.9 %) re-enrolled and lived in the residence hall. A Chi-squared analysis was run to determine a relationship between
residence and re-enrollment. The analysis determined no significant relationship between residence and re-enrollment $X^2 = 6.035 (df = 3, N = 385), p > .05$. See Appendix F for contingency table.

This completes the analysis for combined academic years 2005-2006 and 2006-2007. The following section explored these analyses per academic year versus combined years.

**Overall First Year Enrollment and Seeking Counseling and Retention**

A total of 4,165 individuals enrolled as first-year students in the academic year 2005-2006 (Office of Institutional Research, 2007). Of the 4,165 two hundred eighty-three (6.79%) first year students sought counseling. Of the two hundred eighty-three, 204 students (72.08%) gave consent for their data to be analyzed. One hundred and forty-three of the 204 (70.09%) re-enrolled in the fall of the following year. Overall first year retention for the year 2005-2006 was 80%. Of the 80% returning 4.29% sought counseling during their first year.

**Cross-tabulations and Chi-Squared Analysis for Academic Year 2005-2006**

Chi-squared goodness of fit was run to analyze re-enrollment. It was determined that there was a statistical significance in retention, $X^2 = 32.961(1, N = 204), p < .05$. For this academic year, the results parallel the ones for the combined academic years. See Appendix F for contingency table.

**Gender as a Variable**

A cross-tabulation was completed using gender and re-enrollment to assess the relationship. A total of one hundred and forty-two (N = 203, with 5 missing) students re-
enrolled in the fall of the following year. Of that number 59 (41.5%) were male and 83 (58.5%) were female. There was no significant relationship between the distribution of gender and re-enrollment, \( X^2 = .086 \) (\( df = 1 \), \( N = 203 \)), \( p > .05 \). This result is consistent with that of the combined academic years. See Appendix F for contingency table.

**GPA as a Variable**

GPA was calculated from 0 to 4.0. A cross-tabulation was completed using GPA and re-enrollment to assess the relationship. A total of one hundred forty–three students re-enrolled (\( N = 203 \), with 5 missing) in the fall of the following year. Fifty percent had a GPA of 2.60 or higher. There was a significant relationship between GPA and retention, \( X^2 = 28,693 \) (\( df = 4 \), \( N = 203 \)), \( p < .05 \). This result is consistent with that of the combined years. See Appendix F for contingency table.

**Residence as a Variable**

Residence consisted of the options residence hall, off campus, Greek housing and home. A cross-tabulation was run to assess whether there was a relationship between residence and re-enrollment. There was not a significant relationship between residence and retention \( X^2 = 10.010 \) (\( df = 3 \), \( N = 204 \)), \( p > .05 \). This result is consistent with that of the combined years. See Appendix F for contingency table.

This completes the separate analysis for the academic year 2005-2006. The separate analysis for academic year 2006-2007 follows.

**Overall first–year Enrollment and Seeking Counseling and Retention**

A total of 4,084 students who identified as first-year, enrolled in the academic year 2006-2007. Of the 4,084, two hundred twenty nine (5.61%) sought counseling. Of
the two hundred twenty nine, 181 (79%) gave consent for their data to be analyzed. One hundred thirty seven (75.69%) re-enrolled in the fall of the following year. Overall, first-year retention for 2006-2007 was 78%. Of the 78% returning 4.30% sought counseling during their first year.

*Frequencies, Cross-tabulation, and Chi-Squared Analysis for Academic Year 2006-2007*

Chi-square Goodness of fit was run to analyze re-enrollment. It was determined that there was a statistical significance with re-enrollment, $X^2 = 47.785 \ (1, \ N = 181), p < .05$. These results are consistent with those computed for the combined data set as well as the first-year students for 2005-2006. See Appendix F for contingency table.

*Gender as a Variable*

A cross-tabulation was run to assess the relationship between gender and re-enrollment. Fifty-eight participants (32%) were male and 123 participants (68%) were female. Of the sample 43 males re-enrolled and 94 females re-enrolled. There was not a statistically significant relationship between gender and retention $X^2 = .112 \ (df = 1, \ N = 181), p > .05$. These results parallel those in the previous chi-square analyses for the combined data set and for the academic year 2005-2006. See Appendix F for contingency table.

*GPA as a Variable*

GPA was calculated from 0 to 4.0. A cross-tabulation was run to assess the relationship between GPA and re-enrollment. Fifty percent of the sample had a GPA of 3.0 or higher. There was a statistically significant relationship between GPA and retention, $X^2 = 20.341 \ (df = 4, \ N = 181), p < .05$. See Appendix F for contingency table.
Residence as a Variable

A cross-tabulation was run to assess the relationship between residence and re-enrollment. Residence included the residence hall and off campus because there were only two categories represented in the academic year 2006-2007. One-hundred seventy-seven participants (98%) lived in the residence hall and four lived off campus (2%). One hundred thirty-seven (75.7%) re-enrolled in the fall of the following year. Of the 137 who re-enrolled, (97%) lived in the residence hall. There was not a significant relationship between residence and retention, $X^2 = 1.314$ ($df = 1$, $N = 181$), $p > .05$. These results parallel those in the previous chi-square analyses for the combined data set and for the academic year 2005-2006. See Appendix F for contingency table.

Research Question Two

RQ2  Is there a relationship between client presenting concerns and retention?

It was hypothesized that there was a significant relationship between client presenting concern and retention. The 53 variables were thematically categorized by a clinical judgment panel of one researcher and two mental health clinicians for simplicity of analysis. Chi-Squared test were conducted to test this hypothesis and to determine the relationship between client presenting concern and retention. An analysis was run on client presenting concern by re-enrollment for both academic years combined and separately. The results of the academic years combined are below.
Cross-tabulations of Client Presenting Concerns by Re-enrollment Academic Years


Combined Legal Concerns as a Variable

Cross-tabulations were run on the “re-enrolling” variable by each of the 13 categories to determine if there was a relationship between client presenting concern and retention. Of the 13 categories, Legal Concerns was determined to be significant. The total sample for both years was (N = 385, 10 missing). Of the 385, 280 (72.7%) re-enrolled. Of the 280, 12 (4.3%) reported Legal Concern as a presenting concern. There was a significant relationship between Legal Concerns and retention, $X^2 = 3.889$ (df = 1, N = 385), p < .05. Of the total sample (N = 385, 10 missing) 22 (5.7%) report Legal Concerns as a presenting concern. Of the 22, who reported Legal Concerns, 16 (72.7%) were expected to stay and 6 (27.3%) were expected to leave, however, 12 (54.5%) re-enrolled and 10 (45.5%) did not re-enroll. See Appendix F for contingency table.

There was no significance found in any other category of client presenting concern. This completes the analysis for combined academic years 2005-2006 and 2006-2007. The following section reported the significant analyses per academic year versus combined years.

Cross-tabulations of Client Presenting Concern by Re-enrollment Academic Year

2005-2006

International Students as a Variable

A cross-tabulation was run to assess the relationship between the client presenting concern category of International Students and re-enrollment (N = 204, 4 missing). Of the
204, 143 (70%) re-enrolled. Of the 143, 1 (.7%) reported International Students as a presenting concern. There was a significant relationship between the presenting concern of International Student and re-enrollment, $X^2 = 8.420$ (df = 1, N = 204), $p < .05$. Of the total sample N = 204, 4 missing) 6 (.3 %) reported International Students as a presenting concern. Of the 6 who reported International Students as a concern, 4.2 (70%) were expected to stay and 1.8 (30%) were expected to leave, however, 1 (17%) re-enrolled and 5 (83%) did not re-enroll. See Appendix F for contingency table.

There was no significance found in any other category of client presenting concerns. This completes the analysis for the academic year 2005-2006. The following section reported the specific analysis for the academic year 2006-2007.

