IMPORTANCE AND EFFECTIVENESS OF STUDENT HEALTH SERVICES AT A SOUTH TEXAS UNIVERSITY

A Dissertation

by

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This dissertation meets the standards for scope and quality of
Texas A&M University-Corpus Christi and is hereby approved.

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ABSTRACT

IMPORTANCE AND EFFECTIVENESS OF STUDENT HEALTH SERVICES AT A SOUTH TEXAS UNIVERSITY

(April 2013)

Marilyn M. McCaig, MPA

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The study examined the health needs of students at a south Texas university and documented the utility of the student health center. The descriptive study employed a mixed methods explanatory sequential design (ESD). The non-probability sample consisted of 140 students who utilized the university's health center during the period of March 23 - 30, 2012. Analysis of the quantitative data revealed the highest ranked health issues were 1) being aware of safer sex practices, 2) being aware of risky sex practices, and 3) being mentally healthy. The students reported stress, sleep difficulties, and internet use as the health concerns affecting their academic performance the most. The reported level of importance was higher than the degree of fulfillment for all health-related needs. Furthermore, the data indicated students endorsed the health center and used it for three main purposes, namely, healthcare, illness, and health information. Analysis of qualitative data suggested that the university health center assisted the students in identifying healthy life styles and focus on educational goals. The study results may be useful to student health program planners who are considering initiatives to further meet student health needs. The study may also be of interest to student affairs program planners who are considering ways to keep students focused on completing their educational goals.

DEDICATION

Thanks to God, first and foremost, who is with me always and gives strength on a daily basis to complete all goals. This dissertation is dedicated to my mother, Marie Barchard Thames, for being the inspiration in my life and my husband, David L. McCaig, who encouraged and supported my pursuit of education. It is also dedicated to my father, Norwood E. Thames and my aunt, Dr. Kathyrn Barchard, who encouraged me through the completion of this dissertation with sincere encouragement and timely reminders to continue working toward the completion of my academic goal.

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I extend my heartfelt thanks to Dr. Raul Prezas, my dissertation chair and mentor. I humbly thank him for his patience, support, and continued encouragement. I cannot thank him enough for recognizing my potential and expressing his belief in me.

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TABLE OF CONTENTS

CONTENTS PAGE

CONTENTS PAGE

CONTENTS PAGE

LIST OF TABLES

LIST OF FIGURES

FIGURES PAGE

CHAPTER I

INTRODUCTION

Background

The planning and implementation of health services for university students have evolved over the past century (Christmas & Dorman, 1996). The development of health service centers with fully staffed clinics and well-designed programs is an accomplishment of the past 50 years. Health services can provide an environment where the student feels safe, healthy, and successful academically, which fosters a satisfied and committed student. An environment that consistently provides programs to raise the students' sense of health and well-being above what they experience elsewhere in their lives is where the student will desire to spend time. If the student is physically ill or emotionally depressed, s/he may not feel like attending class or completing assignments (Deutsch, 1998).

Health Services can create an environment of support by providing students with knowledge to deal with an acute or chronic illness. A sense of support can lessen the students' anxiety when they are ill, which may decrease the discomfort of a physical malady. Treatment for illness and a supportive environment facilitates a quicker recovery, which may enable the student to return to class and course of studies in a timely manner than they would otherwise. Early intervention that gets the student back to class as soon as possible reduces the amount of lost study time and may yield a higher rate of student satisfaction with her/his academic environment (Weschler, Deutsch & Dowal, 1994). A sense of satisfaction with her/his academic environment might avert a decision to drop out of college if the student misses class and course deadlines due to prolonged illness or a chronic condition. Retaining enrolled students has been a problematic issue for universities throughout the past century. Student affairs programs,

including health related programs, have been tasked to keep students progressing toward the completion of their academic goals (Weschler, et al, 1994).

More than a quarter of a century ago, the issue of student retention, also referred to as persistence, was addressed by student services advocate and educator Vincent Tinto. Tinto's landmark article, written in the 1970s, *Dropout from Higher Education*, was the catalyst for more than 25 years of student retention discourse among education professionals (Tinto, 1975). According to Tinto, retention rates have plagued institutions of higher education for the last century. Nationally, university student retention rates have held at the 50% mark, which means half of the students entering higher education fail to realize their dreams and aspiration (Tinto, 2012). Watson Swail, developer of a geometric framework for student retention, reported United States postsecondary institutions' low student retention rates create a costly and problematic issue (Swail, 2005).

Beginning in the early 1920s through the late 1970s, scholars had tried to identify and rectify the problem of students leaving colleges before reaching academic goals. Scholars, such as Noel Cuff, J.H. McNeeley, R. E. Iffert, and John Summerskill expressed concern for students' failure to complete academic goals. Summerskill (1954), referred to student attrition as "discontinuance" and exclaimed concern for 40 years of research that had yielded meager knowledge that could have affected change. In addition to scholarly research on the matter, agencies of the United States government, in the 1950s and 1960s, expressed the need for the resolution of low student retention rates (Sanford, 1967).

Summerskill (1954) stated that scores of pertinent investigations had been conducted (e.g., McNeeley, 1938; Iffert, 1958) and concluded that in spite of the studies, the problem of falling or low student retention rates seemed to have not attracted the active interest of any

significant segment of the social science profession and that there had been no concerted effort to utilize the existing data to produce results that could resolve the issue. Sanford (1967) examined 18 studies and reported that there had been sufficient research related to a multitude of factors affecting attrition, such as, extracurricular activities, the effects of differing sex ratios on campus enrollment, dating and marriage patterns, sexual problems and solutions, physical and mental illness, and concluded that dropouts due to medical reasons had been recognized through four decades of attrition research.

Tinto echoed the earlier scholars' concerns of falling retention rates by stating that the penalty of this substantial exit from higher education is not trivial, either for the individuals who leave or for their institutions (Tinto, 1993). Tinto's research advocated initiatives to correct low retention rates that continue to be unresolved after 30 years. Sixty-three percent of high school graduates enroll in postsecondary education the fall after completing high school, and approximately one fourth of first year students drop out before the end of that year (Tinto, 2010). For the past 30 years, The National Center for Education Statistics [NCES] has reported graduation and student retention rates, averaging 50% (National Center for Education Statistics, 2002).

The 1999 and 2010 student retention rates at Fort Lewis College in Durango, Colorado illustrate Tinto's concern and the [NCES] results (Tinto, 1993). In 1999, 460 of the 1,000 Fort Lewis College freshmen failed to persist at the university the following fall semester. Only 240 of the original Fort Lewis College freshmen actually graduated from the college (Reisberg, 1999). In 2010, the retention rate at Fort Lewis College increased to 63% overall but the first year dropout remained at 25% (NCES, 2010). This scenario is repeated throughout U.S. colleges (Tinto, 2012). John Braxton (2000), in his book, *Reworking the Student Departure Puzzle,*

warned enrollment of traditional college-age students was continuing to be at a record high level; however, far too many students entering two and four-year institutions departed at the end of the first year. The scenario continued in 2010, as Leo Rampell of the New York Times repeated the same warning that "college enrollment rates are at a record high" (Rampell, 2010, para. 1) with a 91% increase over the previous 15 years (United States Bureau of Labor Statistics, 2009), but keeping students enrolled remains a challenge.

Data from the National Center for Education Statistics [NCES], *Beginning Postsecondary Student survey (BPS)*, indicate continued challenges for students, educators, and policymakers in the student retention dilemma (NCES BPS, 1996/2001). Swail (2005) reported some of the survey results in his newsletter, *Education Policy Institute (EPI)*, as follows: 1) one quarter of all students who entered postsecondary education for the first time ended up at another institution before attaining a postsecondary degree; 2) 46% of first-time students who left their initial institution by the end of the first year never returned for postsecondary education; 3) students who attended full-time or whose attendance was continuous were more likely to achieve their degree goals than did other students; however, only about two-thirds of students were continuously enrolled; 4) 50% of four-year students who did not delay entry into postsecondary education earned degrees at their first institution, compared to 27% of students who were delayed entrants; and 5) 40% of students whose first-year grade point average was 2.25 or less left postsecondary education permanently.

As parents, business leaders, and tax payers, became aware of the problem of low college retention rates, they expressed concern to education, local, state, and national government leaders. The combined loss of potential livelihood, financial investments, and an educated

workforce had policy makers so concerned that Congress deemed low student retention rates a problem necessitating an immediate resolution (Swail, 2005).

The Government Performance and Accountability Act, GPAA, (1994) was the government's response to public complaints about the higher education system. The GPAA was a far reaching initiative that required all state agencies to submit performance-based program budgets. Budgets were to be based on results achieved in accordance with an approved list of performance measures. Funding would follow rather than precede demonstrated outcomes. Enrollment and graduation rates were basic outcome measures used as performance-based criteria for higher education. Student retention became an important factor in accountability for federal funding (Proctor, 2004).

As part of funding continuance, institutions have been mandated to evaluate all existing federally funded student assistance programs. Programs allocated for student retention intervention that have not produced higher graduation rates are specifically targeted for evaluation. Reasons for student dropout are to be identified and action strategies implemented to correct the problems (Swail, 2005).

In 2009, President Obama proclaimed reform of the United States Education System a priority and allocated $100 billion to the education system through the $737 billion Economic Stimulus Bill. During the May 28, 2009 White House Press Conference, Arne Duncan, United States Secretary of Education, expressed concerns for the low student retention rates in colleges:

> Colleges need to keep students they have recruited, not just get them enrolled but maintain until academic goal completion. Building a climate and culture of inclusiveness and of engagement will retain them. Thirty billion dollars has been allocated for higher education

> to increase student accessibility and opportunity. It has never been more critically important for students to receive a college education. I worry about the dreams of students not being met. Funding will be allocated to help institutions develop programming intended to keep students enrolled until they have successively completed goals (Duncan, C-SPAN Communication, 2009).

University leaders have been struggling to identify the problems related to student retention and are in the process of evaluating the effectiveness of a variety of existing student support programs. University leaders are also exploring alternative strategies to implement actions to increase retention rates. Some student services advocates have identified student health services as a potential area that may have a positive impact on a student's decision to stay enrolled. However, health services have not been extensively evaluated for effectiveness (Williams, 2002). Empirical studies are important to justify and validate the utilization of health services as one of the many areas that may increase student retention.

As university student service professionals have conducted formative evaluations on health services, a new perspective has come to light: a student's health may be a factor in academic continuance. Dr. D.L. Floyd (2003), education program planner at Florida Atlantic University, claimed "college health services are pertinent to student success, and a college committed to student success is one that is also committed to student health" (Floyd, 2003, p. 2). Floyd found it surprising that even though the colleges have a long history of student services, offer a variety of services, and provide them to a large number of students, they fail to give much consideration to the provision of health issue related services. Health services may have been

overlooked because administrators and policymakers are uninformed of the relevance of student health toward the institution's mission of student success (Floyd, 2003).

Student affairs leadership have begun to consider health services as a possible means to increase student retention by providing more than just medical diagnostic and treatment services. Health services can be utilized in conjunction with other academic support programs to focus on student health concerns that might keep students from completing class work, promote healthier life style choices, and teach coping skills that may help the student adjust to various stresses associated with college life. There are a plethora of acute and chronic health related issues which prevent or delay students from achieving academic goals. Dr. Harvey Wechsler (1994), Director of Harvard Health Services, explained that the provision of physical and mental health information, illness treatment, and referrals to specialists may decrease the affects and length of an illness; thus, allowing the student to get back to classes and assignments. Therefore, health services may be an integral piece of the puzzle to maintain the student's ability to stay in class and complete academic goals (Wechsler, Deutsch &Dowal, 1994).

Scholars and theorists, past and present, have expressed frustration with the lack of resolve to an issue that has been investigated and debated for more than half a century. Empirical research and numerous surveys have been conducted to explore factors that affect student retention; demographic data, scholastic aptitude and performance, internal versus external factors, and single versus multi variables have been investigated. Books, articles, and dissertations have been written, all in an attempt to understand and develop programs and strategies to keep students moving toward successful completion of their academic goals.

Student retention rate issues continue on from the 20th century into the 21st century with the call for resolution by both educators and legislators. According to Tinto, more research is

needed so that a more powerful theory can be developed which better explains why students leave college (Tinto, 2005). Tinto contended that current theories and formulas are only rough predictors of departure and are also limited in what they can tell us about the forces that shape and impact student persistence.

Setting

The study was conducted at a university in south Texas, hereafter referred to as the South Coastal Region Texas University (SCRTU). The SCRTU is a four-year university with a student enrollment of 10,000 from the coastal bend region and locations throughout the state and nation. The SCRTU offers degree plans for undergraduate, graduate, and post graduate studies. The SCRTU has a federal designation as a Hispanic Serving Institution (HSI) and is a multicultural campus.

From 1980 to 1996, the SCRTU's health services center was housed in the campus security building and was little more than a first aid station with a single small treatment room. The nurse on staff functioned as a basic school nurse, taking blood pressure readings, and monitoring a student who felt ill and needed to rest for a while. The health related information provided was in the form of pamphlets and brochures.

The University Health Center (UHC) is currently housed in its own building and is a fully functioning clinic with a mission directed toward enhancing the educational process for students by 1) treating illnesses, 2) promoting optimal wellness, and 3) enabling students to make informed decisions about health related concerns. According to the director of the UHC, students are provided physical and mental support through health education programs for healthy lifestyles, health education for the community, physical exams, and health awareness screenings. The clinic has a staff of a primary physician, nurse practitioners, and registered nurses. Also, on

staff are four licensed pharmacists to fill prescriptions from a well stocked pharmacy (class A). Laboratory work can be drawn but is sent off to a local laboratory for testing. The results are sent back to the UHC and reported to the student (Marrazzio, Personal Communication, 2008).

