

TIME TO WEIGH-IN: AN ANALYSIS OF WHAT, IF ANYTHING, U.S. PUBLIC,  
TWO-YEAR COLLEGES IN THE SACS REGION ARE DOING TO  
CURB OBESITY AMONG THEIR STUDENTS

by

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## ABSTRACT

American higher education's mission has always been to educate the "whole" student. Educating the entire student includes nurturing their academic, emotional, social, vocational, moral, spiritual, economic, and physical development to ensure they are prepared to successfully compete in a changing global society in and after college.

Each area of a college student's life is important and deserves attention; however, higher education institutions often overlook students' physical health. This is unfortunate because every student is affected by health, and a direct relationship exists between student health and academic success. Healthy students are more likely to persist in college. It is time for students' physical health to get more attention, because over 30% of college students are overweight or obese, and this statistic is expected to worsen. The prevalence of obesity and its comorbidities were found to be higher among community college students.

The purpose of the study was to review what, if anything, public, two-year colleges accredited by Southern Association of Colleges and Schools (SACS) classified as rural, suburban, and urban are doing to address obesity among their student populations. This quantitative study used *Qualtrics* to distribute an electronic 17-item survey to senior student affairs administrators at 289 U.S. public community colleges in the SACS region classified as rural, suburban, and urban. Descriptive statistics were used to organize, analyze, and interpret survey data.

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This dissertation is first dedicated to my Lord and Savior, Jesus Christ, who encouraged me throughout this arduous process. You picked me up when I got knocked down and carried me when I could not stand on my own. I am thankful you heard and understood all of my spoken and liquid prayers (tears) and strengthened me for this unforgettable journey. I am nothing without you. I love you.

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CHAPTER I:  
INTRODUCTION

Educating the “whole” student, or student well-being, has been a longstanding focus of American higher education (Palmer & Zajonc, 2010). Doyle (2004) stated that developing the whole college student includes developing students emotionally, physically, socially, vocationally, morally, spiritually, and economically. Student well-being was once the responsibility of all college personnel; academic and student affairs were tightly interwoven. *In loco parentis*, which means college personnel cared for students as if they were their own children, was still in effect (Caple, 1996; Doyle, 2004; Rodgers, 2009).

The close relationship faculty and students shared began fading when American postsecondary faculty began adopting the European philosophy that faculty were responsible for academic achievement and student behavior inside the classroom only (American Council on Education [ACE], 1937; National Association of Student Personnel Association [NASPA], 1987). Subsequently, American faculties’ attention to student well-being outside the classroom and laboratories fizzled. Student well-being garnered even less attention when faculty members were expected to contribute to scientific research. Doyle (2004) noted that college presidents had to hire additional personnel, excluding faculty, to handle student concerns and discipline outside classrooms and laboratories. The new-hires were referred to as student personnel officers (Caple, 1996). This was the beginning of the student affairs “movement.” Enacted federal legislation and a growing diversified student body further increased the need to hire additional student personnel.

The need for student support services increased to meet the demands of a diversified student body. Therefore, the public needed to be aware of student affairs' mission. The *1937 Student Personnel Point of View (SPPV)* and its 1949 revision assisted with marketing student affairs. In part, the *SPPVs* informed the public that student affairs is the postsecondary administrative arm that educates students up to, but excluding, the classroom (ACE, 1949). Jackson and Weinstein (1997) noted that college students spend approximately two-thirds of their time outside classrooms and laboratories. The *SPPVs* made it clear that student affairs has the same mission as higher education--to educate the whole student (ACE, 1937, 1949).

Palmer and Zajonc (2010) stated that developing the whole student ensures students are well-rounded and prepared to enter a competitive global work force. Doyle (2004) acknowledged physically developing students is one part of educating the whole student. Physical development warrants more attention, because the U. S. "has the highest prevalence of obesity among developed nations" (Hodge, Garcia, & Shah, 2008, p. 2). Nearly two-thirds of Americans are either overweight or obese (Levi, Segal, St. Laurent, & Kohn, 2011). Obesity can cause hypertension, cardiovascular disease, Type 2 diabetes, cancer, stroke, depression, and the list continues (Hoffman, Policastro, Quick, & Lee, 2006; McMahan, Hampl, & Chikamoto, 2003; Struble, Lindley, Montgomery, Hardin, & Burcin, 2010). Seipel (2005) informed readers that obesity is associated with 300,000 deaths each year. Obesity is the second highest single cause of preventable death among Americans (Levi, Chan, & Pence, 2006). These current obesity statistics are predicted to worsen (Desai, Miller, Staples, & Bravender, 2008). The Centers for Disease Control (CDC) found that obesity and its comorbidities are more prevalent in the Southern U.S. region (CDC, 2012a).