Cross-tabulations of Client Presenting Concern by Re-enrollment for the Academic Year 2006-2007

*Anxiety and Thought Disturbance as a Variable*

A cross-tabulation was run to assess the relationship between the client presenting concern category of Anxiety and Thought Disturbance and re-enrollment (N = 181, 6 missing). Of the 181, 137 (75.7 %) re-enrolled. Of the 137, 99 (72.3 %) reported the category Anxiety and Thought Disturbance as a presenting concern. There was a significant relationship between the presenting concern of Anxiety and Thought Disturbance and re-enrollment, $X^2 = 6.498$ (df = 1, N = 181), $p < .05$. Of the total sample N = 181, 6 missing) 139 (76.9%) reported the concern Anxiety and Thought Disturbance. Of the 139 who had the concern 105.2 (75.7%) were expected to stay and 33.8 (24.3%)
were expected to leave, however, 99 students (71.2%) re-enrolled and 40 (28.8%) did not re-enroll. See Appendix F for contingency table.

*Mood Disturbance as a Variable*

A cross-tabulation was run to assess the relationship between the client presenting concern category of Mood Disturbance and re-enrollment (N = 181, 6 missing). Of the 181, 137 (75.7%) re-enrolled. Of the 137, 114 (83.2%) reported Mood Disturbance as a presenting concern. There was a significant relationship between the presenting concern of Mood Disturbance and re-enrollment, $X^2 = 4.193$ (df = 1, N = 181), $p < .05$. Of the total sample (N = 181, 6 missing) 156 (86.2%) reported Mood Disturbance. Of the 156 who reported the concern 118.1 (75.7%) were expected to stay and 37.9 (24.3%) were expected to leave, however, 114 (73.1%) re-enrolled and 42 (26.9%) did not re-enroll. See Appendix F for contingency table.

*Body Image as a Variable*

A cross-tabulation was run to assess the relationship between the client presenting concern category of Body Image and re-enrollment (N = 181, 6 missing). Of the 181, 137 (75.7%) re-enrolled. Of the 137, 41 (29.9%) reported Body Image as a presenting concern. There was a significant relationship between Body Image and re-enrollment, $X^2 = 5.914$ (df = 1, N = 181), $p< .05$. Of the total sample (N = 181, 6 missing) 63 (34.8%) reported Body Image as a presenting concern. Of the 63 who reported the concern, 47.7 (75.7%) were expected to stay and 15.3 (24.3%) were expected to leave, however, 41 (65.1%) re-enrolled and 22 (34.9%) did not re-enroll. See appendix F for contingency table.
Additional Analysis Academic Years 2005-2006 and 2006-2007 Combined Research

Hypothesis

Seeking Counseling as a Variable

It is hypothesized that there will be a higher rate of attrition for first-year students who sought mental health counseling than those who did not.

A cross-tabulation was run to assess the relationship between seeking counseling and re-enrollment. The results indicate of the 385 valid cases of students who sought counseling, 280 (73%) re-enrolled. Of the 385 valid cases of students who sought counseling 326 (85%) were expected to re-enroll. Of the 385 valid cases of students who sought counseling, 105 (27%) did not re-enroll. Of the 385 valid cases of students who sought counseling 87 (23%) were expected not to re-enroll. Of the 7864 students who either did not seek counseling or sought counseling but did not give consent to use data, 6238 (79%) re-enrolled. Of the 7864 students who either did not seek counseling, or sought counseling but did not give consent to use data 6192 (79%) were expected to re-enroll. Of the 7864 students who either did not seek counseling, or sought counseling but did not give consent to use data, 1626 (21%) did not re-enroll. Of the 7864 students who either did not seek counseling or sought counseling but did not give consent to use data, 1644 (21%) were expected to leave. There was a significant relationship between seeking counseling and retention, \(X^2 = 10.757\) (df = 1, N = 385), \(p < .05\). see Appendix F for contingency table.

In interpreting the above results, it should be noted that the data reflects the students who sought counseling, gave consent and did not have any missing data for re-
enrollment. The retention rate for these students was 73%. The students who did not give consent are included in the general population rate that has 79% retention. If the students that were excluded for lack of available date could have been included in the “sought counseling” group, the percentages would most likely change.

Summary

This chapter reviewed the descriptive results of this study. This research explored retention and client presenting problem of students who sought counseling at the university counseling center. Two Chi-Squared Analyses were computed to determine relationship. The first analysis determined whether the proportion of observed individuals who sought counseling and re-enrolled equaled the hypothesized proportions. The null hypothesis is there is no statistically significant relationship between first-year students who sought counseling center services and the students’ re-enrollment in the fall of the following year. Results found that the null hypothesis for the relationship between seeking counseling and retention could be rejected at the $p < .05$ level. The second analysis explored the relationship between client presenting concern and retention. The null hypothesis is there is no statistically significant relationship between first-year students who sought counseling center services and their presenting concern and the student’s re-enrollment in the fall of the following year. Results found that the null hypothesis for the relationship between client presenting concern and retention could be rejected at the $p < .05$ level. The additional analysis suggests that there was a higher rate of retention for the general population.
CHAPTER FIVE: DISCUSSION, SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Introduction

Student attrition is a national concern that affects thousands of college students and numerous educational institutions every year. With each departure, a student may potentially lose the time invested, financial aid opportunities, and the confidence in his or her abilities to obtain a college degree (Carey, 2004; Lundquist, Spalding, & Landrum, 2002). Specifically, student success is most at risk during the first-year (U.S. Department of Education (2003-2004). The National Center for Higher Education Management Systems (2007) has reported that students are more likely to drop out of post secondary education within the first-year than any other time in their educational experience. Therefore, researchers, the U.S Department of Education, college counseling centers and educational consultants have been working for years to gain insight and understanding into the dynamics of student attrition.

Analyzing the relationship between seeking counseling, client presenting concern, and retention, provides information for the design of effective academic and student services. To date, however, few studies have researched the relationship between client presenting concern and retention. In addition, previous studies have not examined the relationship between seeking counseling, client presenting concern, and retention in a rural environment at a large, public research university, similar to the university examined for this study.
Given the current research, the purpose of the study was two-fold. First, it aimed to investigate if there was a relationship between seeking counseling and re-enrollment for students who did utilize on-campus mental health services. Second, this study sought to analyze the relationship between client presenting concern and retention for students who utilized on-campus mental health services.

The following sections summarize the findings related to the study, connect the findings to the previous literature, and provide implications for future research. A summary and discussion of findings initiates the chapter. Then, a review of how the findings fit into existing research on the relationship between seeking counseling, retention, and client presenting concerns and retention follows. The chapter ends with a discussion of limitations, recommendations, and future research initiatives.

**Summary of Overall Respondent Demographics**

The client questionnaires of 512 individuals’ who were students at a large, mid-western, public, university, were reviewed. Three hundred ninety-five questionnaires met the study’s criteria and were used for the data analysis. Two academic years were reviewed. Two hundred eight (52.7%) were from the academic year 2005-2006. One hundred eighty-seven (47.3%) were from the academic year 2006-2007.

Regarding characteristics associated with students who sought counseling, 250 (63.8%) were female and 142 (36.2%) were male. The students were predominantly Caucasian (N = 363, 94.5%) with 16 students (4.2%) identifying themselves as minorities, and 5 students (1.3%) as unknown. The majority of students were residential students (N = 383, 97%). It should be noted that this population was required to live on
campus for the first year of their academic career. One hundred eighty-six students (48.3%) had a GPA of 3.00 or above. There was no data available to compare this sample to the overall population since the Health Insurance Portability and Accountability Act laws prevented utilizing personal identification numbers needed to compare with the general population of first-year students.

Review of Research Questions and Hypotheses

This study was guided by two research questions. They were:

(1) Is there a relationship between seeking counseling and retention?

(2) Is there a relationship between client presenting concern and retention?

Correspondingly to the research questions, the following research hypotheses directed this study:

(1) There is a relationship between seeking counseling and retention.

(2) There is a relationship between client presenting concern and retention.

Discussion of Major Findings

A discussion of major findings provides an opportunity to consider the research questions individually.

Research Question One:

Is there a relationship between seeking counseling and retention?

Research question one focused on determining if there was a statistically significant relationship between seeking counseling and re-enrollment. Seeking counseling was operationalized as students who went to the college counseling center, completed a client questionnaire and gave their consent for use of their individual data.
There were three independent variables analyzed of the first-year students that sought counseling. Those were as follows: GPA, residence, and gender.

The findings for this research question suggest that there was a statistically significant relationship between seeking counseling and re-enrollment for first-year students who had sought on-campus mental health services. Two hundred eighty (73%) of the students who sought counseling services re-enrolled in the fall of the following year. This is consistent with other studies exploring the impact of counseling and retention (Turner & Berry, 2000).