All requests for care are scheduled with a nurse practitioner skilled in identifying the most effective coordination of health services for each student client. The nurse practitioner is able to help the student client get the care she/he needs by connecting her/him with the proper resources. The nurse staff assists the student/client by providing individualized care, working with her/his insurance requirements, and maintaining a relationship with the primary medical provider. The student/ client is first processed, or triaged. Janice Stump, Director of the Wellness Center at North Carolina Wesleyan College in Rocky Mount, explained the process of "triage" as a means of assessing the severity of the medical issue, stabilizing the patient, and then matching the type of care needed to solve the problem (Stump, 1994). During the assessment, the nurse may educate the student/client on how to most effectively utilize the health care system and provide information concerning available referral resources. The process may include teaching self care measures, providing care and treatment based on physician orders, referral to a campus medical provider, consultation with their primary care provider, or making arrangements for further care as needed (Stump, 1994).

The UHC's primary focus is to provide acute care and promote relationships with the students' primary care providers for chronic healthcare needs. Some patients have multiple chronic medical problems that are best managed by their primary care physician. For continuity of care, the UHC collaborates with the primary physician and the student/client to assist and facilitate the most effective use of service resources. These services include: 1) Primary Health Care Clinic, 2) Women's Health Clinic, 3) Men's Health Clinic, 4) Immunizations, 5) Blood Pressure and Cholesterol Checks, 6) Care for Strains and Sprains, 7) Contraceptive Counseling, 8) Laboratory

Services, 9) Pharmacy (class A), 10) Physical Examinations, 11) Preventive Health Care and Medical Resource Information, 12) STD and HIV Testing and Counseling, 13) Educational Consults: Nutrition, Life style and Weight Management, and Tobacco Cessation, and 14) "Ask-A Nurse" phone line.

Dr. Paula Swinford, past president of the American College Health Association (ACHA), identified health services as central to the heart of the institutions' mission in higher education. Swinford noted "a college health program that is solely, or even primarily, a clinical service is somehow missing the point" (Keeling, 2002. p. 261) and needs to re evaluate its mission.

University's student health services may provide some measures to validate the student experience and increase his/her sense of well-being. Since there have been changes in student lifestyles, drug and alcohol abuse, a potential degree of violence on campus, the spread of AIDS, hepatitis, sexually transmitted diseases, and other infectious diseases, colleges have reacted to this new reality. Most four-year universities and many two- year colleges provide some form of health services and programs to offset student physical and emotional insecurities (Harris, 1991).

Statement of the Problem

The South Coast Region Texas University (SCRTU) is among the many universities in Texas providing student health services. The SCRTU's University Health Center (UHC) has been providing full clinical care to students for more than 20 years. Satisfaction and drug and alcohol use surveys have been conducted, but no empirical studies relating to SCRTU student health needs have been conducted. Specifically, no studies have been conducted with respect to the perceived degree of importance of health needs, the utility of the UHC in meeting student health needs, and its impact on assisting students in fulfilling their academic goals.

Theoretical Framework

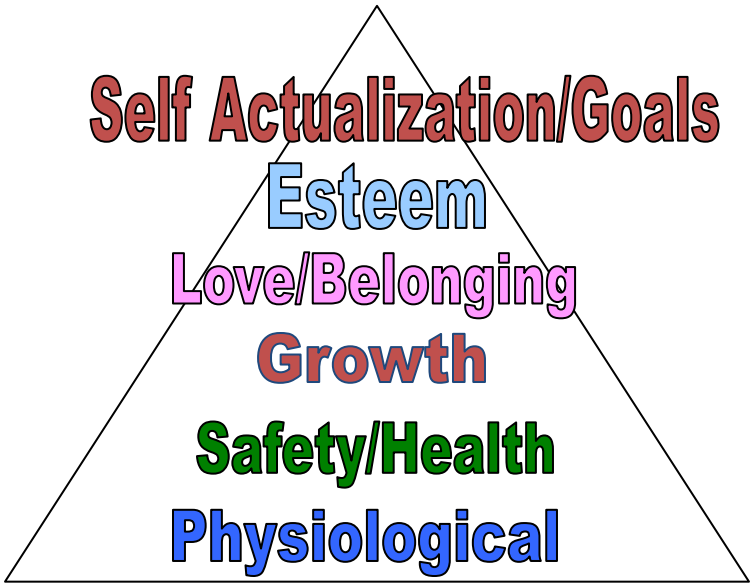
Abraham Maslow's Hierarchy of Human Needs Pyramid Model (Maslow, 1968), identifies human needs priority; Vincent Tinto's Student Integration Model (Tinto, 1975), describes the student's integration in the college setting and departure from it; and Watson Swail's Geometric Model of Student Persistence and Achievement (Swail, 2005), which was designed to further illustrate Tinto's model of integration provides an illustrative format that identifies factors that affect the student's college experience. The three models served as the theoretical framework, guiding the exploratory stages of the study.

Maslow's model, by first identifying human needs required for progression toward goals, framed the exploration of the discussion for the development of the study's survey instrument. The model illustrates the progression from basic to upper level needs as foundational levels that support movement toward academic accomplishment. In order to explore health services utility as a potential strategy to provide the student with not only clinical but also academic support, the Tinto model provides a framework for student integration and engagement factors toward a decision to drop out or stay in college. Swail's model further benefitted the study by illustrating factors involved in the student's college experience. Both models, Swail's as an illustrated expansion of Tinto, placed health services in a position to be a clinical and academic supportive service; one that may result in a student's decision to continue studies rather than dropping out or discontinuing academic goals.

Maslow advocated that human beings have a need for a basic sense of health, well being, and security which are illustrated on the lowest level of his Hierarchy of Human Needs Pyramid Model (Figure 1). The upper levels of the model focus on satisfying emotional needs (Maslow & Stephens, 2000). Specifically, the model depicts a pyramid with five levels of human needs

the individual must satisfy before she/he can begin to work toward satisfying the next level of needs. The basic needs, bottom to top of the pyramid, begin with physiological comfort needs, followed by safety needs, love and social needs, esteem, and self-actualization/goal needs. Maslow theorized individuals successfully move up to a higher level, experience a threat at that level resulting in a regress to a previous level. When again secure with meeting the more basic level needs, progression to the previous higher level is reinitiated (Maslow, 1968).

Figure 1: Maslow's Hierarchy of Needs

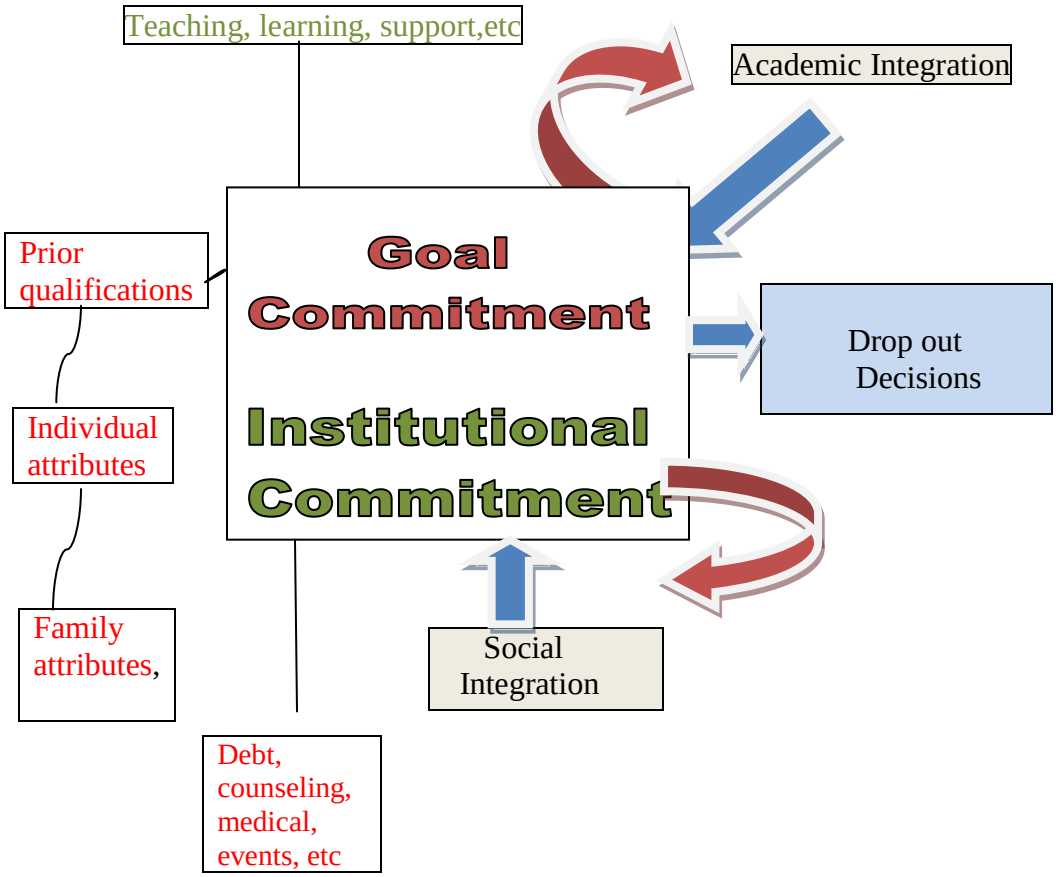


Maslow proposed that human beings are motivated by unsatisfied needs and people act to satisfy lower needs before satisfying higher needs (Maslow, Stephens, & Heil, 1998). What Maslow suggested is that, for example, when an individual has a choice between giving up safety/health or growth, the former will be chosen. Each individual has a need to feel safe, well, and protected from anything that might harm her/him. Regression of levels could possibly make the difference between continuing educational goals or not.

As institutions work to identify strategies to reduce falling retention rates, several models have been developed. Tinto's Student Integration Model and Swail's Geometric Model of Student Persistence and Achievement Model, place the student experience as the basis for program needs assessment and program development.

Tinto's Student Integration Model (Figure 2), as illustrated in an adapted Tinto model (Draper, 2003), has a central idea or theme of academic and social integration. Tinto (1975) theorized students possess characteristics that contribute to their goal commitment. Additionally, there are factors that enter into the college experience that affect their decision to stay or leave. The decision to persist or drop out is quite strongly predicted by the degree of academic and social integration. Integration, or lack thereof, evolves over time, as integration and commitment interact. The decision to dropout depends on the level of goal commitment at the time the decision to dropout is made (Tinto, 1987).

Figure 2: Student Integration Model

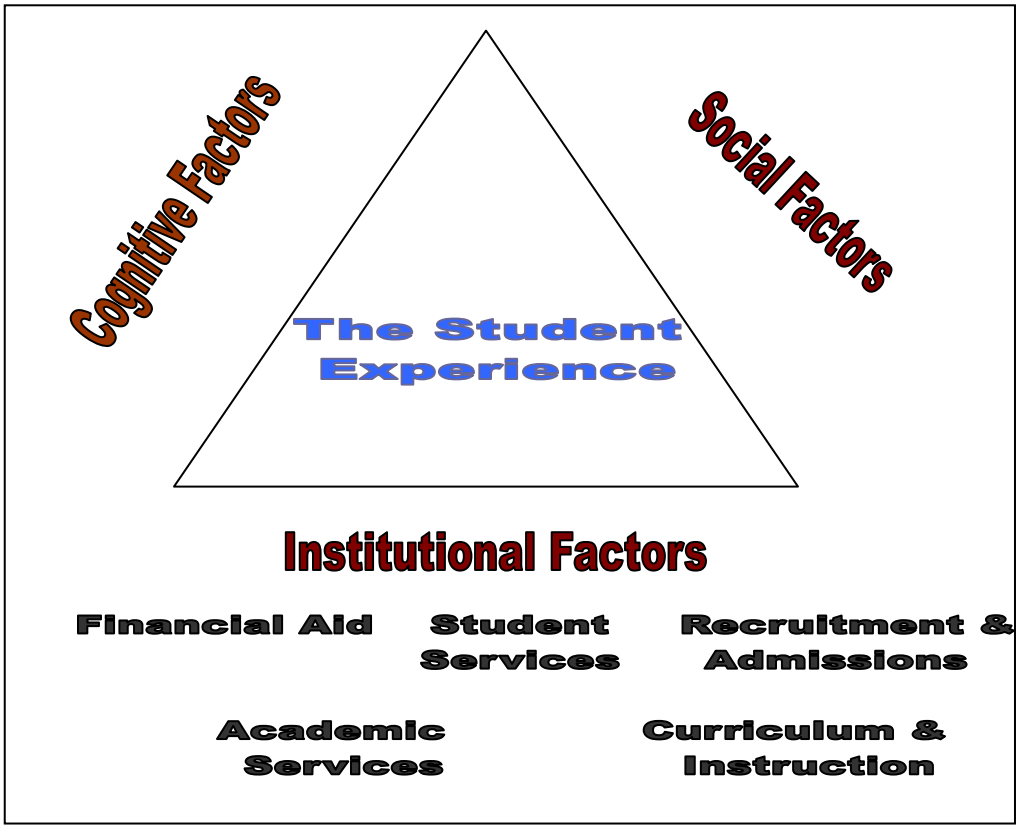


Swail's Geometric Design of Student Persistence and Achievement Model (Figure 3) utilizes Tinto's model of Student Integration to illustrate, in a geometrical design, factors which affect student experience. The model places "The Student Experience" in the center of a triangle with various impacting factors at each side and at the base of the triangle. Cognitive and Social factors are on each side of the triangle of Student Experience with Institutional factors at the base of the model. Cognitive factors include academic rigor, quality of learning, aptitude, content knowledge, critical thinking ability, technology ability, study skills, learning skills, time management, and academic-related extracurricular activities. Social factors include financial issues, educational legacy, attitude toward learning, religious background, maturity, social

coping skills, communication skills, attitude toward others, cultural values, expectations, goal commitment, family influence, peer influence, and social lifestyle. At the base or foundation of the model are various institutional service components, namely, financial aid, student services, recruitment and admissions, academic services, and curriculum and instruction (Swail, 2005).

Within the body of the student service component is a student service that is not historically identified as a strategic service for student retention. Health service is one of many student services provided by the institution. Literature over the past century supports institutional awareness and assistance with student health issues, but it has only been in the last 50 years that formal health programs have been established (Tinto, 2005). As educators and student service program planners evaluate the utility of existing programs, there is a growing body of literature that identifies student health issues as being factors that affect the students' academic success. In this day and age of ever growing health exposure issues and enrollment of students with chronic illnesses, student health services could be utilized to provide health maintenance services and medical support to students with both acute and chronic illnesses (Floyd, 2003). The student could be taught healthy coping skills that foster a positive health outcome which may support student retention and completion of academic goals (Swail, 2005).