Health issues found in the general adult society tend to be the same health issues college students face (Prescott, 2011). Prescott (2011) also noted that obesity is “common” among college students (p. 468). Over 30% of college students are overweight or obese (Freedman, 2010). Student health, particularly obesity, should be a concern to higher education personnel for three leading reasons. The first reason is that health affects all college students (Dunkle & Presley, 2009). Student health and academic success are directly connected (Fullerton, 2011). Unhealthy students are more likely to drop out of college. Student retention is a necessary revenue stream for institutions, but it is the students who “have the greatest to gain from the common goal of retention” (Richmond, 1986, p. 65). “Once students drop out of college, they may decide never to return, and their life opportunities may forever be constrained” (Braxton, Hirschy, & McClendon, 2004, p. xi). Almost half of first-year two-year college students drop out compared to approximately 25% of first-year students at four-year institutions (Braxton et al., 2004). Second, depression (Levi et al., 2011) and low self-esteem (Hoffman et al., 2006) are often attached to obesity. A student’s mental state affects academic performance (Downs & Ashton, 2011). The third leading reason higher education institutions should be concerned about college student obesity is because college may be the last opportunity for students to improve their physical health (Floyd, 2003). College is a pivotal time for students to adopt positive health behaviors.

Student affairs professionals are likely the ones who will champion the battle against the bulge on American college campuses (Jackson & Weinstein, 1997). Therefore, a review of student affairs’ history will be detailed to better understand its role. Leading health issues in the general adult U.S. and college populations that are causing disease, disability, and death will be discussed as well. Obesity will be the centerpiece of discussion. More specifically, how, if at

all, public U.S. SACS-accredited two-year colleges address obesity among their student populations is the focal point of this research.

Discussing health issues, especially weight, is very sensitive, and this research treated it as such. However, because a subject is delicate does not mean it should not be addressed. The motive that steered this research was to increase awareness of the prevalence of obesity among college students who attend public, two-year SACS-accredited colleges. Possible interventions were brainstormed in a “nonjudgmental and professional” manner (Sparling, 2007).

### **Purpose of the Study**

Mental and physical health affects all students (Dunkle & Presley, 2009). Nichols (1973) and Sandeen (2004) remarked there is a direct relationship between college student health and academic success. Keeling and Heitzmann (2003) noted there is an “undeniable value of health to learning” (p. 56). Healthy students are more apt to learn information conveyed to them (Floyd, 2003).

Four-year college and university students attract more health research attention (Quintiliani, De Jesus, & Wallington, 2011), but community colleges are more likely to observe a broader range of health concerns among their students because of their open admissions policy. A national 1995 CDC survey, the National College Health Risk Behavior Survey (NCHRBS), reported that two-year college students were more likely than four-year students to engage in risky health behaviors (CDC, 1997; Floyd, 2003). Quintiliani et al. (2011) cited national research that also found obesity’s prevalence to be higher among community college students than among four-year college students.

In addition, two-year colleges enroll more nontraditional students than senior institutions. Nontraditional students are more susceptible to physical and mental stress because of family and

career responsibilities (Prescott, 2011). Observations revealed that community college students are “less likely to receive important health information,” in comparison to their peers at senior institutions (Boyd & Braun, 2007, p. 2). Boyd and Braun also indicated that “community colleges are important venues for health promotion programs” (p. 2).

Prescott (2007) remarked that college student obesity is normal. Freedman (2010) stated that over 30% of college students are overweight or obese. Obesity and its comorbidities such as hypertension, Type 2 diabetes, stroke, and cardiovascular disease are more prevalent in the Southern U.S. (CDC, 2012a). This study reviewed what, if anything, public, two-year SACS-accredited colleges classified as rural, suburban, and urban are doing to address obesity among their student populations. Descriptive statistics were used to analyze data. Collected data brought awareness, added to scarce empirical literature, and sparked ideas for interventions.

### **Research Questions**

The research attempted to answer the following questions:

1. What, if anything, are public, two-year colleges in the SACS region doing to address obesity among their students?
2. What percentage of two-year institutions has conducted a comprehensive assessment/study of their students’ physical health in the past five years?
3. If two-year colleges are not addressing obesity, why not?
4. Are there any institutional publications or policies (i.e., college mission statement, strategic plan, college catalog, student handbook, etc.) that exist, or are slated to be developed, that address students’ physical health, particularly obesity?

## **Significance of the Study**

There is a direct relationship between student health and academic success. However, there is little information on community college students' health. This is unfortunate because community colleges are a vital sector of higher education. Two-year colleges educate almost one-half of all undergraduate students (Floyd, 2003). Twenty-five percent of all four-year college graduates attended a two-year college at some point (Kirkwood & Riegelman, 2011). Community colleges enroll more credit and noncredit students than any other educational sector and are considered the most diverse educational sector.

The researcher believes the benefits of the study are larger than the study itself and will outlive the study's finite boundaries. Research that provides additional information about community college student health contributes to scarce, but ongoing, empirical literature. The former president of the Association for the Study of Higher Education, Patrick Terenzini, stated, "The lack of good empirical research on community colleges is one of the three great holes in the higher education research literature" (Katsinas, 2003, p. 17). The study gave two-year colleges a distinct voice in empirical literature. The study's findings also heightened awareness about obesity among community college students and contributed to or created a repository of strategic interventions that can be used on a micro or macro level statewide, nationwide, and abroad.