The remaining measure of the relationship between seeking counseling and retention included assessing GPA, residence, ethnicity, and, gender. There was a statistically significant relationship between GPA and re-enrollment. One hundred eighty-six students (48.3%) had a GPA of 3.00 or above. This is consistent with a study conducted on 26,537 college students who had below a “C” average and were found less likely than “B” students to remain in school (Hu & St.John, 2001).

The findings of this study for the relationship between residence and re-enrollment, is not consistent with a majority of the previous research (Kanoy & Bruhn, 1996; Thompson, Samiratedu, & Rafter, 1993; Wilson, H.W., 2003). More specifically, Thompson, Samiratedu, and Rafter (1993) studied 2,500 to 2,800 students and examined on-campus living and academic achievement. They concluded that academic progress and retention were higher among students who lived on campus, regardless of race or gender. Kanoy & Bruhn (1996) performed a study with university
students who participated in a living/learning residence hall program and discovered that the residence hall environment contributed to higher persistence rates.

The findings for this study may be due to the difference in design and method. A majority of the previous research examined retention and student involvement rather than seeking counseling and retention. Thus the participants sampled may have affected the results. Furthermore, the requirement of first year students to live on campus contributed to 97% of the sample residing on-site. This provides less variability within this sample’s variable of residence, thereby minimizing the potential for significance to emerge.

The findings for gender were that there was not a relationship between gender and re-enrollment. This is consistent with a study conducted by Ishitani and DesJardins (2002). They had a nationwide sample of 3,450 U.S. citizens (ages 18 to 25) who enrolled in college between August of 1989 and October of 1989. They tracked the students for five years and determined that the attrition risks for women and men were not statistically different.

The sample size for minority participants was too small to run a separate analysis. For the two years analyzed, 363 (94.5%) of the participants were Caucasian, 16 participants (4.2%) were minorities and five (1.3%) were unknown. The Ohio Board of Regents (2006) reports, for the university in this study, an 87% white/non-Hispanic student population. Thus 12% of the student population were minorities and 4.2% of the 12% sought counseling. This is consistent with a study conducted by Davidson, Yakushka, & Sanford-Martins (2004) on 242 participants who sought counseling at a
large mid-western university. The results of that study reflected a very low percentage of racial and ethnic minority students (2.4%) utilized on-campus services.

These findings indicated a statistically significant relationship between seeking counseling and retention. In addition, there was a significant relationship between GPA and re-enrollment. The numbers of observed and expected, for place of residence, did not reflect a significant relationship with re-enrollment. The results of this study reflect a low percentage of racial and ethnic minority students sought counseling center services at the university.

**Research Question Two:**

*Is there a relationship between client presenting concern and retention?*

Research question two explored the relationship between client presenting concern and re-enrollment. Client presenting concern was measured through the completion of the counseling center client questionnaire. Clients check and/or circle items that are concerns they want to discuss in counseling. There were 53 client presenting concerns identified and divided into 13 categories as follows: (1) “Anxiety and Thought Disturbance,” (2) “Mood Disturbance,” (3) “Relational Concerns,” (4) “Academic Concerns,” (5) “Sexual Concerns,” (6) “Substance Use,” (7) “Body Image,” (8) “International Students,” (9) “Concerns related to Abuse, Violence, or Harassment,” (10) “Legal Concerns,” (11) “Medical Concerns,” (12) “Religion/Spirituality,” and (13) “Financial Concerns.”
Summary of Statistical Findings

For clarification, the major findings of this study are briefly overviewed and presented below:

(1) There was a statistically significant relationship between seeking counseling and retention.

(2) There was a statistically significant relationship between GPA and re-enrollment, (82.1%) had a GPA of 2.00 or above and (48.3%) had a GPA of 3.00 or above.

(3) There was not a statistically significant relationship between residence and re-enrollment.

(4) There was not a statistically significant relationship between gender and re-enrollment.

(5) Results for ethnicity revealed that a very low percentage (4.2%) of minority students, utilized on campus services.

(6) There was a statistically significant relationship between Legal Concerns and re-enrollment.

(7) There was a statistically significant relationship between International Students and re-enrollment.

(8) There was a statistically significant relationship between Anxiety and thought Disturbance.

(9) There was a statistically significant relationship between Body Image and re-enrollment.
(10) There was a statistically significant relationship between Mood Disturbance and re-enrollment.

*Implications of Findings in Literature*

Chapter Two provided a review of relevant literature related to seeking counseling, client presenting concern and retention. As explored in that chapter, student attrition is a national concern that the majority of universities and colleges must address (Braxton, Hirschy, & McClendon, 2004; Carey, 2004). The university in this study has addressed the retention problem by implementing various retention strategies including learning initiatives, residential learning communities, student engagement committees, supplemental instruction workshops, and academic probation intervention (Williford & Schaller, 2007). In spite of these efforts, the university has experienced a gradual decrease in first-year retention over the past five years to the current rate of 78% (Office of Institutional Research, 2007).

The literature indicates that counseling and retention are positively correlated and influenced by a variety of variables (Sharkin, 2004). Many studies have reflected that college students who seek mental health counseling on campus have higher retention rates than their classmates who do not receive counseling (Bishop, 1990; Bishop & Brenneman, 1986; Coll & Stewart, 2002; Gerdes & Mallinckrodt, 1994). The literature suggests that seeking counseling for academic and retention reasons support the role of counseling centers in increasing student retention. The findings for this study suggest that GPA, plays a significant role in re-enrollment. In addition, client presenting concern was significant in re-enrollment. Specifically the client presenting concerns of Legal
Retention: The Influence of GPA

There have been numerous studies linking GPA in high school and college to a student’s likelihood to staying in college (Tinto, 1993; Hu and St. John, 2001). This study explored the relationship between GPA and re-enrollment and found that 280 of the 395 students re-enrolled. Of those who re-enrolled, 82.1% had a GPA of 2.00 or above and 48.3% had a GPA of 3.00 or above. GPA was found to have a significant relationship with retention. This finding is consistent with existing studies and encourages the ongoing attention to how factors impacting GPA interact with retention outcomes.

Retention: The Influence of Gender

Upon examining the influence of gender on retention there is a disparity in the literature. Some studies suggest that gender was not significant in retention. Peepe (2002) performed a study on gender and retention and found no significance between gender and retention. Other studies indicate that females are more likely than males to re-enroll. Payne, Pullen, and Padgett (1996) conducted a survey of students who did not re-enroll, and discovered that males were more likely than females to leave school. This study discovered that there were more females than male participants; however, the observed count and the expected count for re-enrollment was found to have no significance with retention. This finding suggests that further research on men and women needs to be conducted to better understand how gender-based issues interact with retention outcomes.
**Retention: The Influence of Ethnicity**

The literature indicates that the transition to higher education seems to be more difficult for minority students than for Caucasian students (Seidman, 2005; Rankin & Reason, 2005). The literature reviews a number of barriers that affect the success of minority students: loneliness, alienation, isolation, discrimination, academic difficulty, and difficulty with the English language (Gardner, 2005). However, there is a disparity in the literature on race influencing attrition. Murtaugh, Burns and Schuster (1999) report that Blacks, Hispanics, and American Indian students were at a higher risk to leave school than White students. Addleman (1999) performed a study with the results indicating that race was not a significant variable in retention. The sample size for this study was too small to run separate analysis. Of the total number of participants 94.5% were Caucasian, while 4.2% were minority students. Future research needs to develop strategies for sampling minority participants so that this variable can be better understood within the context of retention.

**Retention: The Influence of Residence**

In the literature, empirical studies (Pascarella & Terenzini, 1980) literature reviews (Ware & Miller, 1997) and retention theories (Tinto, 1975) suggest that students who live on campus are more likely to remain in college than commuter students. This study focused on first-year students who were primarily residential students (97%). Off campus, Greek housing, and home were (3.1%) of the total participants. The results of this study indicate the observed count was not statistically different from the expected count; therefore no significance in the relationship between residence and re-enrollment
was found. This is potentially a result of the presence of only 3% of participants who lived off campus. Future research is necessary to explore how variance among residences impacts retention.