Figure 3: Swail's Geometric Model of Student Persistence and Achievement



Purpose of the Study

The study was conducted to identify and document the health-related needs of the students at the SCRTU by answering the following research questions:

1. What is the students' level of agreement/disagreement with health-related issues?
2. To what extent the university health clinic is utilized by the students?
3. To what extent academic performance is affected by health-related factors?
4. What is the level of importance of health-related needs and to what extent the needs are fulfilled?
5. What are the perspectives of students regarding the usefulness of the health clinic?

Definition of Terms

The following terms are used throughout the document. Health Services refers to services providing physical examinations, treatment for illness, health screening, health education, and promotion of healthy lifestyles (American College Health Association, 2001). Retention refers to the student who re-enrolls semester to semester until completion of academic goals (International Center for Student Retention, 2005). Persistence refers to a measured timeframe of student retention from fall to spring semester and spring to fall semester (International Center for Student Retention, 2005). University Health Services refers to free or low cost, on-campus, primary and preventive health care available to students enrolled at South Texas University (American College Health Association, 2001).

Delimitations, Limitations, and Assumptions

The study was delimited to a University in South Texas and selected health-related needs and issues affecting college students. Due to the non-probability nature of the sampling, the external validity was limited to study participants. Due to non-experimental nature of the study, no causal inferences were drawn. The researcher assumed that the participants provided accurate quantitative and qualitative data.

Significance of the Study

In response to public and government demands to increase retention rates, university program planners are exploring all types of student services that may support the students as they work toward completion of their academic goals. Student Affairs Director, Terry Williams of Loyola University, Chicago, in his article, *Challenges to Student Learning and Success through Student Services,* addressed the need for administrative planners to evaluate the

effectiveness of all existing student affairs services and to identify a collaborative strategic approach to the student retention issue (Williams, 2002).

The study may be of importance to the SCRTU's student retention program planners who need data to justify existing programs or to substantiate program expansion. The study may also encourage the UHC to collaborate with other student service programs as a means to enhance the effectiveness of other existing services. The SCRTU Health Services, a program within Student Affairs, has not been evaluated as to its utility as a program that might effectively collaborate with other student retention programs. The study may offer insight and add to the body of knowledge as it relates to students' identification of health needs, the degree of importance of such needs, and the utility of the UHC in meeting the needs. The results may also be useful to student affairs program planners who are considering initiatives to further meet student health needs. The qualitative results may provide program planners with an opportunity to better understand the perspectives of the students regarding the impact of the UHC on their efforts to complete their education as well as improving their health styles. The study results may be useful in the justification for funding of future health services programs.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Institutions have been struggling to identify the issues related to low retention rates, develop theoretical models that explore and explain retention issues, and establish effective programs and strategies to keep students working toward completion of their academic goals. University student service professionals have been evaluating existing programs in order to determine their effectiveness and expansion potential. Program planners have also been assessing the need to develop new services and strategies that can be utilized to develop a more effective and appealing learning environment in an attempt to increase student retention rates (Tinto 2012).

Vincent Tinto's model of Student Integration addressed the need to create a campus culture of caring, inclusion, and engagement (Tinto, 1975). Kenneth Ender, Vice President for Academic Affairs at Richland Community College, proposed that students would perceive an environment that provided a safe and comfortable experience, as a positive learning environment. A sense of trust could be built which would enable the student to feel confident enough to reach out to the campus services in times of stress, challenge, or doubt. This would be the environment in which the student could feel safe and comfortable and would choose to continue and complete his/her studies (Ender,Chand & Thornton, 1996). A safe and comfortable experience and a campus culture of caring, inclusion, and engagement might be a formula for student retention by providing a positive learning environment.

As student service leaders have evaluated existing programs, the programs have been identified as an untapped source in the quest for student retention-related programs. Student

health services have programs that provide both physical and mental health services that also provide supportive measures that may assist the student in ways that keep them committed to their studies. Traditionally, health services have been viewed as a means to deliver clinical services, such as health wellness information, screening services, and treatment for illnesses. Student health service is a growing area that has the potential to provide programs to keep students moving forward toward their academic goals (Deutsch, 1998). The service can foster healthy lifestyles and provide coping skills to assist the students during their adjustments to college stresses. Providing assistance with physical and mental health issues can decrease the effects and length of an illness; thus, allowing the student to get back to classes and assignments, which may keep the student from falling so far behind in course work that she/he may drop out (Floyd, 2003).

The University of Minnesota Boynton Health Services, UMBHS, conducted a comprehensive 2007 survey of colleges nation-wide that identified student health trends that affect academic performance. Dr. Erlinger, Director and Chief Health Officer of the UMBHS, reported the findings were beneficial to college health services nation-wide. He further expressed the belief that members of the public, higher education leaders, and policy makers should pay attention to the study's findings and make the health of college students a priority.

> "The reason we're studying students from fourteen schools is because these health issues are community and state issues. The health of college students is important not only to the institutions they attend but also to the health of the State. Good health helps students remain in school, and a college degree or certificate is an excellent predictor of better health and economic status throughout one's lifetime" (Erlinger, 2007. p. 2).

Research has revealed some impressive efforts by many scholars to explore and document the issue of student retention through the past century. The following topics will be discussed in this chapter: history of student health programs in higher education, organizations and standards of practice of student health services, student health need and issues, retention models, and institution's role and drop-out prevention programs.

History of Student Health Services

Prior to the 1880s, health services were primarily infirmaries for ill students. During the 19th century, the focus of student's health was on hygiene education. College administrators were concerned about the health issues of students which often resulted in the student's leaving college (Stoller, 2007). Reverend Edward Hitchcock, president at Amerherst College from 1845 to 1854, established student hygiene education into the college curricula (American College Health Association, 2001). Hitchcock "created a health and physical education program that attempted to fill what he saw as the college's role in combating the failing health of nineteenth century students" (Sloane & Sloane, 1986, p. 271). Hitchcock expressed concern with retention issues at Amherst: "I am concerned over the wasted effort represented by a student's dropping out of college before the completion of academic requirements" (Christmas & Dorman, 1996. p. 45). William A. Stearns was the following president of Amerherst College in 1856 and continued the focus on student hygiene education. He stated:

> "The breaking down of the health of students, especially in the spring of the year, which is exceedingly common, involving the necessity of leaving college in many instances, crippling the energies and destroying the prospects of not a few who remain, is, in my opinion, wholly unnecessary, if proper measures could be taken to prevent it" (Turner & Hurley, 2002. p. 2).

While Reverend Hitchcock and President Stearns impacted university health education and future student health programs, it was Dr. Edward Hitchcock, Reverend Hitchcock's son, the Father of American College Health, who established the first formal college health program in 1861 (The American College Health Association, 2001). Since the early 1800s, there has been considerable change in college student health focus. College health programs have evolved from infirmaries for ill boarding students to modern day multi-specialty clinics, which offer services to "students, faculty, staff, spouses, dependents, and in some cases, the general public" (Turner & Hurley, 2002, p. 43). The planning and implementation of health services, with a wide range and scope of contemporary medical issues, is a development of the past 50 years. Prior to 1945, only rudimentary services, often just a band- aid station, existed for colleges without infirmaries. After a series of critical reports produced in the mid 40s by student organizations and the British Royal College of Physicians, there existed a steady increase in both the number of formal university health services as well as the expansion of services and programs (Williams, 2002).

Historically, the emphasis for health care programs for students has been at the four-year university. In the last 20 years, two-year community colleges have begun varying levels of health care services for students. Prior to the late 90s, community colleges focused on the fact that they were transfer units of education, did not have resident students, and therefore did not need health services (Williams, 2002). College legal counsels warned that because students did not live on campus, they were still under the responsibility of parents; thus, the college was not responsible to provide for the medical care, and if it did, the college would suffer litigation risks that might cause great financial losses and negative public relations. Based on this legal advice, colleges have chosen to provide limited services, offer no services, or outsource as a means of protecting the institution. However, the contemporary changes in lifestyles, nutritional related

disorders, drug and alcohol abuse, violence on the campus, hepatitis, meningitis, and the spread of AIDS and other sexually transmitted diseases have many community colleges taking a need to act mode, while others take an evaluative approach (Williams, 2002).

Currently, there are only a small number of universities that do not have some form of medical care for students. Most four-year universities have accepted the need for student health services and provide a wide scope of services to provide for students' physical and emotional health needs. The focus of services varies among universities, with some health services based on occupational health and others focusing on psychotherapy. Most tend to lean toward primary clinical care service with emphasis on emotional and mental disorders, environmental health, and safety problems (Williams, 2002).

American College of Health Association: Setting the Standard

The American College Health Association (ACHA) is the principle advocate and leadership organization for college and university health services. There are six standards that guide accreditation requirements: 1) integration with the learning mission, 2) collaborative practice, 3) cultural competence, 4) theory-based practice, 5) evidence-based practice, and 6) professional development and service.

In 1961, the ACHA adopted a statement of standards and practices for college health programs which recommended the inclusion of preventive medicine, psychiatry, health education, and careful attention to environmental factors that are detrimental to health (American College Health Association, 2001). The standards outline a health program that is to be so organized to become an essential part of the educational experience of college students, showing the student importance and value of health, as both a personal and community value. Members of college health services should be promptly available for consultation, have knowledge of all

phases of campus life, and work closely with other departments on matters of mutual interest or concern. Health services are to maintain a confidential relation between themselves and the students they service (Williams & Kitzinger, 1967). These standards were established almost 50 years ago, with a revision in 2004, currently continue to serve as a required standard for student health services practice.

The American College of Health Association in 1996 initiated the Task Force on Health Promotion in Higher Education to review and analyze the scope of practice of health promotion services, and to draft standards of quality indicators for higher education communities. Members of the task force developed a National Survey on Health Promotion and Education in Institutions of Higher Education and surveyed two groups. One group consisted of a stratified random sample of 600 ACHA member institutions and the other of 97 key best-practice health promotion leaders (Zimmer, Hill & Sonnad, 2003). The reported findings from both groups set the state of health promotion practice in higher education at the close of the 20th century. The survey data were used to develop and establish a statistics-driven framework for the Year 2001 American College Health Association Standards of Practice for Health Promotion in Higher Education (Zimmer, Hill & Sonnad, 2003). In 2004, the ACHA published a second edition, which stands as the most current guidelines. The revisions in the 2001 and 2004 guidelines were based on the institution of higher education health services surveys and provide measurable guidelines for enhancing the quality of campus health promotion programs.

Other standards guiding student health programs include the Council for the Advancement of Standards in Higher Education Guidelines, [CAS], (2002), CAS Professional Standard for Higher Education (2007), and the Standard and Accreditation Association for Ambulatory Health Centers, [AAAHC], (2007). CAS standards include health promotion programs, alcohol,

tobacco and other drug programs, counseling services, clinical health programs, and student leadership programs. The AAAHC is an independent national organization that evaluates the quality of care at ambulatory centers such as outpatient surgery centers, clinics, and college health centers (AAAHC, 2007).

Rensselaer Polytechnic Institute in Troy, NY is an example of one of the many institutions that made the commitment to seek and maintain AAAHC certification (AAAHC, 2010). Maintaining the certification provides students the assurance of quality patient care and the appropriate organizational framework for providing care (Rensselaer, 2008).

Identifying Student Health Needs

Abraham Maslow's Hierarchy of Human Needs Pyramid Model was chosen as the best theoretical framework for the study, because of the importance it places on meeting both physiological and emotional health needs (Maslow & Stephens, 2000). Dr. Philip Cauthery, in his book, *Student Health,* reminded administrators that college students are in a vulnerable age range and in a social environment that puts them at risk for many health ailments that are likely to occur (Cauthery, 1973). Some of these common college ailments include meningitis, hepatitis, diabetes, asthma, bronchitis, sexually transmitted diseases, alcohol and other substance abuse related conditions, relationship violence, depression, and mental illness (Turner &Hurley, 2002).

Human beings have a basic need for a sense of health, well-being, and security. Maslow's model depicts his pyramid of levels of needs the human must satisfy before she/he can begin to satisfy the next level of needs. The basic needs (bottom level of the pyramid model) relate to physiological/comfort needs. The next level relates to love, belonging, and social needs. Next are esteem and ego needs, and at the top of the model is the self-actualization or self fulfillment

achievement. Maslow theorized that an individual, who has reached a higher level of needs, but for some circumstances, subsequently feels threatened, would regress to the more basic lower level of needs (Maslow, 1968). What Maslow suggested is that when an individual has reached the growth level and has a situation occur that threatens health or safety, the individual will regress to the lower level until the needs have been satisfied. At that point, the individual will feel secure enough to again seek the needs of the growth level. As this progression/regression process relates to completion of goals, regression could possibly be the difference between continuing education or not. Maslow proposed that human beings are motivated by unsatisfied needs and people act to satisfy lower needs (physical safety, social and esteem) before satisfying higher needs (self actualization). All individuals have a need to feel safe, well, and protected from anything that might cause them mental anguish or bodily harm (Barr & Desler, 2000).

Charles Deutsch, Director of the Harvard School of Public Health, advised "most obviously, people don't learn well if they are not healthy" (Deutsch, 1998. p. 2); thus, the success of a college's academic mission is dependent on the climate it creates. The use of education policy and technology helps to create a culture that advocates healthy behavior. In the Project Report for the American Association of Community Colleges, K.G. Dickinson, an educator and student advocate, reported some important reasons why health care services for university and college students should support the students' academic success. The reasons, according to Deutsch, have held true throughout most of the 1990s. The reasons include: 1) illnesses can quickly have repercussions in completing course work; 2) illnesses having a three to four week period of duration can cause such a gap in continuity of course work that the student is unable to catch up and complete the study; 3) an illness occurring just before or during an exam can be troublesome, physically and psychologically. Pressures of assignments, projects, and papers are more likely to precipitate patterns of emotional disorders in an considerable percentage of students

that are still undergoing the normal psychological adjustments of adolescence and young adulthood during times of illness it is urgent that staff decide what medical action (if any) be offered; and 4) students of universities tend to live in halls of residence, scattered about in various lodgings, flats, or multi-occupancy houses of varying standard (Dickinson, 1976 p. 1117).