## **Operational Definitions of Terms**

*Body Mass Index (BMI):* The BMI is often used to determine whether a person is overweight or obese. A BMI of 25-29 indicates a person is overweight. A BMI of 30 or higher indicates the person is obese. To manually calculate BMI, divide body weight in kilograms by height in meters squared ( $\text{kg}/\text{m}^2$ ) (Racette, Deusinger, Strube, Highstein, & Deusinger, 2005), or

simply Google *BMI calculator* and enter the height and weight for BMI to be electronically calculated.

*Community college:* A community college is “any institution regionally accredited to award the associate in arts or the associate in science as its highest degree” (Cohen & Brawer, 2003, p. 5). A higher education institution is also considered to be a community college if less than 10% of total undergraduate degrees awarded are bachelor’s degrees (Carnegie Foundation, n.d.). The terms *community college* and *two-year college* will be used interchangeably in this study.

*Health:* The World Health Organization (WHO) defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity” (Jackson & Weinstein, 1997, p. 238).

*Integrated Postsecondary Education Data System (IPEDS):* IPEDS is an annual collection of survey data pertaining to U.S. higher education institutions. The data are collected by the U.S. Department of Education (Toutkoushian, 2001).

*Minority:* U. S. residents whose ancestry is Asian, African American or Black, Hispanic/Latino, Native Hawaiian/other Pacific Islander, or American Indian/Alaskan Native (U.S. Department of Education, 2007).

*Overweight/Obesity:* WHO defines overweight and obesity as “abnormal or excessive fat accumulation that presents a risk to health” (WHO, 2011, p. 1). The terms *overweight* and *obesity* will be used to describe a person with a BMI equal to or greater than 25.

*Rural-serving institution:* Community colleges located in either Metropolitan Statistical Areas (MSAs) or Primary Metropolitan Statistical Areas (PMSAs) with fewer than 500,000 people (based on 2000 U.S. Census), or community colleges that are classified as rural but are

not located in MSAs or PMSAs (Carnegie Foundation, n.d.). Classification data are from 2008-2010.

*Southern Association of Colleges and Schools (SACS):* SACS is the accreditor for degree-granting colleges and universities in the Southern U.S. region. Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia are within in the SACS region (SACS, 2012). The SACS also offers international accreditation. This research will only include public U.S. two-year colleges in the SACS region.

*Suburban-serving institution:* Community college located within Metropolitan Statistical Areas (MSAs) with a population over 500,000, based on the 2000 U.S. Census (Carnegie Foundation, n.d.). Classification data are from 2008-2010.

*Urban-serving institution:* Community colleges located within Primary Metropolitan Statistical Areas (PMSAs) with a population over 500,000, based on the 2000 U.S. Census (Carnegie Foundation, n.d.). Classification data are from 2008-2010.

*Wellness:* Wellness has been defined as “an integrated method of functioning that is oriented toward maximizing the potential of which the individual is capable within the functioning environment” (Sivik, Butts, & Moore, 1992, p. 136).

### **Assumptions**

Following are the assumptions utilized for this study:

1. IPEDS was the best data source to use to identify the institutional population for the study.
2. IPEDS data were accurate and complete.
3. Descriptive statistics was the best method to use.
4. The survey instrument was honestly completed.

5. The SACS membership directory was accurate and complete.
6. Institutions' websites were up-to-date.

### **Limitations**

The study was conducted recognizing the following possible limitations:

1. IPEDS may have been inaccurate or incomplete.
2. The survey may not have been honestly completed.
3. The SACS membership directory may have been inaccurate or incomplete.
4. Institutions' websites may not have been up-to-date.

### **Delimitations**

The following delimitations framed the study:

1. Only public, two-year colleges were included.
2. Only institutions accredited by SACS were included.
3. Only institutions in the U.S. were included.

### **Researcher Positionality**

The researcher is currently a Higher Education Administration doctoral student in the Department of Educational Leadership, Policy, and Technology Studies at The University of Alabama (UA). The foundation for this research study was "born" when the researcher combined her interests in health and wellness, specifically the obesity epidemic, and community colleges, and wrote a research paper titled *I Came to Gain an Education, not Weight!* in her History of American Higher Education class in Fall 2007. The researcher's background is filled with athletics and other health and wellness experiences. The researcher has been affiliated with and/or professionally worked in a higher education setting for almost 20 years. A majority of her doctoral research and professional work experience have involved community colleges. The

researcher is disclosing her background, subject familiarity, and passion for the research study to inform readers that there was potential for her to be biased.