Retention: Client Presenting Concerns

The literature reflects a correlation between counseling and retention (Turner & Berry, 2000; Coll & Stewart, 2002). Various studies suggest that seeking counseling for academic and retention reasons support the role of counseling centers in increasing student retention (Bishop & Brenneman, 1986; Bishop, 1990; Gerdes & Mallinckrodt, 1994). There is little research on client presenting concerns and the relationship to retention. One study in the literature examined counseling for personal, psychological reasons and the results indicated that students who counseled for personal, psychological reasons were more likely to re-enroll (Wilson, Mason, & Ewing, 1997).

This study explored the relationship between client presenting concern and retention. The client concerns were thematically categorized into 13 categories by a clinical judgment panel of one researcher and two mental health clinicians for simplicity of analysis. The results reflected significance in the concerns of International Students, Legal Concerns, Anxiety and Thought Disturbance, Mood Disturbance and Body Image. The significance in the category of Legal Concerns may indicate that students who present with the concerns of Crime Victim and/or Judicial Legal Problems end up in extenuating situations and consequences that impede their continued enrollment. The significance of the category International Students suggest that clients who present with Culture Shock, English as a 2nd language, and Immigration are having greater difficulty
in transitioning into higher education than Caucasian students. The literature supports the
difficulty that minority students experience in discrimination, isolation, alienation, and
racial identity as a predictor of psychological health (Gardner, 2005; Pillay, 2005; 7
Seidman, 2005).

The findings of significance in the category of Anxiety and Thought Disturbance
indicate that students are reporting presenting concerns of anxiety, compulsive behaviors,
fearing failure, hallucinations, panic attacks and stress. The results of significance in the
concern of mood disturbance indicate that students are reporting concerns of death/grief
issues, depression, guilt, loneliness, mood swings, self mutilation shame, sleep problems,
suicidal thoughts and troublesome thoughts. This is consistent with the literature that
reports an increase in the severity of client concerns. Benton et al., (2003) performed an
empirical study on 13, 257 student-clients and the overall results indicated that students
are reporting more complex problems, such as anxiety, and thought disturbances,
depression and suicidal thoughts more than was reported in the past. Students appear to
be entering higher education with various emotional disturbances that may be
exacerbated by the transition into university life (Kirn, 2003).

The significance in the category of Body Image reveals students are reporting
presenting concerns of body image and eating problems. Students who report these
concerns are re-enrolling at a lesser rate than was expected. This may be due to the
difficulty in thought or behaviors concerning weight, eating or food. In addition, various
medical conditions may arise from eating problems.
Limitations

As with all empirical research, there are limitations to this study. Consequently, the conclusions provided by this study should be viewed in the context of the following limitations. The scope of this study was limited to the students of one university, which is a rural university in the mid-western United States. Therefore, the results might not be applicable to all higher education institutions, and thus their generalizability may be somewhat limited. In addition, the data on the client questionnaire is self-report and is not evaluated by a professional. Also, Health Insurance Portability and Accountability Act privacy laws prevented the use of personal identification numbers for comparison with the general population thus limiting the population studied to those students who sought counseling at the university counseling center.

Another limitation was the study was based on pre-existing, secure, data collected by the university’s counseling center. As a result, the data was limited to those variables collected and cataloged by the counseling center. During data collection, it was discovered that a revised intake had been implemented within the academic year (2005-2006) thus limiting a percentage of useable data. Further, the data was limited to those first-year students who had signed the informed consent. Finally, there was a limitation of researcher bias in compiling the categories for research question two. A different categorization could yield different results.

Implications and Recommendations

This study provides an empirical foundation for understanding the relationship between seeking counseling, client presenting concern, and retention. The findings serve
to guide future research in this area. As reviewed in Chapter One, this study is significant for a number of reasons. First, it responds to the paucity of literature related to client presenting concern, (psychological and personal) and retention. Numerous studies indicate that seeking counseling for academic and retention related concerns are positively correlated and support the role of counseling centers increasing student retention (Bishop & Brenneman, 1986; Coll & Stewart, 2002, & Bishop, 1990). This study lends support for additional study into the possible benefits to retention when students seek counseling.

This study not only responds to the dearth of literature related to client presenting concern and retention, but it also addresses factors related to retention, specifically for first-year students seeking counseling at a university, counseling center. Consideration of GPA, residence, ethnicity and gender in relationship to seeking counseling and retention has been limited in previous research. This study works to clarify the relationship that each of these factors has with the re-enrollment of first–year students that seek on-campus counseling. Future, research will be necessary to further clarify the relationship of ethnicity, gender, and residence with retention for first-year counseling students that seek counseling.

Furthermore, future empirical research is critical in supporting the role that counseling centers play in student retention. University counseling centers are under increasing scrutiny regarding how services contribute to student retention (Sharkin, 2004). This study revealed that of the 80% of students returning in the academic year 2005-2006, 4.29% sought counseling during their first-year. In addition of the 78%
returning students for the academic year 2006-2007, 4.30% sought counseling during their first year.

Recommendations for enhancing the retention of students who seek counseling are articulated below.

Recommendations for Enhancing Retention

Counseling plays an important role in enhancing retention. Improving the opportunities for student success benefits the student, the institution and the nation. Based on the findings of this study and the literature on counseling and retention, several recommendations develop for college counselors, administrators, and educators:

i. College administrators and faculty could endorse and promote a university-wide retention seminar to inform administrators and faculty of the psychological concerns that put students at risk for attrition.

ii. College counseling centers (in conjunction with Residence Life) could design and implement workshops addressing “Anxiety and Thought Disturbance” and “Mood Disturbance” in the first-year residential communities.

iii. College counseling center staff could become more involved at New Student Orientations by offering a “First-year Student Concerns” survey that could assess potential mental health concerns. Upon completion of the survey, an appointment could be established to review and interpret the results with the student, providing the opportunity to be pro-active in addressing potential mental health problems that could hinder first-year student success.
iv. Faculty and administrators could endorse counseling center staff giving a presentation about “client concerns” of first-year students, to those enrolled in university college or other learning communities encompassing (first-year) courses.

v. University counseling centers could consider participating in a program titled “Center for the Study of College Student Mental Health” (CSCSMH). This program has collaboratively developed a set of data standards representing a starting point for national data standards in the counseling center field. Becoming involved in the program provides the opportunity for college counseling centers around the nation to use standardized forms that could be pooled into a nationwide database of college student client information. The database will be used for research purposes about college student mental health (CSCSMH, 2006). Involvement in this program could help to address the lack of research about student characteristics, outcome studies, and increasing severity in client presenting concerns.

vi. The Division of Student Affairs could endorse and promote a required seminar for first-year students, created by Judiciaries educating students on the universities student code of conduct.

vii. Orientation programs could identify first-year students with low high school GPA’s and set up mini-seminars with the appropriate offices (academic affairs, learning center, counseling center) during orientation to expose the student and parents to services available to insure student success.
Future Research Initiatives

The results of this study provide an opportunity for understanding the relationship between seeking counseling, client presenting concern, and retention. The findings begin to respond to the dearth of literature addressing these constructs within the counseling and retention fields. In response to the limitations of this study and the findings of this study, the following options for future research are recommended.

The sampling plan itself relied on students who sought counseling at the university counseling center. Future research could expand the sampling plan and compare with the general population. Future studies could assess “how” psychological counseling has a positive effect on the relationship to retention. This study specifically focused on “client presenting concerns.” Future studies could expand and explore DSM IV diagnosis of clients and the relationship to retention. In addition, future research could utilize more objective measures rather than client self-report.

This study utilized the counseling center client questionnaire as a measure of “client presenting concern.” Future research endeavors could utilize the Counseling Center Assessment of Psychological Symptoms assessment instrument recommended by the Center for the Study of College Student Mental Health (2006). This instrument is reported as balanced for both assessment and outcome (Center for the Study of College Student Mental Health, 2006). Further understanding of the relationship between counseling for psychological reasons and retention provides the foundation to support student success and enhance retention.
Summary

Student attrition is a national puzzle that most universities and colleges must solve (Braxton, Hirschy, & McClendon, 2004). The numbers of students enrolling in higher education is increasing, however, the numbers of students who are being retained are not (National Center for Higher Education Management Systems, 2007). As technology continues to advance, continuous learning may not only be desirable but necessary (Act, 2007).