Motivational theorist, Etienne Minarik, explained how students' satisfaction with environment impacts motivation. Minarik proposed a concept that considers the basis for all motivation as personal potential, which varies from one individual to another. Creative individuals possess aptitude and have a natural tendency to use it. Situations in life and work sometimes create an environment that blocks and prevents the creative individual from using the aptitude or makes it difficult to do so. Personal aptitudes conflict with the obstacles of the student's environment and may set up a series of negative outcomes (Minarik, 1992). Minarik offered an example: internal motivation is met with obstacles, the individual experiences a gradual feeling of frustration, motivation decreases, vanishes or shifts, and a number of negative attitudes are adopted. In an attempt to avoid the negative feelings, some individuals quit or drop out. The majority, instead of quitting or dropping out, look to non-academic interests as a way to avoid negative feelings and become disinterested in their studies. Both approaches lead to consequences that affect the student's academic goals (Minarik, 1992).

John Summerskill, a professor of Medical Administration and Director of the Sloan Institute of Hospital Administration at Cornell University, expressed concern for student's failure to complete academic goals and conducted extensive research on student health. Summerskill referred to student attrition as discontinuance and exclaimed concern for the, at that time, 40 years of research that yielded meager knowledge that could affect change. Summerskill further expressed the notion that universities should be conducting studies on constituent needs rather than depend solely on studies conducted on a number of variables based on other college

students' needs. Most universities fail to study clinically the causes for student discontinuance, which has denied college administrators valuable information as to how best to fulfill constituents' needs (Sanford, 1967).

Diseases and Life Style Behaviors

The health implications of the college age population today are much the same as they were in the 1950s, but with added complexities of contemporary lifestyle issues. Dr. Jesse Williams and Dr. Angela Kitzinger (1967) reported a study conducted at Harvard University in 1950-1952 and identified student illnesses to be the common cold and respiratory infections of all kinds. The top four illnesses were rubella, infectious hepatitis, mononucleosis, and upper respiratory inflammation and infectious diseases. Similar health risks exist for college students today, but are compounded by sexually transmitted diseases, meningitis, stress, sleep difficulties, alcohol and drug abuse, relationship concerns, and use of the internet or computer games. Paula Swinford, past President of the American College Health Association (ACHA) and chair of the National Association of Student Personnel Administrators (NASPA) reported "health issues make it harder for a student to be a student" (Swinford, 2007, p. 2).

Nutrition, sleep deprivation, substance abuse and sexually transmitted diseases, as in the 1950s and 1960s, are still in the forefront of current student health issues. Contemporary college health programs have an emphasis on woman's health issues, namely, birth control, breast cancer exams, and cervical cancer awareness screening (Williams & Kitzinger, 1967).

A disease affecting a college student may vary from mild to severe. It may be either a bodily organ disturbance which results in function impairment or an emotional condition which causes disturbance of an otherwise normal structure. Bodily or emotional conditions can disturb functions enough to interfere with the student's college success (Williams, 2002).

Students struggle with wellness issues and are learning how to take care of themselves physically, mentally, and spiritually. Health issues are of concern because many students do not know how to deal with the stress of being homesick and living on their own, as well as the added stress of new classes and professors (Swinford, 2008). Katrina Widener, a student, wrote an article for The Times-Delphic campus paper titled *The sniffles. The hacking cough. The sinus pressure. The upset stomach.* Widener expressed her view of health issues on campus as she wrote about everyone having some sort of illness, from cold to flu. She warned students, "there are so many germs floating around" (Widener, 2007. p. 1), to be on the watch for the next big health issue. Health life style behaviors for the college student affect academic performance. Widener went on to report that the findings from the University of Minnesota Boynton Health Service 2007 survey were impressive as they related to the mental health issues that affected the student's ability to cope with the stresses of campus life and exposure to the high consumption rate of alcohol and drugs. Widener reported these issues resulted in consequences that affected the student's health and GPA. Further results from the 2007 University of Minnesota Boynton Health Survey, as reported by Dr. Erlinger, indicated 28% of surveyed students reported excessive computer/internet/television use. Nearly 42% of those reporting excessive use reported that the activity had affected their academic performance (Erlinger, 2007).

College health related issues and life style behaviors that continue from year to year include physical, spiritual, and social areas. Such areas may include but are not limited to the following: 1) substance abuse prevention and education, including alcohol, tobacco, and other drugs; 2) healthy sexuality education, including reproductive health, contraception, skill-building for healthy relationships, communication, negotiation skills, as well as prevention and education regarding sexually transmitted infections; 3) risk reduction and programmatic strategies; 4) stress

management and relaxation; 5) healthy eating and body image education; 6) physical fitness; 7) safety and prevention of unintentional injury; 8) holistic approaches to wellness; and 10) health-care consumer education (Turner & Hurley, 2002).

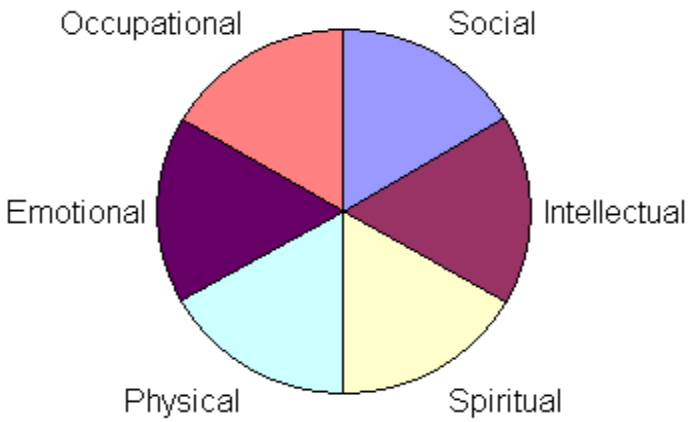
While not specifically named in Turner and Hurley's list of health related areas, Peden, Rayens, Hall, and Beebe named depression as one of the major problems affecting college students and believed it to be a serious consideration for all student health assessments (Peden, Rayens, Hall, & Beebe, 2001). The suicide rate is found to be higher in college students than for the same age general population. Stress related to academic performance and pressures involving contemporary campus lifestyle place students at risk for depression and suicide. Depression in college women has been shown to affect academic performance, school satisfaction, and social relationships (Peden, Rayens, Hall, & Beebe, 2001). In women, low self-esteem and negative thinking have been identified as predictors of the later development of depression. A 2002 - 2003 survey conducted by Peden, Rayens, Hall, and Beebe (2006), on first year students identified an increase in depression. The study used the Wellness Model for Health Assessment, which has proven to be a model that both health professionals and students alike can use to assess health needs. This is of particular importance, because depression is a serious and growing concern. Identifying depression before it progresses to suicidal intentions is key to providing timely intervention (Myers, Sweeney & Witmer, 2000).

The Wellness Model is a comprehensive health assessment that can be incorporated into health counselors' existing programs to give them knowledge and skills to effectively work with college students (Myers, Sweeney & Witmer, 2000). The Wellness Wheel Model (Figure 4) assesses wellness in multi-dimensional factors. It is a holistic approach that identifies a

dysfunction in one area that may express negative effects in other areas and improvement in one area may positively affect another (Myers, Sweeney, & Witmer, 2000).

Figure 4

Wellness Wheel



Another method of assessing wellness is to use the Wellness Evaluation of Lifestyle (WEL), which is a paper and pencil measure that assesses each dimension of wellness and provides composite scores for the tasks of self-direction as well as total wellness. The WEL has been used on more than 4,000 people, including adolescents, young and mid-life adults, and older adults (Myers, Sweeney & Witmer, 2000).

According to *Healthy Campus 2010*, one of the priorities for college campuses is an emphasis on promoting healthy behaviors. LaFountaine, Neisen & Parsons (2006) used the WEL to assess health promotion behaviors of first year college students during 2002-2003. Students in the study scored the highest on the WEL subscales of love (85.64 out of 100) and sense of worth (83.81 out of 100) and lowest on the nutrition (67.16 out of 100) and stress

management (73.48 out of 100). These findings may be useful in planning and implementing pertinent health programs.

Surveys Utilized To Identify Health Issues

Researchers and health service administrators in the field of student health programs utilize a variety of assessment tools and national surveys to identify student health needs and health related issues, for example, the Wellness Wheel, the American College Health Association-National College Health Assessment (ACHA-NCHA), and the University of Minnesota Boynton Health Service College Health Surveys. The data from these sources may be used to develop programs to support and enhance the student's progression toward academic goals.

The American College of Health Association (ACHA) conducts national annual surveys among participating colleges. The surveys identify the top student health issues, as well as those that impede academic performance. The 2005 ACHA-NCHA survey with 54,111 student participants enrolled in nationally participating institutions of higher education identified the top five health-related impediments to academic performance to be: 1) stress, 2) cold/flu/sore throat, 3) sleep difficulties, 4) concern for a friend or family, and 5) depression/anxiety disorders (American College Health Association, 2005).

The American College Health Association-National College Health Assessment survey results, from 2000 to 2008, continued to report these same factors as leading impediments to academic performance. The rate of students reporting a diagnosis of depression increased from 10% in spring 2000 to 16% in spring 2005. Nearly 13% of students reported experiencing an emotionally abusive relationship in the last school year, and 6% reported having a cigarette daily in the previous 30 days (ACHA-NCHA Reference Group, 2005). Having this national feedback

provides the student health services leadership pertinent data to plan and promote programs to better meet the health needs of students.

The comprehensive 2007 University of Minnesota Boynton Health Services (UMBHS) College Health Survey of Health and Academic Performance reported health conditions and behaviors associated with lower grade point averages among Minnesota undergraduates. Data presented in the report documented a link between the health of Minnesota's undergraduates college students and their academic achievement measured by GPA (University of Minnesota Boynton Health Services, 2007). The report examined the following factors found to influence the academic performance of undergraduate students: physical and mental health, perception of stress and ability to manage stress, experience of stressors, financial issues, and health-related behaviors such as tobacco, alcohol, marijuana and other illicit drug use, gambling, nutrition, physical activity, and sleep. The top associated conditions and behaviors were found to be 1) lack of health insurance, 2) gambling, 3) tobacco use, 4) alcohol use, 5) marijuana use, 6) chronic health condition, 7) mental health condition, 8) lack of sleep, and 9) lack of exercise (University Minnesota Boynton Health Service Survey, 2007).

University Role: Provision of Student Health Programs

The college and university environment needs to be conducive to safe and healthy learning opportunities. Andrew Hannan, path-breaking organizational theorist, made the argument within the organizational or institutional cultures that there are diverse balances of influences which encourage or resist innovation. The influence that encourages and inhibits innovation is in the cultural environment/community of the institution (Hannan & Silver, 2000). The environment mirrors the degree of organizational or institutional commitment for the

provision of a safe and healthy environment; one that supports student's healthy life styles and academic growth or not.

K.G. Dickenson, educator and student advocate, and Kenneth Ender, Vice President for Academic Affairs at Richland Community College, have identified some important reasons for universities to support health services for students. Dickenson reported ordinary illnesses can quickly have repercussions in student course work; an illness lasting three to four weeks can cause a gap in student course work that the student would be unable to catch up and complete the study; an illness occurring just before or during an examination can be troublesome, physically and psychologically; and university students tend to live in halls of residence, scattered about in various lodgings, flats or multi-occupancy houses of varying standards (Dickinson, 1976).

Ender and his colleagues additionally reported five major issues affecting student learning and suggested a planned response from the institution of higher education. The five major issues affecting student learning are: 1) joining the institution, 2) achieving academic success, 3) becoming affiliated and involved, 4) maximizing personal potential, and 5) completing educational objectives (Ender, Chand, & Thornton, 1996). The issues complement the upper levels of Maslow's Hierarchy of Human Needs Pyramid Model and Tinto's Student Integration Model.

The works of Dickinson, Ender, and other scholars and student affairs leadership reflect the collective efforts to develop concepts to identify and understand the health needs of students. Scholars are conducting student retention research; program planners are evaluating the effectiveness of existing student retention programs; and theorists are developing framework models to better identify processes, which are done to collaboratively improve retention rates.

Much has been learned, but despite all the efforts, retention rates remain low for colleges throughout the nation (Reisberg, 1999).

The best college health programs protect and advance the health of students in ways liberating to students' minds. Paula Swinford, Director of USC Wellness Program and the 2008 president of the American College Health Association, argued the point that effective college health programs are not and should never be purely clinical operations. If the program is solely clinical, its mission is missing the mark. Health programs should be placed in the heart of the institution's mission of higher education, because they are responsible for the advancement of student's health (Swinford, Personal Communication, 2012). College health programs can strengthen and fortify the campus learning environment while supporting the development of the student cognitively, emotionally, behaviorally, and socially (Keeling, 2002).

In order to promote student success, student affairs services and resources, which are often scarce, must be organized to provide the maximum response to student issues. (Ender, Chand, & Thornton, 1996). Using a variety of services, including student health services, is an effective way to maximize the student's learning experience. Creating a university environment that results in feeling safe, healthy, and satisfied with academic accomplishments fosters a supported, nurtured, and committed student. An environment consistently providing health programs to raise the student's sense of health and well being, above what they experience elsewhere in their lives, is where the student most desires to work toward completion of academic goals. If the student becomes ill or overwhelmed with emotional stress, s/he does not feel like pushing to attend a class or do the research required for assignments (Ender, Chand, & Thornton, 1996).

In a well supported health care environment, students are provided with health- related knowledge to deal with an acute or chronic illness, which reduces the physical symptoms and

lessens the student's anxiety, enabling him/her to continue class attendance and course work. A well supported health care environment could make the difference between becoming so overwhelmed and behind in class work that the student drops out, versus feeling supported and enabled to reduce missed classes and course work, and ultimately complete academic goals (Ender, Chand, & Thornton, 1996).