### **Organization of the Study**

This study is organized into five chapters. Chapter I provided the purpose and significance of the study, the research questions, definitions of related terms, assumptions, limitations, and delimitations of the study and researcher positionality. Chapter II is a review of relevant literature related to this study. Chapter III explains how the research will be conducted and the research method that will be used. Chapter IV presents the data. Chapter V includes research findings, conclusions, and recommendations for further research.

CHAPTER II:  
LITERATURE REVIEW

**Introduction**

Student well-being has been overtly woven into higher education's institutional landscape. At one point, academic affairs was responsible for student well-being, or educating the whole student, but that responsibility was later shifted into student affairs' hands. A review of student affairs' history is relevant to understand how and why the responsibilities were shifted. Common theoretical underpinnings to justify these responsibilities will be discussed. Health is one component of student well-being. A broad review of health issues plaguing the U.S. at-large and, specifically, the Southern U.S. region is necessary to introduce and understand the connection between our nation's overall health and college student health. College students' physical well-being will monopolize this academic discussion. In addition, how institutions address health concerns among their students will be analyzed. Concentrated attention on how community college students are physically affected by obesity and how obesity may adversely affect their academic success will be discussed as well.

**Student Well-being as a Function of American Higher Education**

In Fall 2011, nearly 20 million college students from various backgrounds enrolled in our nation's public and private colleges and universities to pursue a college degree, acquire personal enrichment, and/or enhance their workforce development skills in an assortment of majors and fields as equally diverse as the student population (U.S. Department of Education, n.d.). More

than half (60%) of the college student population was female and 25% were persons from ethnic descent (U.S. Department of Education, n.d.). This is a drastic turn from higher education's homogenous beginnings as institutions that exclusively trained Caucasian males primarily for ministerial careers (Caple, 1996; National Association of Student Personnel Association [NASPA], 1987; Rudolph, 1990).

Student well-being has been a common theme since higher education's founding (Prescott, 2011). Personnel felt responsible for students' well-being and health; therefore, institutions set parameters such as close supervision of students to protect them and their health. College personnel were encouraged to treat students as their own children (Prescott, 2011). This viewpoint was parallel with higher education's purpose. Higher education's original mission was to educate the whole person by focusing on "the development of the student as a person rather than upon his intellectual training alone" (ACE, 1937, p. 2). Doyle (2004) defined educating the "whole student" as "including not only intellectual ability and achievement, but also emotional make-up, physical condition, social relationships, vocational aptitudes and skills, moral and religious values, economic resources, and aesthetic appreciations" (p. 68). Stakeholders expect modern higher education institutions to wholly educate students because as institutional budgets have decreased, tuition rates have increased, and accountability standards have strengthened (Barham & Scott, 2006). More importantly, students should be prepared to interact and succeed in a pluralistic society (Palmer & Zajonc, 2010).

Consequently, student affairs' primary goal is identical to the overall mission of higher education (ACE, 1937, 1949; Braskamp, 2011; Dungy, 2009; Magolda, 2009; Sandeen, 2004; Webb, Widseth, & John, 1997). Student affairs is one of higher education's pillars (NASPA, 1987) and is comprised of dedicated professionals who have "always stressed the 'whole

student' perspective in their work" (Braskamp, 2011, p. 1). A holistic postsecondary education includes promoting optimal physical health (Komives & Woodard, 2003). Palmer and Zajonc (2010) considered a holistic education to be transformational.

The field of student affairs has grown, and its influence has heightened on American college campuses since its century-old origin (Cuyjet, Longwell-Grace, & Molina, 2009; Rodgers, 2009; Sandeen, 2004). To fully understand the present status of student affairs, one must be aware of its historical roots, including its evolution and role in educating the whole college student. A thorough overview of its history is warranted because "student affairs has not fully utilized its history in general, and has been particularly remiss in documenting, understanding, and reflecting upon that which predates the Student Personnel Movement" (Gerda, 2006, p. 148).

### **The Evolution of Student Well-being as a Function of American Higher Education**

Student well-being and health have long been a part of higher education (Prescott, 2011). The entire college was once responsible for student well-being and health, but that responsibility was transferred to student affairs professionals. Past and present professors viewed student health as unimportant (Doyle, 2004). The student health function has not always been formalized (Prescott, 2011). The American Student Health Association was developed in 1920 because many colleges and universities began offering health services (Komives & Woodard, 2003).

### **Well-being as a Concern from the Beginning**

Student well-being has been incorporated into the college experience as early as the 17th century (Prescott, 2011), when students' physical health fell under the well-being "umbrella." Prescott (2011) stated that organized health programs were not common during the 17th century.