Continuous learning involves student success. There are many factors contributing to student success. It appears that seeking counseling may be a factor that contributes to student success. Research indicates that counseling is positively correlated to retention and this study may suggest that there is a significant relationship between seeking counseling and retention. The purpose of this study was to possibly contribute to student success by exploring retention and client presenting concerns for students who seek counseling center services.

Up till now, our society has provided more access to higher education, than other countries, however, the leadership of the United States in providing access to higher education is beginning to wane. State policy makers have primarily focused on providing access to higher education and not on college readiness or retention. Therefore, despite an increase in the access to higher education there is not an increase in retention (Carey, 2004)

First-time, full-time students are the population described as “most likely to succeed” and “most at risk” for attrition. There are many factors that contribute to the
retention of first-year students. For example: student expectation, commitment, pre-
college characteristics (GPA), residence, student involvement, and personal
characteristics (family background, ethnicity, gender) to name a few.

This study explored the relationship between seeking counseling and retention
and client presenting concern and retention of the first-time, full-time, students that
sought counseling at a large, public, research university in the mid-west. Results indicate
significance in the relationship between seeking counseling and retention and in GPA and
retention as well as the client presenting concerns of legal concerns, international
students, anxiety and thought disturbance, body image and retention for the population
that sought counseling. Further research could expand to compare with the general
population and utilize more objective measures other than student self-report.
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Washington, DC.


APPENDIX A: University Counseling Center’s Client Questionnaire

Your careful completion of this inventory will help your counselor work with you more effectively. The information you share is confidential. Please answer each item carefully.

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<tr>
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</table>

<table>
<thead>
<tr>
<th>Phone numbers (perm.)</th>
<th>May we leave a message?</th>
</tr>
</thead>
<tbody>
<tr>
<td>(local)</td>
<td></td>
</tr>
<tr>
<td>(cell)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-mail address</th>
<th>May we send you e-mail?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Major:</th>
<th>Overall G.P.A.</th>
<th>How many credit hours this term?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>College of:</th>
<th>Gender</th>
<th>Age</th>
<th>Employed?</th>
<th>If yes, # hrs/week</th>
<th>Employed where?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td></td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td></td>
<td>no</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transgender</td>
<td></td>
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<td></td>
<td></td>
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</tbody>
</table>

The three items directly below are voluntary items designed to improve your services:

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Res Hall</td>
<td>Asian Heritage</td>
<td>Single</td>
<td>Heterosexual</td>
</tr>
<tr>
<td></td>
<td>Greek</td>
<td>Black/African Heritage</td>
<td>Married</td>
<td>Lesbian Woman</td>
</tr>
<tr>
<td></td>
<td>Off campus</td>
<td>Latino/Hispanic</td>
<td>Separated</td>
<td>Gay Man</td>
</tr>
<tr>
<td></td>
<td>Home</td>
<td>Multi-ethnic/multi-racial</td>
<td>Divorced</td>
<td>Bisexual</td>
</tr>
<tr>
<td></td>
<td>Home</td>
<td>Native American</td>
<td>Widowed</td>
<td>Questioning</td>
</tr>
<tr>
<td></td>
<td>Live With?</td>
<td>European Heritage</td>
<td>Partnered</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roommate(s)</td>
<td>Other</td>
<td>In committed dating relationship</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alone</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religious/spiritual affiliation?</th>
<th>Other important world views?</th>
</tr>
</thead>
</table>

Previously used our services? □ No □ Yes If yes, when? __________

Circle the number that represents how severe you feel your problems are:

1  2  3  4  5  Very Severe

If you feel that your concerns are urgent, requiring an early appointment, please place a checkmark (✓) in the preceding space and state below why you think it is urgent.
Background Information - Please fill out to the best of your ability:

Prior Counseling
☐ Psychiatrist
☐ Community Agency
☐ Inpatient Drug/Alcohol Rehab
☐ Private Therapist
☐ Other College Counseling
☐ Other: ________________________________

Referred By
☐ Self
☐ Friend
☐ Physician
☐ Advisor/Professor
☐ Clergy
☐ Residence Life Staff
☐ Dean of Students
☐ Parent or Relative
☐ Judicaries
☐ Other: ________________________________

Disabilities
☐ Physical
☐ Visual Impairment
☐ Hearing Impairment
☐ Learning Impairment
☐ Other: ________________________________
*List accommodations needed for counseling

Parents' Status
☐ Married
☐ Separated
☐ Divorced
☐ Widowed
☐ Dad remarried
☐ Mom remarried
☐ Partnered
☐ Never married

Family History
☐ Anxiety
☐ Depression
☐ Alcohol abuse
☐ Drug abuse
☐ Gambling
☐ Eating disorders
☐ Suicide/self harm
☐ Physical abuse
☐ Sexual abuse

Family Member Involved

My family and I are:
☐ In a satisfactory relationship
☐ Unable to discuss personal issues
☐ Not emotionally close
☐ In an unsatisfactory relationship

Please check all of the following items which are concerns or difficulties at this time. Circle those that you want to discuss with a counselor.

☐ Abortion
☐ Anxiety
☐ Compulsive behaviors
☐ Death/grief issues
☐ Eating problems
☐ Family concerns
☐ Guilt
☐ Impulsiveness
☐ Medical concerns
☐ Peer relationships
☐ Romantic relationship
☐ Sexual concerns
☐ Sleep problems
☐ Time management
☐ Academic concerns
☐ Attention Problem
☐ Crime Victim
☐ Depression
☐ Emotional abuse
☐ Fearing failure
☐ Hallucinations
☐ Judicial/legal problems
☐ Mood swings
☐ Physical abuse
☐ Self-mutilation
☐ Sexual harassment
☐ Social/dating issues
☐ Troublesome thoughts
☐ Alcohol use
☐ Body image
☐ Culture shock
☐ Discrimination
☐ English as 2nd Language
☐ Financial problems
☐ Homesickness
☐ Learning Problem
☐ Over-responsive
☐ Pregnancy
☐ Sexual abuse
☐ Sexual orientation
☐ Stress
☐ Violent behavior
☐ Anger
☐ Career issues
☐ Dating violence
☐ Drug use
☐ Exam Panic
☐ Gambling
☐ Immigration
☐ Loneliness
☐ Panic attacks
☐ Religion/spirituality
☐ Sexual assault
☐ Shame
☐ Suicidal thoughts

Please briefly state what you see as the problem(s) which caused you to seek counseling:

__________________________________________________________________________________________

__________________________________________________________________________________________

__________________________________________________________________________________________
I have tried to control my weight with:
- Vomiting
- Laxatives
- Not eating
- Diet pills or herbs / supplements
- Extensive exercise
- Special diets
- Other: ____________

I have in the past:
- Thought to harm myself
- Tried to harm myself
- Thought to harm another person
- Tried to harm another person

I have currently:
- Thought to harm myself
- Tried to harm myself
- Thought to harm another person
- Tried to harm another person

I use alcohol &/or drugs:
- Never
- Less than once per week
- About once a week
- Several times a week
- Most every day

The following have resulted from my use of alcohol or drugs:
- Traffic violations
- Academic problems
- Relationship problems
- Campus disciplinary action
- Financial problems
- Fight with friends
- Blackouts
- Arrest
- Regretted sexual activity

I have recently experienced problems with the following:
- Sleeping
- Appetite
- Fatigue
- Difficulty in expressing emotion
- Concentration
- Loss of pleasure in most activities
- Depression
- Anxiety
- Mood shifts
- Feelings of anger
- Shame
- Guilt
- Feeling worthless
- Thoughts of death
- Feelings of stress
- Weight loss or gain
- Social isolation

Current Medications: ____________

Have you ever been prescribed medicine for psychological problems? If so, what?

<table>
<thead>
<tr>
<th>Family members and/or other persons important to you</th>
<th>Occupation</th>
<th>Relation</th>
<th>Age</th>
<th>Deceased?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of siblings you have _____ and their ages (____, ____ , ____ , ____ , ____ , ____ , ____ , ____)

Please "x" out all hours within which you CANNOT come for counseling appointments.