Student Health Services: A Strategic Program for Academic Success

For most students, the arrival at the university or college is the student's first experience of life away from home. Suddenly, in the midst of turmoil, new excitements, and responsibilities, students find themselves isolated from the security and practical reassurance of families. Student health services can play an important role in providing a non-demanding source of support and guidance, as well as practical medical care, in these circumstances (Thayer, 2000). Student services administrators have a difficult but worthwhile task before them, as they develop programs to assist and encourage students striving to achieve the completion of academic goals. Institutions of learning have opportunities to design environments and activities that are supportive of particular sub-populations, such as first generation and low income students. Since many students in this population tend to be at greater risk of dropping out, intervention initiatives can ease the difficulties of the transition to college, mitigate to some degree the cultural divergence students encounter between home and college community, and assist in creating a supportive and familiar campus environment (Thayer, 2000).

In the late 1960s, J. A. Wankowski conducted a study at the University of Birmingham and provided evidence those students who live at or near home have better than average chances of completing courses successfully (Cauthery, 1973). Based on such studies, student affairs programs have focused efforts on making the campus experience as home like and as safe as

possible to provide a substitute nurturing environment meant to ease the transition and stresses of the students' new found independence and responsibilities. The programs are designed to enhance student learning and assist them toward completion of academic goals (Turner & Hurley, 2002).

Proactive Institutional Commitment

Harvard University was the first institution of higher education to implement a student health program (Patrick, 1992). Its mission is an example of an institutional commitment focusing on student health and student success. The health service mission encompasses not only the provision of health care but also supports academic success by providing a variety of proactive health awareness benefits and programs. Each student is introduced to the health services during a mandatory orientation and an introductory health awareness workshop. The Harvard health center is so committed to providing each student with a complete and coordinated health care that they encourage a relationship with a particular Primary Care Team (PCT). The PCT consists of a primary care physician, nurse practitioner, team nurse, and health assistant; it assists the students with all their health care needs throughout their time at Harvard University. Each new graduate student is assigned a primary care physician and team to support his/her total health care needs (Harvard University, 2008). This is an example of a university meeting the ACHA Standards of Practice, which requires that: 1) a college health service assists in providing both in-class room and/or out-of-classroom outreach educational opportunities for health enhancement when appropriate, including educational methodology emphasizing decision-making, self esteem, assertiveness, negotiating skills, values clarification, and other skill-building for healthy lifestyles and the development of self-care competencies; and 2) the health service contributes to overall responsibility of the college for education of students in the areas

of lifestyle and behavior that acknowledge health in physical, spiritual, and social areas (ACHA Standards of Practice for Health Promotion in Higher Education, 2001).

The College of New Rochelle is another example of a college that is striving to reach the wellness needs of its students by building a $25 million, 60,000 square-foot state-of-the-art wellness center to provide health services programs that fit the unique needs of the students (Stephan, 2005). The center has brought together multiple disciplines to help students understand and practice the principles of healthy living and wellness, not just for their college days, but also for their whole lives. The center consists of several technologically equipped learning spaces for conferences, seminars and classroom instruction. "Through the Wellness Center, the College will expand our commitment to education for health and well-being, and bring that knowledge into the community," said Dr. Sweeny, President of The College of New Rochelle (Sweeney, 2005, p.1.).

Summary

Innovations in student affairs service programs, such as health services, spotlights its potential for utilization as an instrumental program to provide an environment in which the student can have physical, mental, and emotional needs addressed. In doing so, the student is enabled to continue course work. Further studies are necessary to identify complex and ever changing student health needs.

CHAPTER III

METHOD

Health services are being considered as one of the programs that can be utilized as a strategy to keep students engaged and encouraged to complete academic goals. The study was conducted to document the utility of a health clinic at a public university in South Texas. The study was guided by the following research questions:

1. What is the students' level of agreement/disagreement with health-related issues?
2. To what extent the university health clinic is utilized by the students?
3. To what extent academic performance is affected by health-related factors?
4. What is the level of importance of health-related needs and to what extent the needs are fulfilled?
5. What are the perspectives of students regarding the usefulness of the health clinic?

Research Design

The study employed a mixed methods model. Specifically, the Exploratory Sequential Design (ESD) was used (Creswell & Plano-Clark, 2011). The ESD begins with the collection and analysis of qualitative data in phase 1, followed by collection and analysis of quantitative data in phase 2 (Figure 5). The ESD has two variants, namely, 1) theory-development variant and 2) instrument-development variant. The instrument-development variant was implemented in the study to develop the survey questionnaire which was used to collect the quantitative data. Qualitative data were collected and analyzed to derive the items that were used to develop the Student Health Needs and Perceived Effect Questionnaire (SHNPEQ). The quantitative component of the study was descriptive in nature.

Figure 5

Exploratory Sequential Design

Subject Selection

For the qualitative component of the study, the director of the student health services at the SCRTU and five clinicians were invited to take part in a meeting to discuss the health needs of the SCRTU students. For the quantitative component of the study, the non-probability sample consisted of students who volunteered to participate in the study by completing the SHNPEQ while in UHC during the week of March 23 through 30, 2012. Permission to conduct the study was obtained from the Institutional Review Board at Texas A&M University – Corpus Christi (Appendix A). The voluntary completion of the SHNPEQ served as the consent to participate in the study.

Instrumentation

A panel of experts from the STU's health center was recruited for a focus group which was conducted to collect the qualitative data. There were six clinicians who participated in the focus group. The Assessment of Needs Student Performance Pyramid, AONSPP, (Maslow, Stephens, and Heil, 2002) provided the theoretical framework to conduct the focus group. The AONSPP follows the Maslow's Hierarchy of Human Needs and consists of the following:

Safety/Health – Along with a physical sense of well-being, there must be a psychological belief that the environment is safe from fear, intimidation, or interpersonal treatment that is threatening. Though health change is accepted as a constant in the student's life, a belief that health will radically disrupt the success toward completion of academic goals will accentuate the basic need for safety.

Rewards – Completion of academic goals is commonly accepted as a motivation and commitment power for the student. Rewards are placed as a fundamental foundation that must be in place before higher level needs become commitment drivers.

Affiliation – Belonging that includes being "in the know" and part of something larger than oneself, which has been understood as part of human psychology for decades and translates into being more than just a "another enrollment statistic" as the student works toward completion of academic goals.

Growth – Overall need at this level can be characterized as achievement for the individual, the student body, and the institution of higher learning. Students want opportunities to change, learn, and have new experiences as they work toward academic goals.

Academic Goals/Commitment – Similar to the idea of individual self-actualization, students need to complete their academic goals.

The AONSPP was used to assist the group in identifying the hierarchical levels of basic human needs, followed by focusing on specific health needs of students at STU. On the basis of the input from the focus groups panels (Appendix B), the following items were used to develop the Student Needs and Perceived Effect Questionnaire (SHNPEQ) (Appendix C).

There were 18 health-related issues for which the participants were asked to indicate their level of agreement/disagreement with each by using a 4-point Likert-type scaling: 4 = strongly agree, 3 = agree, 2 = disagree, and 1 = strongly disagree. The health issues were:

1. I am aware of safer sex practices
2. I am aware of risky sex practices
3. I consider myself to be mentally healthy
4. I consider myself to be physically healthy
5. I practice a healthy lifestyle
6. I have received safe sex information from the UHC
7. I am sexually active
8. I eat three balanced meals a day
9. I exercise daily
10. I am concerned about my academic performance at STU
11. I drink alcohol on most weekends
12. I am concerned about my sexual practices
13. I have a chronic health condition
14. I am concerned about my use of alcohol
15. I am concerned about my smoking habits
16. I am concerned about my use of drugs
17. I am concerned about my use of illegal narcotic drugs
18. I am concerned about my use of prescription narcotic drugs

There were 12 attributes of the UHC and the respondents were asked to indicate yes or no regarding each one:

1. I have utilized the UHC for an illness.
2. I was aware that the UHC provides free health information.
3. I have received health information from the UHC.
4. I was aware that I pay for the UHC services as part of tuition fees.
5. I have attended a TAMUCC health fair.
6. I have received health care from the UHC.
7. I have received useful health information from the UHC.
8. I was aware that the UHC can provide counseling for my health concerns.
9. I was aware that the UHC can refer me to University Counseling Services.
10. I was treated professionally by the staff upon arrival at the UHC.
11. I will recommend the UHC to my fellow TAMUCC friends.
12. I will return to the UHC if and when I need medical care.

There were 25 health-related factors which may affect academic performance. The participants were asked to indicate if they had experienced them during the prior 12 months. The factors were: 1) Alcohol use, 2) Drug use, 3) Assault (physical), 4) Assault (sexual), 5) Concern for a troubled friend, 6) Concern for a family member, 7) Chronic illness, 8) Chronic pain, 9) Death of a friend, 10) Death of a family member, 11) Depression, 12) Anxiety disorder, 13) Eating disorder, 14) HIV infection, 15) Physical Injury, 16) Internet use, 17) Cell phone use, 18) Computer games, 19) Pregnancy, 20) Partner's pregnancy, 21) Sexually transmitted disease, 22) Sleep difficulties, 23) Stress, 24) Relationship difficulty, and 25) Bullying.

There were seven health-related needs which might influence college life. The students were asked to indicate the degree of importance of each by using a 4-point Likert-type scaling: 4 = very important, 3 = important, 2 = slightly important, and 1 = not important; and the degree by which the needs were met, using: 4 = a lot, 3 = some, 2 = little, and 1 = none. The health-related needs were: 1) Access to a good source for health information, 2) Identification of health needs, 3) Staying in good physical health, 4) Staying in good mental health, 5) Obtaining medication, 6) Obtaining testing, and 7) Referral to a specialist.

The students were also provided with three open-ended questions: 1) The UHC services have helped me improve my healthy life style by:; 2) By meeting my health needs, the UHC has impacted my decision to continue my educational goals in the following ways:; and 3) I have experienced barriers to gaining access to the UHC services in the following ways:. The SHNPEQ was pilot-tested with 20 students to examine the reliability of various sections of the instrument as well as its utility. For the section of the instrument which included 18 health-related issues, the reliability coefficient was .697**.**

Data Collection

The qualitative data were collected, using a semi-structured focus group with the director of the health services and selected clinicians, to develop the SHNPEQ. The researcher served as the moderator, audio-taped the meeting, and later transcribed the tape. The following lead questions guided the focus group:

1. In your opinion, what are the major health/safety needs of the students at STU?
2. In what ways might the health services assist the students in achieving health/safety needs?

Additional qualitative data were collected, using three open-ended questions in the SHNPEQ.

The quantitative data were collected, using the SHNPEQ. Researcher set up table at the SCRTU Health Center. Students utilizing the health center were asked to complete the questionnaire and place it in a collection box. Data were collected during the health center's operational hours between March 23 and March 30, 2012, excluding the weekend.

Data Analysis

Focus group qualitative data were analyzed by the researcher in order to derive the items that were used to construct the SHNPEQ. There were three open-ended questions in the SHNPEQ. Responses to the questions were coded and content-analyzed to derive themes that were used to summarize the qualitative data.

Quantitative data were coded and entered into the computer. The Statistical Package for the Social Sciences (SPSS) was used for the purpose of data entry, manipulation, and analysis. Descriptive statistics were used to summarize and organize the data. Cronbach's Coefficient Alpha was used to estimate the internal consistency of the scale scores. The degree of importance of health needs and the extent by which they had been met were compared, using a

series of Wilcoxon Matched-Pairs Signed-Ranks Test. The test is analogous to t-test for correlated samples; data should be at least ordinal; and when the sample size is large, approximate Z is used (Field, 2009). Effect sizes were computed by $r = Z/\sqrt{N}$, and were characterized as .1 = small effect, .3 = medium effect, .5 = large effect (Cohen, 1988).

Summary

The study followed a mixed methods exploratory sequential model to collect, analyze, interpret, and synthesize quantitative and qualitative data. Parametric and non-parametric statistical techniques were used to analyze the quantitative data. Qualitative data were used to construct the study's survey questionnaire as well as developing themes to document the perspectives of the study's participants regarding their health-related needs and use of the UHC.

CHAPTER IV

RESULTS

The purpose of the study was to examine the health needs of students at the SCRTU and to document the utility of the student health services. Qualitative data were used to develop the Student Health Needs Effectiveness Questionnaire (SHNEQ), which was utilized to collect the quantitative data. The non-probability sample consisted of 140 students who utilized the STU student health center between March 23 and March 30, 2012.

Quantitative Results

Profile of Subjects

The data for the quantitative component of the study were obtained from 140 (116 undergraduate, 24 graduate) students who had utilized the University Health Center (UHC). The majority of the study participants were female (67.10%). The mode for ethnicity was Non-Hispanic White (40.00%), followed by Hispanic (32.10%). The participants provided the data on age, number of semesters at the STU, and number of times the UHS had been used. The three distributions were positively skewed; thus, the median was reported as the most appropriate measure of central tendency. The median age was 21 years old. The median number of semesters at the STU was 4.00, and the median numbers of times the UHC had been used was 3.00. Results are summarized in Tables 1 and 2.

Table 1

A Profile of Subjects, Continuous Variables, n=140

Variable	Median
Age*	21.00
Semesters attended*	4.00
Times used university health service*	3.00

* Skewed distribution

Table 2

A Profile of Subjects, Categorical Variable, n=140

Variable	F	%
Gender		
Male	46	32.90
Female	94	67.10
Ethnicity		
Non-Hispanic white	56	40.00
Hispanic	45	32.10
Other Hispanic	4	2.90
African American	11	7.90
Native American	2	1.40
Asian American	9	6.40
Other	13	9.30
Class		
Undergraduate	116	82.90
Graduate	24	17.10

Health Issues

The study participants were provided with 18 health issues and asked to indicate their level of agreement/disagreement with each by using a 4-point Likert-type scaling: 4 = strongly

agree, 3 = agree, 2 = disagree, and 1 = strongly disagree. The reliability coefficient for the scale, as computed by Cronbach's Coefficient Alpha, was .70. Results are summarized in Table 3.