Doyle (2004) asserted that academic and student affairs were seamlessly integrated during the colonial period and early nation times of American higher education; professors, staff, tutors, and college presidents worked harmoniously to meet students' needs inside and outside the classroom. The entire college was once responsible for student well-being and health. A common best practice was for students to live with faculty, staff, and tutors or for faculty and staff to live on or near campus to mentor students (Doyle, 2004; Rodgers, 2009; Webb et al., 1997). There was no separation of academics and student care. Faculty members welcomed the responsibility to holistically educate and develop students both inside and outside the classroom (Doyle, 2004; NASPA, 1987). During this time period, faculty were concerned about the personal welfare of individual students (ACE, 1937; NASPA, 1987). "As much attention to the social, moral, and religious development of students as to their intellectual growth" was granted (ACE, 1949, p. 2). Moral development was a pressing developmental priority for faculty, because a majority of college students were being trained to be ministers (Caple, 1996; Gerda, 2006), and most, if not all, faculty members were ministers themselves (Webb et al., 1997). It was easy for faculty to get to know and develop relationships with students because students spent most of their time on campus in the classroom, library, residence hall, or dining hall (Komives & Woodard, 2003). The close relationships with students allowed personnel to monitor and influence students' well-being and physical health (Prescott, 2011). Faculty and staff supervised and disciplined students in their parents' absence. College personnel were acting "in the place of parents" or *in loco parentis*, as the phrase was coined (Caple, 1996; Doyle, 2004; Rodgers, 2009). The responsibility was not a burden or undue hardship for faculty and staff because higher education institutions were less complicated and enrolled only a few students (Caple, 1996). In fact, institutions were managed and operated by a maximum of three

people. This single-faceted paradigm spanned from the 18th century to the mid-19th century (Doyle, 2004; NASPA, 1987). When students demanded more independence, a majority of male institutions then “reduced or abandoned parietal rules for students” (Prescott, 2011, p. 464). Student well-being and health then became more important to college personnel, as irresponsible sexual behavior, drunkenness, and smoking were compromising student health (Prescott, 2011). Furthermore, health epidemics such as influenza claimed students’ lives (Christmas, 2011).

### **Changing Responsibility for Student Well-being**

Inextricably intertwined forces after the Civil War propelled student affairs’ emergence on American college and university campuses (Gerda, 2006; NASPA, 1987). The forces were a changing American professoriate, enacted government legislation, and an expanding college student population (NASPA, 1987; Wolf-Wendel, Twombly, Tuttle, Ward, & Gaston-Gayles, 2004). These dynamics complicated postsecondary institutions and enlarged and diversified student populations. Overall, all American postsecondary institutions were affected by these social changes, but Ivy League institutions were first and most affected (NASPA, 1987).

Student health and well-being continued to be a concern on college campuses during these times of social transition. Some institutions created health promotion departments that offered physical education activities to male students. The purposes of the physical education activities were to develop their bodies and distract them from risky health behaviors such as smoking and drinking (Prescott, 2011).

### **Adaptation of the German Model to American Practice**

A changing professoriate prompted student affairs’ emergence. The latter part of the 19th century introduced an important educational shift in U.S. colleges and universities. The German postsecondary education model penetrated and modified American faculty members’ role

perceptions, the educational focus of colleges and universities, and student relationships with both faculty and administrators (ACE, 1937; Doyle, 2004; Gerda, 2006). The shift was caused by a majority of American faculty members receiving their graduate educations in Germany (ACE, 1937; NASPA, 1987). Strangely, this laid the foundation for a unique mode of educating the whole student in U.S. colleges and universities. The German higher education model neglected learning outside the classroom; therefore, learning external to the classroom was neglected in American faculty members' studies (ACE, 1937; NASPA, 1987). Doyle (2004) concurred by stating, "Faculty became more invested in their research and scholarly work and less interested in investing in their students' learning" (p. 67). In other words, moral development or how students behaved outside the classroom became less of a concern to faculty members; developing intellectualism inside the confines of the classroom or laboratory garnered their primary focus (ACE, 1937; Caple, 1996; Doyle, 2004). Faculty were no longer interested in students' well-being or health. Some faculty publicly criticized health education and promotion (Prescott, 2011). A second matter was that the German postsecondary education sector was scientifically based (NASPA, 1987), and American faculty members were expected to contribute more to scientific literature (ACE, 1937). Faculties' growing attention to scientific research exacerbated their inattention to students outside the classroom (ACE, 1937; NASPA, 1987). Meanwhile, the clergy's influence and control in higher education, particularly in the classroom, significantly declined (Caple, 1996).

There was an expanding gap separating the once cohesive bond faculty and students shared (ACE, 1937). Komives and Woodard (2003) noted that signs of faculty's estranged relationships with students included "diminished interest in residence halls, the decline in compulsory chapel, and the reduced involvement of faculty in student discipline" (p. 68).

Students were expected to be responsible for self-regulating their behavior. Faculties' ideological shifts created a domino effect in assigned responsibilities, forcing college presidents to hire personnel other than faculty to be solely responsible for student discipline and to ensure the "whole student" philosophy was not disrupted (ACE, 1937; Doyle, 2004). Harvard Corporation, now Harvard University, took a futuristic step when its president, Charles Eliot, formally hired Ephraim Gurney in 1870 to be dean of its undergraduate college (Caple, 1996; Gerda, 2006; Sandeen, 2004). Gurney was not recognized as a "student affairs officer," but he definitely operated as the first person in that capacity (Caple, 1996; Gerda, 2006). Persons hired in these administrative roles were commonly referred to as Deans of Men and Deans of Women (Gerda, 2006). There were no questions about *if* students should learn morally and socially acceptable behavior--what had shifted was *whose* responsibility it was to facilitate this kind of learning (Doyle, 2004).