Monday 8 9 10 11 1 2 3 4
Tuesday 8 9 10 11 1 2 3 4
Wednesday 8 9 10 11 1 2 3 4
Thursday 8 9 10 11 1 2 3 4
Friday 8 9 10 11 1 2 3 4
CONFIDENTIALITY
State and federal law and our professional ethics require us to protect the confidential nature of any information you provide. The privacy rule under the Health Insurance Portability and Accountability Act of 1996 requires us to provide notice to you of our legal duties and privacy practices. Your signature below confirms that you have received a copy of our NOTICE OF PRIVACY PRACTICES.

Client Signature  Date

TAPING OF SESSIONS
Audio/Videotaping helps CPS staff provide superior quality services to you. You are encouraged, but not required, to allow the taping of your sessions. You may request that the tape recorder be turned off at any time, and you may request that the tape or a portion of it be erased immediately. Tapes are used only for supervisory purposes and are then erased.

I grant permission for my counselor to tape my sessions.

Client Signature  Date

CONSULTATION WITH HEALTH CLINIC PHYSICIANS
I grant permission for CPS staff to consult with Ohio University Health Clinic Physicians about my treatment if necessary. CPS maintains records that are separate from the Health Clinic. Referral and consultation notes are shared.

Client Signature  Date

FULFILLING OUR RESEARCH MISSION
Staff at CPS want to provide the highest quality services to our students and this sometimes means sharing our “best practice” findings at conference and meetings. The data we share is anonymous (such as age, gender, or diagnosis of all of our clients compiled together). We need your permission to use even anonymous information in a more public setting. Any research designed to capture more than demographic data requires a separate permission form.

I grant permission for anonymous and/or demographic data from my file to be used for research purposes.

Client Signature  Date

I AM REQUESTING SERVICES FOR MYSELF AND CONSENT TO PARTICIPATE IN COUNSELING
CPS has a session limit of 13 sessions during an academic year (excluding summer and winter breaks). I understand that I must take responsibility for canceling sessions prior to 24 hours before they are scheduled. Cancellations not done 24 hours in advance and failure to appear (“no-show”) for scheduled appointments WILL BE COUNTED TOWARD THE SESSION LIMIT AND RESULT IN A $10 “MISCELLANEOUS MEDICAL” CHARGE ON YOUR ACCOUNT, unless there is a legitimate excuse. I understand that participation in counseling at Counseling and Psychological Services is strictly voluntary. I have asked for any needed clarification of the conditions mentioned above, I am satisfied with the explanations and I agree to abide by these conditions. I consent to participate in counseling at CPS and I understand that I may withdraw consent at any time.

Client Signature  Date
APPENDIX B: LIST OF CLIENT CONCERNS

1. Abortion
2. Academic Concerns
3. Alcohol Use
4. Anger
5. Anxiety
6. Attention Problems
7. Body Image
8. Career Issues
9. Compulsive Behaviors
10. Crime Victim
11. Culture Shock
12. Death/Grief Issues
13. Depression
14. Discrimination
15. Drug Use
16. Eating Problems
17. Emotional Abuse
18. English as a 2nd Language
19. Exam Panic
20. Family Concerns
21. Fearing Failure
22. Financial Problems
23. Guilt
24. Hallucinations
25. Homesickness
26. Immigration
27. Impulsiveness
28. Judicial/Legal Problems
29. Learning Problems
30. Loneliness
31. Medical Concerns
32. Mood Swings
33. Over-responsible
34. Panic Attacks
35. Peer Relationships
36. Physical Abuse
37. Pregnancy
38. Religion/Spirituality
39. Romantic Relationship Problems
40. Self-Mutilation
41. Sexual Abuse
42. Sexual Concerns
43. Sexual Harassment
44. Sexual Orientation
45. Shame
46. Sleep Problems
47. Social Dating Issues
48. Stress
49. Suicidal Thoughts
50. Time Management
51. Troublesome Thoughts
52. Violent Behavior
APPENDIX C: DATA COLLECTION PROCEDURE

A data collection strategy was provided by the university counseling center’s research coordinator and was as follows:

1. The researcher will collect the data from the university counseling center:
   Freshman students from 2004-2005 and 2005-2006 who sought counseling, completed an intake form, and signed consent to use their intake data for research purposes. It will be individual student data with personal identification numbers attached (no name, date of birth, or social security number).

2. Using the sample created by the researcher, the university counseling center research coordinator (with the help of support staff) will identify the students who dropped out during the year or at the end of the year using the university student information system. After dividing into these two groups, personal identification numbers will be removed and a random number will be assigned.

3. The researcher will receive a data set with two groups (re-enrolled and dropped out) without personal identification numbers or any other identifiers. The researcher can then take the data set to the methodologist for further analysis.
APPENDIX D: LIST OF CATEGORIES OF CONCERNS

Category 1: Anxiety and Thought Disturbance
5. Anxiety
9. Compulsive Behaviors
21. Fearing Failure
24. Hallucinations
34. Panic Attacks
48. Stress

Category 2: Mood Disturbance
12. Death/Grief Issues
13. Depression
23. Guilt
30. Loneliness
32. Mood Swings
40. Self-Mutilation
45. Shame
46. Sleep Problems
49. Suicidal Thoughts
51. Troublesome Thoughts

Category 3: Relational Problems
20. Family Concerns
25. Homesickness
35. Peer Relationships
39. Romantic Relationships
47. Social Dating Issues

Category 4: Academic Concerns
2. Academic Concerns
6. Attention Problems
8. Career Issues
19. Exam Panic
29. Learning Problems
33. Over-responsible
50. Time Management
Category 5: Sexual Concerns
   1. Abortion
   2. Pregnancy
   42. Sexual Concerns
   44. Sexual Orientation

Category 6: Substance Use
   3. Alcohol Use
   15. Drug Use

Category 7: Body Image
   7. Body Image
   16. Eating Problems

Category 8: International Students
   11. Culture Shock
   18. English as a 2nd Language
   26. Immigration

Category 9: Problems related to Abuse, Violence, or Harassment
   17. Emotional Abuse
   36. Physical Abuse
   41. Sexual Abuse
   43. Sexual Harassment
   52. Violent Behavior
   53. Anger

Category 10: Legal Concerns
   10. Crime Victim
   28. Judicial/Legal Problems

Category 11: Medical Concerns
   31. Medical Concerns

Category 12: Religion/Spirituality
38. Religion/Spirituality

Category 13: Financial Problems
  22. Financial Problems
The amendment, detailed below, and submitted for the following research study has been approved by the Institutional Review Board at Ohio University. Approval date of this amendment does not affect the expiration date of the original approval.

Amendment: New data collection strategy.

Project: Counseling and Attrition: A Study of Reasons Students Pursue Counseling and the Relationship to Attrition at a Mid-Western University

Project Director: Martha Reynolds-Adkins

Advisor: Thomas Davis

Department: Counselor Education

Robin Stack, C.I.P., Human Subjects Research Coordinator
Office of Research Compliance

8/15/07 Date
APPENDIX F: CONTINGENCY TABLES

Table 1. Re-enrolled in Fall of Following Year: Gender 2005-2006 and 2006-2007 Combined.

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.011a</td>
<td>1</td>
<td>.916</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.000</td>
<td>1</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.011</td>
<td>1</td>
<td>.916</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td>.906</td>
<td>.503</td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.011</td>
<td>1</td>
<td>.916</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>384</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 38.55.
Table 2. Re-enrolled in Fall of Following Year: GPA on Whole Numbers 2005-2006 and 2006-2007 Combined

<table>
<thead>
<tr>
<th>Re-enrolled in Fall of Following Year</th>
<th>GPA on Whole Numbers</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>24</td>
<td>31</td>
<td>35</td>
<td>2</td>
<td>104</td>
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<tr>
<td>Expected Count</td>
<td>3.8</td>
<td>13.8</td>
<td>35.2</td>
<td>50.4</td>
<td>8</td>
<td>104.0</td>
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<tr>
<td>Yes</td>
<td>2</td>
<td>27</td>
<td>99</td>
<td>151</td>
<td>1</td>
<td>280</td>
</tr>
<tr>
<td>Expected Count</td>
<td>10.2</td>
<td>37.2</td>
<td>94.8</td>
<td>135.6</td>
<td>2.2</td>
<td>280.0</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>51</td>
<td>130</td>
<td>186</td>
<td>3</td>
<td>384</td>
</tr>
<tr>
<td>Expected Count</td>
<td>14.0</td>
<td>51.0</td>
<td>130.0</td>
<td>186.0</td>
<td>3.0</td>
<td>384.0</td>
</tr>
</tbody>
</table>
Table 3. Re-enrolled in Fall of Following Year: Type of Residence 2005-2006 and 2006-2007 Combined