Table 3

Frequency and Percentage Distribution of Agreement/Disagreement with Health Issues, n = 140

Health Issue	Response	F	%
I consider myself to be physically healthy	Strongly Agree	58	41.40
	Agree	71	50.70
	Disagree	9	6.40
	Strongly Disagree	2	1.40
I consider myself to be mentally healthy	Strongly Agree	82	58.60
	Agree	49	35.00
	Disagree	7	5.00
	Strongly Disagree	2	1.40
I practice a healthy lifestyle	Strongly Agree	48	34.30
	Agree	73	52.10
	Disagree	16	11.40
	Strongly Disagree	3	2.10
I eat 3 balanced meals a day	Strongly Agree	37	26.40
	Agree	45	32.10
	Disagree	49	35.00
	Strongly Disagree	9	6.40
I exercise daily	Strongly Agree	31	22.10
	Agree	43	30.70
	Disagree	51	36.40
	Strongly Disagree	15	10.70
I am sexually active	Strongly Agree	38	27.70
	Agree	60	42.90
	Disagree	15	10.80
	Strongly Disagree	26	18.60
	Missing	1	0.70

Table 3 (Continued)

Health Issue	Response	F	%
I have received safer sex information from the UHC	Strongly Agree	46	32.90
	Agree	54	38.60
	Disagree	20	14.30
	Strongly Disagree	20	14.30
I am aware of safer sex practices	Strongly Agree	92	65.70
	Agree	44	31.40
	Disagree	4	2.90
	Strongly Disagree	0	0.00
I am aware of risky sex practices	Strongly Agree	93	66.40
	Agree	37	26.40
	Disagree	9	6.40
	Strongly Disagree	1	0.70
I am concerned about my sexual practices	Strongly Agree	22	15.70
	Agree	16	11.40
	Disagree	27	19.30
	Strongly Disagree	73	52.10
	Missing	2	1.40
I have a chronic health condition	Strongly Agree	10	7.10
	Agree	11	7.90
	Disagree	22	15.70
	Strongly Disagree	97	69.30
I am concerned about my smoking habits	Strongly Agree	7	5.00
	Agree	7	5.00
	Disagree	13	9.30
	Strongly Disagree	113	80.70
I drink alcohol on most weekends	Strongly Agree	18	12.90
	Agree	23	16.40
	Disagree	27	19.30
	Strongly Disagree	72	51.40
I am concerned about my use of drugs	Strongly Agree	7	5.00
	Agree	5	3.60
	Disagree	8	5.70
	Strongly Disagree	120	85.70

Table 3 (Continued)

Health Issue	Response	F	%
I am concerned about my use of alcohol	Strongly Agree	7	5.00
	Agree	5	3.60
	Disagree	17	12.10
	Strongly Disagree	111	79.30
I am concerned about my use of illegal narcotic drugs	Strongly Agree	6	4.30
	Agree	6	4.30
	Disagree	3	2.10
	Strongly Disagree	125	89.30
I am concerned about my use of prescription narcotic drugs	Strongly Agree	4	2.90
	Agree	6	4.30
	Disagree	6	4.30
	Strongly Disagree	124	88.60
I am concerned about my academic performance at STU	Strongly Agree	32	22.90
	Agree	35	25.00
	Disagree	28	20.00
	Strongly Disagree	45	32.10

Health Issues Ranked

The health issues were ranked from the highest to the lowest on the basis of the level of agreement/disagreement. Being aware of safer sex practices, followed by being aware of risky sex practices, and being mentally healthy were ranked the highest. Being concerned about the use of prescription narcotic drugs, use of illegal narcotic drugs, and use of drugs were ranked the lowest. Results are summarized in Table 4.

Table 4

Ranking of Agreement/Disagreement with Health Issues, n=140

Health Issue	Mean*
I am aware of safer sex practices	3.63
I am aware of risky sex practices	3.59
I consider myself to be mentally healthy	3.51
I consider myself to be physically healthy	3.32
I practice a healthy lifestyle	3.19
I have received safe sex information from the UHC	2.90
I am sexually active	2.79[a]
I eat three balanced meals a day	2.79
I exercise daily	2.64
I am concerned about my academic performance at STU	2.39
I drink alcohol on most weekends	1.91
I am concerned about my sexual practices	1.91[b]
I have a chronic health condition	1.53
I am concerned about my use of alcohol	1.34
I am concerned about my smoking habits	1.34
I am concerned about my use of drugs	1.28
I am concerned about my use of illegal narcotic drugs	1.24
I am concerned about my use of prescription narcotic drugs	1.21

*4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree
[a] n = 139, [b]n = 138

University Health Center Attributes

The study participants were provided with 12 yes/no attributes of the UHC. The attribute which was endorsed the most was "returning to UHC if medical care is needed," followed by "recommending the UHC to fellow students," and "receiving health care from UHC." The attributes which were endorsed the least were "attending a university health fair," followed by "being aware that the UHC can refer the students to university counseling services," and "being aware that the UHC can provide counseling for health concerns." Results are summarized in Table 5.

Table 5

University Health Center Attributes, n = 140

Attribute	Response	F	%
Utilized UHC for an illness	yes	114	81.40
	no	26	18.60
Aware that UHC provides free health information	yes	125	89.30
	no	15	10.70
Received health information from UHC	yes	114	81.40
	no	26	18.60
Aware that I pay for the UHC services as part of tuition fees	yes	123	87.90
	no	17	12.10
Attended a STU health fair	yes	40	28.60
	no	100	71.40
Received health care from the UHC	yes	124	88.60
	no	16	11.40
Received useful health information from the UHC	yes	121	86.40
	no	19	13.60
Aware that the UHC can provide counseling for health concerns	yes	115	82.10
	no	25	17.90
Aware that UHC can refer to University Counseling Services	yes	111	79.30
	no	29	20.70
Was treated professionally by staff upon arrival at UHC	yes	122	87.10
	no	18	12.90
Will recommend UHC to fellow STU friends	yes	129	92.10
	no	11	7.90
Will return to UHS if and when medical care is needed	yes	133	95.00
	no	7	5.00

Health Concerns Affecting Academic Performance

The study participants were provided with 25 health-related factors which may affect academic performance and asked to indicate if they had experienced them during the prior 12 months. As can be seen in Table 6, the majority of the factors had not been experienced by the respondents. Stress, followed by sleep difficulties, and internet use were reported the most; HIV infection, followed by partner's pregnancy, pregnancy, and bullying were reported the least. Results are summarized in Table 6.

Table 6

Health-related Factors Affecting Academic Performance

Factor	Response	F	%
Alcohol	yes	25	17.90
	no	115	82.10
Drug Use	yes	12	8.60
	no	128	91.40
Assault (physical)	yes	7	5.00
	no	133	95.00
Assault (sexual)	yes	7	5.00
	no	133	95.00
Concern for a troubled friend	yes	32	22.90
	no	108	77.10
Concern for a family member	yes	40	28.60
	no	100	71.40
Chronic illness	yes	25	17.90
	no	115	82.10

Table 6 (Continued)

Factor	Response	F	%
Chronic pain	yes	14	10.00
	no	126	90.00
Death of a friend	yes	10	7.10
	no	130	92.90
Death of family member	yes	27	19.30
	no	113	80.70
Depression	yes	37	26.40
	no	103	73.60
Anxiety disorder	yes	34	24.30
	no	106	75.70
Eating disorder	yes	13	9.30
	no	126	90.00
HIV infection	yes	4	2.90
	no	136	97.10
Physical injury	yes	14	10.00
	No	126	90.00
Internet use	yes	47	33.60
	no	93	66.40
Cell phone use	yes	44	31.40
	no	96	68.60
Computer games	yes	29	20.70
	no	111	79.30
Pregnancy	yes	6	4.30
	No	134	95.70

Table 6 (Continued)

Factor	Response	F	%
Partner's pregnancy	yes	4	2.90
	No	136	97.10
Sexually transmitted disease	yes	11	7.90
	no	129	92.10
Sleep difficulties	yes	59	42.01
	no	81	57.90
Stress	yes	87	62.10
	no	53	37.90
Relationship difficulty	yes	39	27.90
	no	101	72.10
Bullying	yes	6	4.30
	no	134	95.70

Importance of Health Related Needs

The study participants were provided with seven health-related needs which might influence college life and were asked to indicate the degree of importance of each by using a 4-point Likert-type scaling: 4 = very important, 3 = important, 2 = slightly important, and 1 = not important. The reliability coefficient for the scale, as computed by Cronbach's Coefficient Alpha, was .80. As can be seen in Table 7, the majority of student responses indicated that the seven health-related needs were very important to them. Results are summarized in Table 7.

Table 7

Frequency and Percentage Distribution of Health-related Need Importance, n = 140

Health-related Need	Response	F	%
Access to a good source health information	Very Important	107	76.40
	Important	25	17.90
	Slightly Important	8	5.70
	Not Important	0	0.00
Identification of health needs	Very Important	103	73.60
	Important	29	20.70
	Slightly Important	8	5.70
	Not Important	0	0.00
Staying in good physical health	Very Important	114	81.40
	Important	22	15.70
	Slightly Important	4	2.90
	Not Important	0	0.00
Staying in good mental health	Very Important	123	87.90
	Important	14	10.00
	Slightly Important	3	2.10
	Not Important	0	0.00
Obtaining medication	Very Important	106	75.70
	Important	22	15.70
	Slightly Important	8	5.70
	Not Important	4	2.90
Obtaining testing	Very Important	107	76.40
	Important	23	16.40
	Slightly Important	5	3.60
	Not Important	5	3.60
Referral to specialist	Very Important	100	71.40
	Important	21	15.00
	Slightly Important	11	7.90
	Not Important	8	5.70

Health Related Needs Met

The study participants were asked to indicate the degree by which the seven health-related needs were met, using a 4-point Likert-type scaling: 4 = a lot, 3 = some, 2 = little, and 1 = none. The reliability coefficient for the scale, as computed by Cronbach's Coefficient Alpha, was .88. Results are summarized in Table 8.

Table 8

Frequency and Percentage Distribution of Health-related Need Fulfillment, n = 140

Health-related Need	Response	F	%
Access to a good source of health information	A lot	75	53.60
	Some	46	32.90
	Little	15	10.70
	None	4	2.90
Identification of health needs	A lot	73	52.10
	Some	44	31.40
	Little	18	12.90
	None	5	3.60
Staying in good physical health	A lot	66	47.10
	Some	49	35.00
	Little	21	15.00
	None	4	2.90
Staying in good mental health	A lot	67	47.90
	Some	48	34.30
	Little	20	14.30
	None	5	3.60
Obtaining medication	A lot	72	51.40
	Some	40	28.60
	Little	18	12.90
	None	10	7.10

Table 8 (continued)

Health-related Need	Response	F	%
Obtaining testing	A lot	77	55.00
	Some	42	30.00
	Little	16	11.40
	None	5	3.60
Referral to specialist	A lot	67	47.90
	Some	38	27.10
	Little	19	13.60
	None	16	11.40

The degrees of health needs importance and health needs being met for each of health-related needs were compared, using Wilcoxon Signed Ranks Test. The level of importance was higher than was the degree of fulfillment for all health-related needs and all differences were statistically significant at the .01 level. "Staying in good mental health" was the most important health-related need, followed by "staying in good physical health, "access to a good source of health information need," "identification of health needs," "obtaining testing," "obtaining medication," and "referral to specialist." The health-related need which had been fulfilled the most was "access to a good source of health information" followed by "obtaining testing," "identification of health needs," "staying in good physical and mental health, "obtaining medication," and referral to specialist." The effect sizes ranged from .22 to .41. Results are summarized in Table 9.

Table 9

Comparison of Degree of Importance with Degree of Needs Met, n=140

Health-related Need	Importance Mean[a]	Needs Met Mean[b]	Z[c]	p	ES[d]
Access to a good source of health information	3.71	3.37	4.89	< .01	.29
Identification of health needs	3.68	3.32	4.34	< .01	.26
Staying in good physical health	3.79	3.26	6.10	< .01	.37
Staying in good mental health	3.86	3.26	6.79	< .01	.41
Obtaining medication	3.64	3.24	4.78	< .01	.29
Obtaining testing	3.66	3.36	3.69	< .01	.22
Referral to specialist	3.52	3.11	4.42	< .01	.26

[a] 4=Very Important, 3=Important, 2 =Slightly Important, 1=Not Important
[b] 4 =A lot, 3= Some, 2=Little, 1=None
Mean scores are reported for the ease of interpretation. Responses were treated as ordinal data.
[c] As calculated by the Wilcoxon Signed Ranks Test
[d] ES (effect size) as computed by r, 0.1= small, 0.3 = medium, 0.5= large

Qualitative Result

Open Ended Statements

There were 106 students, out of 140, who responded to the first statement: "The UHC services have helped me improve my healthy life style by". Content analysis of the responses resulted in six themes. The theme which was reported the most was *treatment*, followed by *information, accessibility, reassurance, referral, and encouragement.* Results are summarized in Table 10.

Table 10

The UHC services helped me improve my healthy life style by, Themes, n = 106

Theme	F	%
Treatment	49	46.23
Information	27	25.47
Accessibility	14	13.21
Reassurance	8	7.55
Referral	6	5.66
Encouragement	2	1.88

There were 87 students, out of 140, who responded to the second statement: "By meeting my health needs, the UHC has impacted my decision to continue my educational goals." The content analysis of the responses suggested that a total of 58 students (66.67%) agreed with the statement, of which, five simply responded by stating "yes." Five themes were derived based on the detailed responses provided by 53 students. The theme that was reported the most was *kept focused toward goals,* followed by *advice/encouragement*, *treatment*, *confidence,* and *information*. Results are summarized in Table 11.