### **The Role of Federal Legislation**

Federal legislation was the second impetus that contributed to a uniquely American mode of educating the whole student was (NASPA, 1987). Federal legislation was instrumental in broadening college curriculum, services, and programs and increasing college enrollment and student diversity (NASPA, 1987). Nichols (1973) posited that a heterogeneous student body may broaden student health issues. Student well-being became a priority to college and university presidents again when the first Morrill Act was passed in 1862. The Morrill Act of 1862 was the brainchild of Senator Justin Smith Morrill, a Republican from Strafford, Vermont (Rudolph, 1990). According to Rudolph, it "provided for the support in every state of at least one college" to teach agriculture and mechanical arts related subjects (p. 252). The Morrill Act prompted higher education's initial phase of student diversity (Aronson & Webster, 2007; Caple,

1996; Gerda, 2006). “More than 600 colleges and universities were founded and college enrollment sharply rose from approximately 40,000 to over 400,000 students” (Caple, 1996, p. 194) within 5 decades after the Morrill Act’s passage. The enrollment surge initiated a housing shortage on and near college and university campuses (Komives & Woodard, 2003). In 1890, together higher education and student affairs turned another strategic corner when the second Morrill Act founded Historically Black Colleges and Universities (HBCUs), which further diversified higher education by affording more minorities the opportunity to earn a postsecondary education (ACE, 1937; Rudolph, 1990). The Legislation mandated “no appropriations would go to states that denied admission to the colleges on the basis of race unless they also set up separate but equal facilities” for minorities and non-minorities at these land-grant colleges (Rudolph, 1990, p. 254). At the time of the second Morrill Act, Blacks were unable to attend a majority of existing colleges and universities. More than 50 years after the passage of the second Morrill Act, the Serviceman’s Readjustment Act of 1944 (also known as the G.I. Bill) was enacted. The G.I. Bill afforded scores of returning World War II veterans the opportunity to enroll in college (Caple, 1996; Floyd, 2003). The student diversity spawned by the return of World War II veterans “prompted the specialization of student affairs” (Doyle, 2004, p. 68).

### **Diversification of the Student Population**

The third factor that strengthened the ideal of educating the whole student post-World War II was a growing and diversified student body (NASPA, 1987). More African Americans, women, veterans, nontraditional students, and students from various socioeconomic backgrounds were attending college (NASPA, 1987). Higher education’s ivory towers were speedily crumbling and falling (Caple, 1996).

The growing pluralistic student body, with assistance from embryonic psychological developments, revealed to college and university personnel that each student was different, and the prescribed cookie-cutter curriculum needed to be broadened to cater to a more diverse population (Komives & Woodard, 2003). Student advising was subsequently integrated into the education process to better assist students.

In addition, student interest in extracurricular offerings arose and changed (Doyle, 2004). Therefore, extracurricular activities had to be expanded to appeal to a heterogeneous student body (Caple, 1996; Doyle, 2004; Dungy, 2009; Gerda, 2006; NASPA, 1987). Earlier extracurricular activities tied into the academic and religious frameworks and included literary societies and debate clubs (Komives & Woodard, 2003; Rudolph, 1990). Students had been programmed that life and college were all work and no play; they began wanting more than intellectualism and religiosity (Rudolph, 1990). Unorganized athletics were later incorporated as a means of relaxation for students (Komives & Woodard, 2003) and for physical fitness (Prescott, 2011). Fraternities and sororities were then introduced to university and college campuses by undergraduate students to fill a social void (Rudolph, 1990). Although fraternities and sororities were viewed as incongruent to intellectualism and religion, members were provided housing (Komives & Woodard, 2003). Fraternities provided a closer bond between students. “Everywhere, the literary societies declined in the decades after the introduction of fraternities” (Rudolph, 1990, p. 145). Another reason literary societies declined is because their responsibilities were transferred to the colleges. The German university model again influenced the American postsecondary sector by introducing the gymnasium which provided other ways for students to become healthy and physically fit (Komives & Woodard, 2003). Initially, students built the gymnasiums themselves or raised the funds, but as athletics became organized

and more competitive, state legislatures increased their appropriations to support them (Rudolph, 1990). Expanded athletics and the addition of physicians to the faculty emphasized student health (Komives & Woodard, 2003).

Doyle (2004) postulated that student affairs had become even more specialized during the student population growth. As such, the need for student affairs intensified on American postsecondary campuses.