<table>
<thead>
<tr>
<th>Re-enrolled in Fall of Following Year</th>
<th>Type of Residence</th>
<th>Residence Hall</th>
<th>Off Campus</th>
<th>Greek Housing</th>
<th>Home</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Count</td>
<td>100</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>102.3</td>
<td>1.6</td>
<td>.5</td>
<td>.5</td>
<td>105.0</td>
</tr>
<tr>
<td>Yes</td>
<td>Count</td>
<td>275</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>280</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>272.7</td>
<td>4.4</td>
<td>1.5</td>
<td>1.5</td>
<td>280.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>375</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>385</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>375.0</td>
<td>6.0</td>
<td>2.0</td>
<td>2.0</td>
<td>385.0</td>
</tr>
</tbody>
</table>

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>6.035</td>
<td>3</td>
<td>.110</td>
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<tr>
<td>Likelihood Ratio</td>
<td>5.836</td>
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<td>.120</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>5.098</td>
<td>1</td>
<td>.024</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>385</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .55.
Table 4. Re-enrolled in Fall of Following Year: Gender 2005-2006

<table>
<thead>
<tr>
<th>Cross-tabulation</th>
<th>Gender</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>Re-enrolled in Fall of Following Year</td>
<td>No</td>
<td>Count</td>
<td>24</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>24.9</td>
<td>36.1</td>
<td>61.0</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Count</td>
<td>59</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>58.1</td>
<td>83.9</td>
<td>142.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Count</td>
<td>83</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>83.0</td>
<td>120.0</td>
<td>203.0</td>
</tr>
</tbody>
</table>

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
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</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.086a</td>
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<td>.770</td>
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<td></td>
</tr>
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<td>Continuity Correctionb</td>
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<td>.891</td>
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<td>Fisher's Exact Test</td>
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<td>.876</td>
<td>.447</td>
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<td>1</td>
<td>.770</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>203</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.94.

b. Computed only for a 2x2 table
Table 5. Re-enrolled in Fall of Following Year: GPA on Whole Numbers 2005-2006

<table>
<thead>
<tr>
<th>Cross-tabulation</th>
<th>GPA on Whole Numbers</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-enrolled in Fall of Following Year</td>
<td>No</td>
<td>Count</td>
<td>8</td>
<td>14</td>
<td>18</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expected Count</td>
<td>2.4</td>
<td>8.6</td>
<td>19.5</td>
<td>29.3</td>
<td>.3</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Count</td>
<td>0</td>
<td>15</td>
<td>48</td>
<td>79</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expected Count</td>
<td>5.6</td>
<td>20.4</td>
<td>46.5</td>
<td>69.7</td>
<td>.7</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>8</td>
<td>29</td>
<td>66</td>
<td>99</td>
<td>1</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>8.0</td>
<td>29.0</td>
<td>66.0</td>
<td>99.0</td>
<td>1.0</td>
<td>203.0</td>
</tr>
</tbody>
</table>

Chi-Square Tests

<table>
<thead>
<tr>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>28.693$^a$</td>
<td>4</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>29.321</td>
<td>4</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>22.681</td>
<td>1</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>203</td>
<td></td>
</tr>
</tbody>
</table>

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is .30.
Table 6. Re-enrolled in Fall of Following Year: Type of Residence 2005-2006

Cross-tabulation

<table>
<thead>
<tr>
<th>Re-enrolled in Fall of Following Year</th>
<th>Type of Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Residence Hall</td>
</tr>
<tr>
<td>No</td>
<td>Count</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
</tr>
<tr>
<td>Yes</td>
<td>Count</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
</tr>
</tbody>
</table>

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>10.010a</td>
<td>3</td>
<td>.018</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>10.261</td>
<td>3</td>
<td>.016</td>
</tr>
<tr>
<td>Linear-by-Linear Assoc</td>
<td>7.151</td>
<td>1</td>
<td>.007</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>204</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .60.
Table 7. Re-enrolled in Fall of Following Year: Gender 2006-2007

### Cross-tabulation

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Re-enrolled in Fall of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Following Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>15</td>
<td>29</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Expected Count</td>
<td>14.1</td>
<td>29.9</td>
<td>44.0</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>43</td>
<td>94</td>
<td>137</td>
<td></td>
</tr>
<tr>
<td>Expected Count</td>
<td>43.9</td>
<td>93.1</td>
<td>137.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>123</td>
<td>181</td>
<td></td>
</tr>
<tr>
<td>Expected Count</td>
<td>58.0</td>
<td>123.0</td>
<td>181.0</td>
<td></td>
</tr>
</tbody>
</table>

### Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.112a</td>
<td>1</td>
<td>.738</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.022</td>
<td>1</td>
<td>.882</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.111</td>
<td>1</td>
<td>.739</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.853</td>
<td>.437</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.111</td>
<td>1</td>
<td>.739</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.10.
Table 8. Re-enrolled in Fall of Following Year: GPA on Whole Numbers 2006-2007

Cross-tabulation

<table>
<thead>
<tr>
<th>GPA on Whole Numbers</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-enrolled in Fall of Following Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Count</td>
<td>4</td>
<td>10</td>
<td>13</td>
<td>15</td>
<td>2</td>
<td>44</td>
</tr>
<tr>
<td>Expected Count</td>
<td>1.5</td>
<td>5.3</td>
<td>15.6</td>
<td>21.1</td>
<td>.5</td>
<td>44.0</td>
</tr>
<tr>
<td>Yes Count</td>
<td>2</td>
<td>12</td>
<td>51</td>
<td>72</td>
<td>0</td>
<td>137</td>
</tr>
<tr>
<td>Expected Count</td>
<td>4.5</td>
<td>16.7</td>
<td>48.4</td>
<td>65.9</td>
<td>1.5</td>
<td>137.0</td>
</tr>
<tr>
<td>Total Count</td>
<td>6</td>
<td>22</td>
<td>64</td>
<td>87</td>
<td>2</td>
<td>181</td>
</tr>
<tr>
<td>Expected Count</td>
<td>6.0</td>
<td>22.0</td>
<td>64.0</td>
<td>87.0</td>
<td>2.0</td>
<td>181.0</td>
</tr>
</tbody>
</table>

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>20.341a</td>
<td>4</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>18.229</td>
<td>4</td>
<td>.001</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>7.260</td>
<td>1</td>
<td>.007</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>181</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 4 cells (40.0%) have expected count less than 5. The minimum expected count is .49.
Table 9. Re-enrolled in Fall of Following Year: Type of Residence 2006-2007

<table>
<thead>
<tr>
<th></th>
<th>Type of Residence</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Residence Hall</td>
<td>Off Campus</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Re-enrolled in Fall of</td>
<td>No</td>
<td>44</td>
<td>0</td>
<td>44</td>
</tr>
<tr>
<td>Following Year</td>
<td>Expected Count</td>
<td>43.0</td>
<td>1.0</td>
<td>44.0</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>133</td>
<td>4</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>134.0</td>
<td>3.0</td>
<td>137.0</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>177</td>
<td>4</td>
<td>181</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>177.0</td>
<td>4.0</td>
<td>181.0</td>
</tr>
</tbody>
</table>

Chi-Square Tests

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.314a</td>
<td>1</td>
<td>.252</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>.310</td>
<td>1</td>
<td>.578</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>2.257</td>
<td>1</td>
<td>.133</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.574</td>
<td>.325</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.306</td>
<td>1</td>
<td>.253</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .97.

b. Computed only for a 2x2 table
Table 10. Re-enrolled in Fall of Following Year: Legal Concerns 2005-2006 and 2006-2007

### Case Processing Summary

<table>
<thead>
<tr>
<th>Cases</th>
<th>Valid</th>
<th>Missing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>Re-enrolled in Fall of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Following Year * Legal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concerns</td>
<td>385</td>
<td>97.5%</td>
<td>10</td>
</tr>
</tbody>
</table>