Table 11

By meeting my health needs, the UHC has impacted my decision to continue my educational goals in the following ways, Themes, n = 53

"Yes" Themes	F	%
Kept focused toward goals	19	35.85
Advise/Encouragement	15	28.30
Treatment	8	15.09
Confidence	7	13.21
Information	4	7.55

There were 82 students, out of 140, who responded to the third statement: "I have experienced barriers to gaining access to the UHC services." There were 45 (54.87 %) who reported they had experienced barriers to gaining access to the UHC, and their responses resulted

in three themes. *Difficulty getting timely appointment* was by far the barrier reported the most (91.11%), followed by testing costs and obtaining medication. Results are summarized in Table 12.

Table 12

I have experienced barriers to access to UHC services, Themes, n = 45.

"Yes" Themes	F	%
Difficulty getting timely appt.	41	91.11
Testing costs	2	4.44
Obtaining medication	2	4.44

Summary

Analysis of the quantitative data revealed the highest ranked health issues were 1) being aware of safer sex practices, 2) being aware of risky sex practices, and 3) being mentally healthy. The students reported stress, sleep difficulties, and internet use as the health concerns affecting their academic performance. The reported level of importance was higher than the degree of fulfillment for all health-related needs. Furthermore, the data indicated students endorsed the health center and used it for three main purposes, namely, healthcare, illness, and health information. Analysis of qualitative data resulted in several themes, namely, treatment, information, accessibility, reassurance, referral, encouragement, kept focused toward goals, advice/encouragement, confidence, and information.

CHAPTER 5

SUMMARY, CONCLUSIONS AND DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS FOR FURTHER RESEARCH

Summary

The study examined the health needs of students at a south Texas university and documented the utility of the student health center. Abraham Maslow's Hierarchy of Human Needs Pyramid Model (Maslow, 1968), Vincent Tinto's Student Integration Model (Tinto, 1987), and Watson Swail's Geometric Model of Student Persistence and Achievement (Swail, 2005) were synthesized and provided the study's theoretical framework. The descriptive study employed a mixed methods exploratory sequential design (ESD) and was guided by the following research questions:

1. What is the level of agreement/disagreement with health-related issues?
2. To what extent the university health clinic is utilized by the students?
3. To what extent academic performance is affected by health-related factors?
4. What is the level of importance of health-related needs and to what extent the needs are fulfilled?
5. What are the perspectives of students regarding the usefulness of the health clinic?

The study's non-probability sample consisted of 140 students who utilized the university's health center between the study period of March 23 and 30, 2012. The majority of the study participants were female (67.10%). The mode for ethnicity was Non-Hispanic White (40.00%), followed by Hispanic (32.10%). The median age was 21 years old. The median number of semesters at the university was 4.00, and the median numbers of times the health center had been used was 3.00.

Qualitative data were used to develop the Student Health Needs Effectiveness Questionnaire (SHNPEQ), which was utilized to collect the quantitative data. The SHNPEQ consisted of a demographic section, five health-related constructs, namely, 1) health-issue needs, 2) health needs importance, 3) health needs met, 4) attributes of the UHC, and 5) health-related factors affecting academic performance, and three open-ended statements.

Analysis of the quantitative data revealed the highest ranked health issues were 1) being aware of safer sex practices, 2) being aware of risky sex practices, and 3) being mentally healthy. The students reported stress, sleep difficulties, and internet use as the health concerns affecting their academic performance. The reported level of importance was higher than the degree of fulfillment for all health-related needs. Furthermore, the data indicated students endorsed the health center and used it for three main purposes, namely, healthcare, illness, and health information. Analysis of qualitative data suggested that the university health center was instrumental in assisting students identify healthy life styles and focus on educational goals.

Conclusions and Discussion

The review of the literature revealed that student health issues are of concern to both the student and the university. Keeping a student healthy increases the likelihhod of reaching academic goals because it is shown that health affects students' academic efforts (Tinto, 2012; Swinford, 2002; Turner & Hurley, 2002; Deutsch, 1998; Weshcler, 1994; Dickinson, 1976; Williams & Kitzinger, 1967).

In the words of Deutsch, "So what's the big idea? If your college is about learning, then it's also about health" (1998, p. 2.). Deutsch proclaimed that colleges should evaluate what they are doing to create an environment that encourages healthy practices among its own students. Colleges should care about health for their students for several reasons, one of which is, "people

don't learn well if they're not healthy" (Deutsch, 1998, p. 2.), which could hinder completion of studies. The success of the institution's academic mission is not only dependent upon the instruction it provides, but also on the climate it creates. The climate is not about how students do course work but how they live (Deutsch, 1998).

Vincent Tinto, student retention theorist and activist, commented to this researcher that "it is apparent that an illness will undermine retention" (Tinto, Personal Communication, 2012), and suggested the need to conduct further studies. University of South California Health Promotion and Intervention program director, Paula Swinford, expressed that students do not know how to deal with the stress of being homesick and living on their own, as well as the added stress of new classes and professors. Swinford reported that students are seeking ways to better maintain and manage a healthy lifestyle and the university can provide health promotion and intervention programs to assist the student (Swinford, 2002).

Harry Weshler and his colleagues reported stress, sleep difficulties, anxiety, depression, difficulty with relationships, physical assaults, sexual assaults, and sexually transmitted diseases are some of the mental and physical health issues reported as factors attributing to academic failure (Weshler, Deutsch, & Dowal,1994). The 2005 National ACHA annual survey reported experiencing poor health lowered students GPA. Students who reported experiencing three or more days of poor health within the previous 30 days also reported a GPA of 3.20, while students who reported two or fewer days of poor physical health had a mean GPA of 3.27. Nearly 40% of survey respondents reported three or more days of poor physical health within the previous 30 days. Watson Swail reported "42% of students whose first-year grade point average was 2.25 or less left postsecondary education permanently" (International Center for Student Retention, 2005. p. 2). Institution administrators have been struggling with low student retention

rates and are being held accountable for ineffective student retention efforts. Focusing on identifying student health needs and providing means for the student to have the needs met may result in a student who will be better able to focus on course-work and ultimately complete his/her education.

In the current study, stress, followed by sleep difficulty and internet use, were reported as health issues that had affected students' academic performance. The same health issues were reported by students in a national college survey conducted by the University of Minnesota Boynton Health Service (UMBHS, 2007). The UMBHS (2007) survey reported high consumption rate of alcohol and use of drugs as health issues that affected the students' ability to cope with the stresses associated with campus life.

National College surveys for more than half a century have identified alcohol and drug use to be at high rates throughout the United States colleges. Research has linked alcohol and drug use to a multitude of behaviors that affect the students' ability to complete academic goals. Yet, only 25 (17.90%) of 140 participants in the current study reported alcohol use as a factor affecting their academic performance within the prior 12-month period, and 41 (47.90%) reported drinking alcohol on most weekends. Participants reported not being concerned about alcohol use (8.60%) but reported being concerned about their academic performance at the SCRTU (47.90%). Interestingly, the same percentage of the participants (47.90%) was also concerned about their academic performance.

The UMBHS leaders have identified and developed programming for mental health issues that affect the UMB students' ability to cope with the stresses of campus life, as well as the high alcohol and drug consumption rates. Implementation of such programs is expected to

improve students' health and GPA, which may ultimately result in the students' completion of academic goals.

As illustrated in Swail's Geometric Design of Persistence and Achievement Model (Swail, 2005), student health services is a program within student affairs services and is central to student's experience. The SCRTU health services' mission statement holds the provision of health treatment, screening, and health information as its goals for students. The participants' responses suggested that the UHC is meeting its mission expectations and more. Participants reported additional benefits beyond clinical, namely, academic support, advice, and encouragement. The study participants' responses endorsed the utility of the UHC and suggested that they would return if medical care were needed, would recommend the UHC to fellow students, had received helpful health information, had been treated professionally and respectfully by the staff, and credited the UHC with "keeping them focused on their academic goals."

Implications and Recommendations for Practice

The results of the study offer several implications and recommendations for practice for student services program planners and administrators. Institutions of higher education have a responsibility to support the students efforts toward healthy life choices and academic success. Considerable investments have been made to provide resources that identify students' needs and facilitate their efforts to succeed. The UHC's mission statement holds the provision of health treatment, screening, and health information as its goals for students. Study participants reported additional benefits, beyond clinical needs. Participants endorsed the UHC as providing clinical and academic support services. Results suggested that students perceive the UHC services as being instrumental in keeping them focused toward the fulfillment of their educational goals.

Therefore, it is important that student services and student health services focus, collaboratively, on ways to 1) identify students' health needs, specially those affecting their academic life; 2) identify ways to increase student access to health services; and 3) develop and promote initiatives to meet the needs. Further exploration into the utility of the UHC as a component to existing student retention programs is recommended.

The study participants reported the level of importance for all health-related issues to be higher than was the degree of fulfillment met. The highest ranked health issue was being aware of safer sex practices, followed by being aware of risky sex practices, and being mentally healthy and physically healthy. The majority (71.50%) reported receiving safer sex information from the UHC, which indicates that it has done a reasonably good job of providing safer sex-related education to the students. However, it is important to reach the 28.50% who had not reported receiving the information. It would be prudent for health services program planners to use the study results, in collaboration with national surveys results, to identify students' sex-health concerns and explore all possible opportunities to provide health-related sex information to all students.

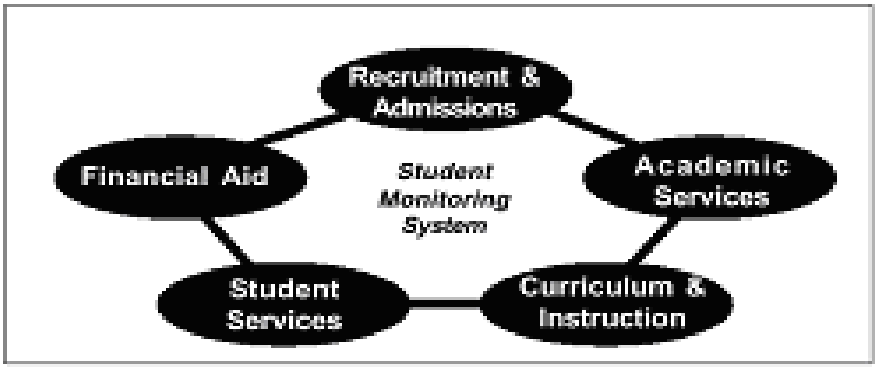
The study results showed participants considered themselves to be mentally and physically healthy, which was important to them. Even though they considered themselves to be mentlly and physically healthy, there seemed to be incongurence between their perception of being healthy while reporting experiencing stress, sleep dificulties, internet, and cell phone use as factors having affected their academic efforts in the previous 12 months. They also reported not being concerned about alcohol and drug use, even though 41.90% reported alcohol use almost every weekend. Interestingly, 41.90% of participants also reported being concerned about their academic performance at the SCRTU. The 2007 College Health Survey: Health and

Academic Performance reported health conditions and behaviors that are associated with lower GPA among undergraduates in Minnesota. The results documented a link between the health of Minnesota undergraduate college students and their academic achievement as measured by GPA. Paula Swinford recommended that even though students do not understand what is causing their problems, they are seeking ways to manage their health. Student health services should provide students with an educational series on health habits awareness that helps students consider the possibility that some of their life style habits are affecting their health and academic efforts (Swinford, 2008). Thus, it is important for the SCRTU health services program planners to consider the development of a health habits awareness educational series and other supplemental programs that could be utilized to better identify the students' mental and physical health needs, such as, on-line health assessment tools, the Wellness Wheel, and referrals to physical health trainers for individualized training.

Exploration into the future role of health services as a student retention strategic program is indicated. The UHC could coordinate with other institutional programs and services that are designed to increase student retention, as illustrated in Swail's Geometric Design of Persistence and Achievement and Swail's Five Components of the Student Retention Framework, Figure 6 (Swail, 1995).

Figure 6

Five Components of the Student Retention Framework



Swail recommended a *meeting of the minds*. The SCRTU provides a variety of services and resources to students but often operates in *silos*, that is, knowledge of the student's progress or difficulties may be shared within each individual program, but are not communicated to all the other programs and services linked to the student. The impact of each service is not known to all and interventions may not be implemented in time to keep a struggling student on track (Swail, 2005). A collaborative and comprehensive monitoring system may be considered, as illustrated in Swail's Five Components of the Student Retention Framework (Swail, 1995). The model illustrates student services as units of service connecting with each other, providing unique services for the student, while also monitoring the collective services and resource efforts outcomes in an attempt to prevent the student from *falling through the cracks*. A comprehensive monitoring system at the SCRTU should be considered as an initiative that may increase student retention rates from the current 64% to the University's projected strategic plan goal of 70%.

Access to a good source of health information was reported by participants as being important, yet 45 (54.87%) out 82 respondents reported they had experienced barriers to health services. Specifically, 41 (91.11%) of the 45 respondents reported difficulty getting a timely appointment. Testing costs and obtaining medication (8.88%) represented the remaining

barriers. Based on the study's results, exploration of the needs of student access to health services is recommended. Virtual services and listserve have become a major source of information, discussion, and debate on college health issues in the United States and the world (Turner & Hurley, 2002) and may be a source of health information access and scheduling contact for students. The internet has increased the reach of student health services and in some cases may be more familiar than is a real office (Stoller, 2011).

Institutions have been struggling to identify the problems related to student retention and are in the process of exploring the effectiveness of a variety of existing student support programs and resources. Alternative strategies should be discussed as potential actions to reduce falling retention rates. It is the people who come face-to-face with students on a regular basis who provide the positive growth experiences which may enable them to identify their goals and talents and learn how to put them to use. The caring attitude of college personnel is viewed as the most potent retention force on a campus (Noel, Levitz, & Saluri, 1985). Student Health Services have been identified as a student service that has not traditionally been viewed as a student retention services because of its primary clinical function. With its clinical face-to-face interaction with the student in a time of physical or mental need, the health service supports the students' lower level human needs, health, and safety, as is theorized by Maslow's Hierarchy of Human Needs Model (Maslow, 1968). The advice and encouragement the students receive from the health services provide them with emotional support and upper level human needs, belonging and growth, that may help them work toward attaining their goals (Maslow, 1968). A recommendation for student service administrators is a need to "look with new eyes" and explore all possible programs (Swinford, 2008).