### **Institutionalizing Well-being in the Function of Student Affairs**

#### **A New Profession**

The exploding student population prompted college and university presidents to hire additional “educational officers,” also referred to as Deans of Men and Deans of Women, to facilitate student discipline and learning outside classrooms and laboratories and to serve as student supervisors and advocates (ACE, 1937; Doyle, 2004; Gerda, 2006; NASPA, 1987). Their roles varied depending on the institution (Komives & Woodard, 2003). The scope of their work was commonly called “student personnel work” (ACE, 1937, p. 3). The Deans of Women were instrumental in professionalizing student personnel and are considered “the first professional ancestors of student affairs” (Gerda, 2006, p. 151). Hiring additional student personnel workers was also an attempt by institutions to maintain personal relationships with students because certain aspects of the American postsecondary education experience had become dehumanized (ACE, 1949; Doyle, 2004). In addition, according to Gerda (2006), the student personnel workers helped students balance their academic and social lives. Higher education institutions became progressively more complicated, and educational officers’ roles broadened to include other student support services such as student health, career counseling, and financial aid assistance (ACE, 1937). Student affairs continued to become increasingly more

specialized. The elevated specialization relinquished learning outside classrooms and laboratories to student affairs professionals alone (Doyle, 2004). Komives and Woodard (2003) pointed out that it was during this time of heightened specialization that student personnel's functional name began evolving to either student affairs or student development. Today the functional area may be referred to as student personnel, student services, student affairs, or student development (Barham & Scott, 2006; Cuyjet et al., 2009; Dungy, 2009; Waple, 2006). The profession's name has changed and evolved; however, student affairs has not strayed away from its mission of educating the whole student (Komives & Woodard, 2003).

### **The 1937 and 1949 Student Personnel Points of View (SPPVs)**

Student affairs' quick emergence and increasing importance warranted educating the public about its goals and mission. Stakeholders needed to know and understand student affairs' role in higher education (NASPA, 1987). As a result, the *SPPVs* of 1937 and 1949 both supported student affairs and explained its role in higher education (ACE, 1949). Both publications clearly acknowledged the importance of student well-being and physical health.

The unprecedented 1937 ACE publication that penned student affairs' inaugural formal mission statement emanated from an ACE-sponsored invitational conference (ACE, 1937; Barham & Scott, 2006; Caple, 1996; Doyle, 2004; Gerda, 2006; Rodgers, 2009). The *SPPV* of 1937 is considered the "springboard for the profession of student affairs" (Barham & Scott, 2006, p. 210). The seminal document clearly defined student affairs practitioners' responsibilities to higher education stakeholders and reiterated its mission to educate the whole student. Thus, the *SPPV* framework outlined 23 student personnel services colleges and universities must offer to students, in some form, based on institutional mission, culture, and student demographics to be effective and to educate the whole student (ACE, 1937; Caple, 1996;

Doyle, 2004; Sandeen, 2004). Student well-being and physical health are considered in the 1937 *SPPV*. One of the 23 services emphasized that postsecondary institutions should be “determining the physical and mental health status of the student, providing appropriate remedial health measures, supervising the health of students, and controlling environmental health factors” in order to educate the entire student (ACE, 1937, p. 4). The *SPPV* of 1937 recommended that students’ physical and mental health information be included in their student file. It was also recommended that student files be centrally located in the admissions office for college personnel to access.

Additionally, the blue-ribbon document emphasized *in loco parentis*, the concept that faculty and staff were responsible for college and university students’ well-being while they were enrolled in college. The 1937 *SPPV* conveyed the message that students were the entire college’s responsibility (ACE, 1937; Caple, 1996; Doyle, 2004; Rodgers, 2009). Thus, the *SPPV* publication fanned the smoldering flames of collaboration between student affairs, faculty, administrators, and students to foster and nurture student development (Doyle, 2004).

In 1949, ACE revised the *SPPV* to reflect the evolving role of student affairs. The 1949 revision reiterated central points made in the previous *SPPV*, such as developing the whole student. Student well-being and physical development were again underscored. The latter *SPPV* published that students should acquire the skills while in college to maintain their physical health. The document emphasized that health education and promotion are essential to optimally developing the whole student.

It is not enough to conceive of a health service as an agency only for the treatment of illness in order to keep the student operating in the classroom at regular maximum efficiency. To be broadly effective, the health program should also aggressively promote a program of health education designed to equip each student with self-understanding and self-acceptance at his optimum personal level of physical competence. The adjustment of

the individual to his physical potentialities as well as to his irremediable limitations is a basic element in his full development of personality. (ACE, 1949, p. 5)

The revised *SPPV* also emphasized student affairs' increased specialization and shifted student affairs' stance on *in loco parentis* (Doyle, 2004). The profession no longer believed it was the entire college's responsibility to educate the whole student. The return of World War II veterans and their unique educational needs contributed to this ideology. Student affairs' changed *in loco parentis* stance was perceived as widening the collaboration gap between student and academic affairs. The latter *SPPV* was openly criticized.