### Re-enrolled in Fall of Following Year * Legal Concerns Cross-tabulation

<table>
<thead>
<tr>
<th>Legal Concerns</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-enrolled in Fall of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Following Year</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>95</td>
<td>10</td>
<td>105</td>
</tr>
<tr>
<td>Expected Count</td>
<td>99.0</td>
<td>6.0</td>
<td>105.0</td>
</tr>
<tr>
<td>Residual</td>
<td>-4.0</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>268</td>
<td>12</td>
<td>280</td>
</tr>
<tr>
<td>Expected Count</td>
<td>264.0</td>
<td>16.0</td>
<td>280.0</td>
</tr>
<tr>
<td>Residual</td>
<td>4.0</td>
<td>-4.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>363</td>
<td>22</td>
<td>385</td>
</tr>
<tr>
<td>Expected Count</td>
<td>363.0</td>
<td>22.0</td>
<td>385.0</td>
</tr>
</tbody>
</table>
Table 10: continued

### Chi-Square Tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>3.889a</td>
<td>1</td>
<td>0.049</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>2.977</td>
<td>1</td>
<td>0.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>3.536</td>
<td>1</td>
<td>0.060</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>0.081</td>
<td>0.047</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>3.879</td>
<td>1</td>
<td>0.049</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>385</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.00.

b. Computed only for a 2x2 table
Table 11. Re-enrolled in Fall of Following Year: International Students 2005-2006

Case Processing Summary

<table>
<thead>
<tr>
<th>Cases</th>
<th>Valid</th>
<th>Missing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>Re-enrolled in Fall of Following Year * International Students</td>
<td>204</td>
<td>98.1%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>208</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

Re-enrolled in Fall of Following Year * International Students Cross-tabulation

<table>
<thead>
<tr>
<th>International Students</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-enrolled in Fall of Following Year</td>
<td>Count</td>
<td>56</td>
<td>5</td>
</tr>
<tr>
<td>No</td>
<td>Expected Count</td>
<td>59.2</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>-3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Yes</td>
<td>Count</td>
<td>142</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>138.8</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>3.2</td>
<td>-3.2</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>198</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Expected Count</td>
<td>198.0</td>
<td>6.0</td>
</tr>
</tbody>
</table>
Table 11: continued

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>8.420a</td>
<td>1</td>
<td>.004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>5.998</td>
<td>1</td>
<td>.014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>7.627</td>
<td>1</td>
<td>.006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.010</td>
<td>.010</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>8.379</td>
<td>1</td>
<td>.004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>204</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.79.

b. Computed only for a 2x2 table
Table 12. Re-enrolled in Fall of Following Year: Anxiety and Thought Disturbance 2006-2007

Case Processing Summary

<table>
<thead>
<tr>
<th>Cases</th>
<th>Valid</th>
<th></th>
<th>Missing</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
<td>N</td>
<td>Percent</td>
<td>N</td>
<td>Percent</td>
</tr>
<tr>
<td>Re-enrolled in Fall of Following Year * Anxiety and Thought Disturbance</td>
<td>181</td>
<td>96.8%</td>
<td>6</td>
<td>3.2%</td>
<td>187</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Re-enrolled in Fall of Following Year * Anxiety and Thought Disturbance Crosstabulation

<table>
<thead>
<tr>
<th>Anxiety and Thought Disturbance</th>
<th>Not a Concern</th>
<th>Concern</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-enrolled in Fall of Following Year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Count</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Expected Count</td>
<td>10.2</td>
<td>33.8</td>
<td>44.0</td>
</tr>
<tr>
<td>Residual</td>
<td>-6.2</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Count</td>
<td>38</td>
<td>99</td>
</tr>
<tr>
<td>Expected Count</td>
<td>31.8</td>
<td>105.2</td>
<td>137.0</td>
</tr>
<tr>
<td>Residual</td>
<td>6.2</td>
<td>-6.2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>42</td>
<td>139</td>
</tr>
<tr>
<td>Expected Count</td>
<td>42.0</td>
<td>139.0</td>
<td>181.0</td>
</tr>
</tbody>
</table>
### Table 12: continued

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>6.498a</td>
<td>1</td>
<td>.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correction b</td>
<td>5.494</td>
<td>1</td>
<td>.019</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>7.515</td>
<td>1</td>
<td>.006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.013</td>
<td>.007</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>6.462</td>
<td>1</td>
<td>.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.21.
- b. Computed only for a 2x2 table
Table 13. Re-enrolled in Fall of Following Year: Mood Disturbance 2006-2007

<table>
<thead>
<tr>
<th>Case Processing Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cases</strong></td>
</tr>
<tr>
<td>Valid</td>
</tr>
<tr>
<td><strong>Re-enrolled in Fall of Following Year * Mood Disturbance</strong></td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>181</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Re-enrolled in Fall of Following Year * Mood Disturbance Crosstabulation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mood Disturbance</strong></td>
</tr>
<tr>
<td><strong>Re-enrolled in Fall of Following Year</strong></td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Expected Count</td>
</tr>
<tr>
<td>Residual</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Expected Count</td>
</tr>
<tr>
<td>Residual</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Expected Count</td>
</tr>
</tbody>
</table>
### Table 13: continued

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>4.193a</td>
<td>1</td>
<td>.041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>3.228</td>
<td>1</td>
<td>.072</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>5.096</td>
<td>1</td>
<td>.024</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
<td></td>
<td>.045</td>
<td>.029</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>4.170</td>
<td>1</td>
<td>.041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.08.

b. Computed only for a 2x2 table
Table 14. Re-enrolled in Fall of Following Year: Body Image 2006-2007

### Case Processing Summary

<table>
<thead>
<tr>
<th>Cases</th>
<th>Valid</th>
<th>Missing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Percent</td>
<td>N</td>
<td>Percent</td>
</tr>
<tr>
<td>Re-enrolled in Fall of</td>
<td>181</td>
<td>96.8%</td>
<td>6</td>
</tr>
<tr>
<td>Following Year * Body Image</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Re-enrolled in Fall of Following Year * Body Image Cross-tabulation

<table>
<thead>
<tr>
<th>Body Image</th>
<th>0</th>
<th>1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>22</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>Expected</td>
<td>28.7</td>
<td>15.3</td>
<td>44.0</td>
</tr>
<tr>
<td>Residual</td>
<td>-6.7</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>96</td>
<td>41</td>
<td>137</td>
</tr>
<tr>
<td>Expected</td>
<td>89.3</td>
<td>47.7</td>
<td>137.0</td>
</tr>
<tr>
<td>Residual</td>
<td>6.7</td>
<td>-6.7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>118</td>
<td>63</td>
<td>181</td>
</tr>
<tr>
<td>Expected</td>
<td>118.0</td>
<td>63.0</td>
<td>181.0</td>
</tr>
<tr>
<td>Residual</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 14: continued

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>5.914a</td>
<td>1</td>
<td>.015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuity Correctionb</td>
<td>5.062</td>
<td>1</td>
<td>.024</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>5.735</td>
<td>1</td>
<td>.017</td>
<td></td>
<td></td>
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<tr>
<td>Fisher's Exact Test</td>
<td></td>
<td></td>
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<td>.018</td>
<td>.013</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>5.881</td>
<td>1</td>
<td>.015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>181</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.31.

b. Computed only for a 2x2 table
Table 15. Seeking Counseling and Re-enrollment 2005-2006 and 2006-2007 Combined

<table>
<thead>
<tr>
<th>Unexpd End Formua</th>
<th>Reenrolled</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sought Cnslg</td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
</tr>
<tr>
<td>Yes</td>
<td>O 280</td>
<td>105</td>
<td>385</td>
</tr>
<tr>
<td></td>
<td>E 326</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>O 6238</td>
<td>1626</td>
<td>7864</td>
</tr>
<tr>
<td></td>
<td>E 6192</td>
<td>1644</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6518</td>
<td>1731</td>
<td>8249</td>
</tr>
</tbody>
</table>

Chi Square Crosstabs Calculations:

\[
\frac{(280 - 336)^2}{336} + \frac{(6238 - 6192)^2}{6192} + \frac{(105-87)^2}{87} + \frac{(1626 - 1644)^2}{1644} = 6.5 + 0.34 + 3.72 + 0.197 = 10.757
\]