C.J. Craven, reported in his 1951 doctoral dissertation titled, *Why we withdrew*, (as cited in Boshier, 1973) that in much prior research, the student was classified rather than understood and recommended insight into the frame of reference of the individual student. The current study's results describe the unique health needs and perspectives of its participants, which may be instrumental in collaborative planning and implementation of intervention measures that permit each unit of service the knowledge of the "whole" SCRTU students' needs. Health services could be incorporated into existing student retention program efforts and care must be taken to protect students' health information, as guided by The Insurance Portability and Accountability Act of 1996 (Bissey, 2006). If for some reason specific health information was necessary, the student could give permission for the release of personal health information on an "as needs to know basis" (2006, p. 13). It is recommended that the SCRTU study, in conjunction with national college outcomes surveys, such as ACHA annual surveys, be used to assist the University's administrators and student services planners as they allocate program resources for the provision of individualized programs such as on-line assessment tools, interactive computer health applications, and referral to physical health trainers.

Recommendations for Further Research

There are several opportunities for future research: 1) replication of the mixed methods study offered to all students utilizing the SCRTU health services; 2) a mixed methods exploratory study conducted to identify students' percieved utility of the UHC toward completion of academic goals; 3) a longitudinal study to track student health needs, degree of importance of health needs, and degree to which the UHC met student health needs; and 4) a mixed methods exploratory study of the SCRTU students who sucessfully completed their academic goals.

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APPENDICES

APPENDIX A

Texas A&M University-Corpus Christi
Compliance Office
6300 Ocean Drive, Unit 5844, Corpus Christi, Texas 78412-5844 361-825-2497 Fax 361-825-2755

April 24, 2009

Ms. Marilyn McCaig
4625 Stonegate Way
Corpus Christi, TX 78411

Dear Ms. McCaig,

I have reviewed your IRB application for your research project entitled "Perceived Importance and Effectiveness of University Student Health Services on Completion of Academic Goals at A South Texas University" (#60-09). The project is consistent with Category 7.1.2(2) and is hereby deemed as Exempt. You are authorized to begin this project as outlined in your application.

If you have any questions, please do not hesitate to contact me at 825-2497.

Sincerely,

Renee K. Gonzales
Research Compliance Officer
Texas A&M University-Corpus Christi
6300 Ocean Dr. Unit 5844
Corpus Christi, TX 78412
Tel: (361)825-2497
Renee.gonzales@tamucc.edu

APPENDIX B

Focus Group Transcript

STU Student Health Center Panel of Clinical Experts Interview

October 9, 2009

Research Interviewer: Marilyn McCaig

Participants:

Respondent 1
Respondent 2
Respondent 3
Respondent 4
Respondent 5
Respondent 6

Researcher: I am Marilyn McCaig , an Education Leadership Doctoral candidate, working toward fulfilling the dissertation requirements of the program. The dissertation title is Let me tell you a little about the problem or issue I wish to study. Problem: Since the implementation of the STU health center there has not been a survey or study conducted to assess the student's perception of the effectiveness of the health center toward meeting student health needs and which might impact their completion of academic goals. The health center has conducted some annual satisfaction surveys, but none to determine the effectiveness in meeting student health needs. College national retention rates for the past thirty years have remained at fifty per cent. Through the years many colleague level forums have been conducted, articles written and planning programs developed, focusing on keeping students engaged and enrolled in college. Student health services is a service that has not been generally considered as beneficial toward keeping students engaged, enrolled and moving toward their academic goals. This service might have an impact on retention rates. This needs further exploration.

Researcher: The purpose of our meeting today is to have you help identify health related needs of the students at South Texas University. I have asked you all to be part of an expert panel to discuss the health needs of the STU students. Once these health needs are identified I will use this information to develop a questionnaire to gather data using measurable scales in order analyze the data.

Respondent 1: We have had some positive results from our satisfaction surveys and through these surveys we have identified some things we can improve on. We have not studied effectiveness of our programs. We mainly have been focusing on keeping the clinic opened and that has required a focus on keeping staff, not necessarily expanding programs.

Researcher: Then the study can be good tool for you. You will not have to use your staff to gather and analyze data, the information from the study could aid in identifying some areas of strengths and areas of needed focus for future student health needs focus/or strengthen some existing health needs focuses.

Researcher: I have some handouts of the 2000 and 2008 American College of Health Association (ACHA) survey. The 2008 survey is the latest available. The ACHA is a national student health survey that reports results on health issues of college students. Let's review them and see how the findings might relate to our STU students.

Pause to look over survey handouts:

As you see the ACHA 2008 survey's top five factors that impedes academic performance are:

1. Stress
2. Cold/flu/sore throat
3. Sleep difficulties
4. Concern for a friend or family
5. Depression/anxiety disorders

The top four or the five top factors remain unchanged in ACHA-NCHA Survey results since 2000.

Researcher: Do you agree? What other health issues do you see in these surveys that might relate to STU's student?

Respondent 2: Yes healthy eating and exercise.

Respondent 3: GYN issues – pregnancy etc.

Respondent 4: These really are pretty much the same for our campus. We have heavy concerns centered around sex behaviors and heavy alcohol drinking. Diet problems are also important to mostly female students. We have a growing problem with obesity and unhealthy eating habits. Remember we have a large population of Hispanic that are predisposed to diabetes. Heavy carbohydrates, fatty fast foods and sodas are all bad for these students.

Researcher: Here is another national survey to review – the University of Minnesota 2007 College Health Survey. There is a part of this survey that identifies factors that affect academic performance. Maybe we could identify some that relate to our STU& students.

Handing out survey handout. Pause to review.

Researcher: Respondent 3, as we name off the top ten factors that affect academic performance from this survey would you please list them on our board.

1. Gambling
2. Tobacco use
3. Alcohol use
4. Marijuana use

5. Chronic health condition
6. Mental health condition
7. Lack of sleep
8. Lack of exercise
9. Nutrition
10. STD's

Researcher: Let's brainstorm about health needs of STU students. We will use two questions to lead our brainstorming session. Respondent 3 would you please write them on the board as we name as many as we can ? The first question is:

1.) In your opinion what are the major health/safety needs of the students in your university?

Panel Responses: (listed on board as respondents gave suggested needs)

1. STDs
2. Practice safe sex
3. Alcohol /Drug use
4. Safety (violence)
5. Nutrition

Researcher: Let's brainstorm the second question:

2.) In what ways does Health Services assist the students in achieving health needs?

Panel Responses: (listed on board as respondents gave suggested ways)

1. Enable students to make informed decisions about health related concerns
2. Safer sex practices
3. Education of health issues and healthy lifestyles through Health Fair and brochures
4. Treatment of illness
5. Offer referral to counseling for alcohol/drug use

Respondent 1: I would like to have some open ended question that would give students opportunity to answer how they perceived the effectiveness of health services on meeting their health needs and did the health services have an impact on academic performance.

Respondent 2 : I agree, even if they don't always answer them I still think we might get some information that would be useful.

Some respondents shook head as in agreement.

Researcher : I think that's a good idea. Jot some suggested open ended questions down now and later I'll hand out some paper that you can use to write some suggested questions. I would like to suggest some other general questions. These are from the ACHA survey:

Within the last 12 months have any of the following factors affected your individual academic performance, i.e. received an incomplete, dropped a course, received a lower grade in a class, on an exam, or on an important project.

1. Alcohol use
2. Assault (physical) Assault (sexual)
3. Concern for a troubled friend or family member
4. Chronic illness
5. Chronic pain
6. Death of a friend/family member
7. Depression/anxiety disorder/seasonal affective disorder
8. Relationship difficulty
9. Drug use
10. Eating
11. HIV infection
12. Injury
13. Internet/cell phone/computer games
14. Pregnancy (yours or partner's)
15. Sexually transmitted disease
16. Sleep difficulties
17. Stress
18. Violence

Respondent 5: I suggest the emphasis be on positive and negative health behaviors, gender roles, alcohol use, sexual behaviors – safer or risky, like in the national survey.

I would like to put those same questions in our questionnaire. They don't include porn, which is distracting students from course work. Some studies I have read contribute use of porn (magazines and internet) to impact on student's studies. Maybe for this study we will just include in internet use.

Researcher: That's a good idea – to include it in with internet use.

Researcher: Do you have anything else to add to our discussion? Any questions, comments or concerns you have for me about our process here today?

Response: Some voices saying no.

Researcher: You, as the panel of experts, have identified what you consider to be the top health needs of STU students. This information will be utilized to develop the study instrument. I am going to hand out some paper. Please write some suggested questions you think should be used for the questionnaire.

Thank you all very much for your participation today. Thank you, respondent 3 for all your board work. If you think of any other health issues or suggested questions contact me. My number is 694-5450.

Interview ended and researcher collected papers.

APPENDIX C

Student Health Needs Perceived Effectiveness Questionnaire (SHNPEQ)
Texas A & M University – Corpus Christi

You are invited to participate in a study designed to determine how students perceive the importance of the University Health Center (UHC) services at Texas A&M University-Corpus Christi (TAMUCC). Your responses will be helpful in assessing future student health services.

<u>Please complete the questionnaire if you are at least 18 years old and have utilized the services of the UHC at TAMUCC</u>.

There is no right or wrong answer. If you don't feel comfortable about answering a question, leave it blank. Your participation is voluntary and you may withdraw at any time without facing any penalty. All raw data will remain confidential. Aggregate format will be used to report the results.

The principal investigator, Marilyn McCaig, may be contacted at 361-510-0274. If you have any questions about your rights as a research participant, you may contact Erin Sherman, Compliance Officer at TAMUCC, at (361) 825-2497.

By completing the survey, you consent to voluntarily participate in the study.

I thank you in advance for your participation in the study.

Marilyn McCaig

Please indicate your level of agreement/disagreement with each of the following statements by circling the appropriate number:

4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree

1. I consider myself to be physically healthy.	4	3	2	1
2. I consider myself to be mentally healthy.	4	3	2	1
3. I practice a healthy lifestyle.	4	3	2	1
4. I eat 3 balanced meals a day.	4	3	2	1
5. I exercise daily.	4	3	2	1
6. I am sexually active.	4	3	2	1
7. I have received safe sex information from the UHC.	4	3	2	1
8. I am aware of safer sex practices.	4	3	2	1
9. I am aware of risky sex practices.	4	3	2	1
10. I am concerned about my sexual practices.	4	3	2	1
11. I have a chronic health condition.	4	3	2	1
12. I am concerned about my smoking habits.	4	3	2	1
13. I drink alcohol on most weekends.	4	3	2	1
14. I am concerned about my use of drugs.	4	3	2	1
15. I am concerned about my use of alcohol.	4	3	2	1
16. I am concerned about my use of illegal narcotic drugs	4	3	2	1
17. I am concerned about my use of prescription narcotic drugs.	4	3	2	1
18. I am concerned about my academic performance at TAMUCC	4	3	2	1

About the University Health Center (UHC): Place an x in the applicable yes or no column:

	Yes	No
1. I have utilized the UHC for an illness.	_____	_____
2. I was aware that the UHC provides free health information.	_____	_____
3. I have received health information from the UHC.	_____	_____
4. I was aware that I pay for the UHC services as part of tuition fees.	_____	_____
5. I have attended a TAMUCC health fair.	_____	_____
6. I have received health care from the UHC.	_____	_____
7. I have received useful health information from the UHC.	_____	_____
8. I was aware that the UHC can provide counseling for my health concerns.	_____	_____
9. I was aware that the UHC can refer me to University Counseling Services.	_____	_____
10. I was treated professionally by the staff upon arrival at the UHC.	_____	_____
11. I will recommend the UHC to my fellow TAMUCC friends.	_____	_____
12. I will return to the UHC if and when I need medical care.	_____	_____

Within the last 12 months, have any of the following factors affected your individual academic performance (e.g., receiving an incomplete, dropping a course, receiving a low grade in a course)? Place an X in the appropriate Yes or No column:

	Yes	No
1. Alcohol use	___	___
2. Drug use	___	___
3. Assault (physical)	___	___
4. Assault (sexual)	___	___
5. Concern for a troubled friend	___	___
6. Concern for a family member	___	___
7. Chronic illness	___	___
8. Chronic pain	___	___
9. Death of a friend	___	___
10. Death of a family member	___	___
11. Depression	___	___
12. Anxiety disorder	___	___
13. Eating disorder	___	___
14. HIV infection	___	___
15. Physical Injury	___	___
16. Internet use	___	___
17. Cell phone use	___	___
18. Computer games	___	___
19. Pregnancy	___	___
20. Partner's pregnancy	___	___
21. Sexually transmitted disease	___	___
22. Sleep difficulties	___	___
23. Stress	___	___
24. Relationship difficulty	___	___
25. Bullying	___	___

Following are health-related needs which could influence a student's college life. First, indicate the degree of importance of each, 4 = very important, 3 = important, 2 = slightly important, 1 = not important. Then indicate the extent by which the need was met by the UHC, 4 = a lot, 3 = some, 2 = little, 1 = none.

	Importance	**Need met**
1. Access to a good source for health information	4 3 2 1	4 3 2 1
2. Identification of health needs	4 3 2 1	4 3 2 1
3. Staying in good physical health	4 3 2 1	4 3 2 1
4. Staying in good mental health	4 3 2 1	4 3 2 1
5. Obtaining medication	4 3 2 1	4 3 2 1
6. Obtaining testing	4 3 2 1	4 3 2 1
7. Referral to specialist	4 3 2 1	4 3 2 1

Y**our comments regarding the following are highly appreciated:**

The UHC services have helped me improve my healthy life style by:

By meeting my health needs, the UHC has impacted my decision to continue my educational goals in the following ways:

I have experienced barriers to gaining access to the UHC services in the following ways:

Please provide the following demographic information about yourself:

Gender: M_____ F_____

Age: _____

Ethnicity (circle the category which best describes your ethnic origin):

1. Non-Hispanic White
2. Hispanic (Mexican Ancestry)
3. Other Hispanic
4. Non-Hispanic African American
5. Native American
6. Asian American
7. Other, please specify: _____

How many semesters have you attended TAMUCC: _____

How many times have you used the UHC: _____

I am an Undergraduate _____ Graduate _____ student.