### **The Current Organization of the Student Affairs Functional Area**

Student affairs is a determining factor in the success of the overall institution (Kuk & Banning, 2009). "From the beginning, 'student affairs' was charged with the growing responsibility for life on the campus, up to but not including the classroom" (Caple, 1996, p. 195). Simply put, essentially all non-academic services rendered to students are provided by student affairs professionals (Hirt, Kirk, McGuire, Mount, & Nelson-Hensley, 2003). These professionals assist students as they develop and mature.

The evolution and complexity of student affairs has necessitated the evolution of past organizational models to adapt to modern times. Historically, the student affairs unit has reported to the chancellor, president, or provost. Kuk and Banning (2009) stated there is no "standard-sized" student affairs organizational structure. It is understood, however, that the organizational structure should complement the institutional mission and student needs. Student affairs is typically organized into functions and based on institutional characteristics, laws, and institutional leadership (Kuk, 2009). Some examples of these functional units are "enrollment management, financial aid, housing, counseling, student health, judicial programs, career services, recreational sports, and student activities," to name a few (Sandeen, 2004, p. 30).

Sandeen further elaborated that student affairs had even enlarged its offerings to include child care and transportation. Each functional unit ties into the mission of the college. The student health functional unit, for instance, promotes student success when health problems are prevented, diagnosed, or treated (ACE, 1949). Outside-the-classroom services, programs, and activities provided by student affairs practitioners are important because institutions that effectively respond to students' needs build meaningful relationships with them, foster student loyalty, and advance higher education's and student affairs' mission to educate the whole student (Braskamp, 2011; Doyle, 2004; Dungy, 2009; Magolda, 2009; Rissmeyer, 2010; Sandeen, 2004; Webb et al., 1997). In addition, these non-academic offerings are vital because college students spend more time outside the classroom than inside (ACE, 1937). Jackson and Weinstein (1997) approximated that students spent two-thirds of their time outside of class, during which "much learning takes place" (p. 239). Therefore, student affairs professionals deny claims that they only "provide services" (Sandeen, 2004, p. 30). They view themselves, based on Sandeen's writings, as significant contributors to the academic or learning process.

### **Status of Theory in Student Affairs Practice**

Higher education and student affairs' goal is to educate the whole student (ACE, 1937; 1949; NASPA, 1987). Educating the whole student includes developing students "physically, socially, emotionally and spiritually, as well as intellectually" (ACE, 1949, p. 2). But surprisingly, "higher education in general and student affairs in particular lack a holistic, theoretical perspective to promote the learning and development of the whole student" (Magolda, 2009, p. 621).

There are simply not many theories to explain or help understand the premise of developing the whole student (Magolda, 2009). Theorists have traditionally focused on separate

and different theories to explain the whole student philosophy. Magolda (2009) also noted that developing a comprehensive theoretical framework to help explain the whole student philosophy should focus on commonalities of theories not individual theories, while also asserting that it is an unrealistic objective to have a single holistic developmental theory, and it is professionally frowned upon to expect such.

### **Theoretical Underpinnings of Educating the Whole Student**

“Theories provide a framework for understanding and maximizing student development” (Heiberger & Harper, 2008, p. 22). Student affairs began interweaving scientific philosophies into the educational process to customize student learning as the profession matured (Cagle, 1996). Higher education as a whole had been “innocent of psychology” (Rudolph, 1990, p. 140). Psychology was incorporated to assist with steering students educationally and professionally. Various strands of psychology were also utilized to help with and bring awareness of abnormal behavioral issues among students. Psychology was also the theoretical underpinning for the development of fair standardized tests in higher education. Psychological frameworks, in substantiating individual differences among students, further affirmed the need for tailored services and programs (ACE, 1949). Additionally, psychiatric advancements attempted to understand and explain atypical student behavior. In 1910, a psychiatrist named Dr. Steward Paton established the first mental health service at Princeton University, because mental health problems forced some of Princeton’s capable students to withdraw (Prescott, 2011). These scientific incorporations assisted with understanding and customizing student learning outside classrooms and laboratories.

## **The Student Development Approach**

Student development has been defined as educating the “whole student” or developing a “liberally educated person,” and it has been stated that student development “has been and must remain one of the primary goals of higher education” (Caple, 1996, p. 200). Student development has also been defined as “the application of human development concepts in postsecondary settings so that everyone involved can master increasingly complex developmental tasks, achieve self-direction, and become interdependent” (Doyle, 2004, p. 70). However, King (2005) acknowledged that student development’s complexity has enabled it to have several meanings. Essentially, student development ties together “the body of research and theories on late-adolescent and life-span adult development, as a means for developing academic programs as well as social programs and experiences to facilitate learning and development” (LaVine, 2010, p. 28). McClellan and Stringer (2009) reiterated that the purpose of the programs and experiences is to educate students physically, emotionally, intellectually, socially, and spiritually.

Student affairs professionals do not typically create formal theories but will, in fact, interpret, use, and heavily rely on them to fulfill student affairs’ mission of educating the whole student (McEwen, 2005). A vast majority of student affairs’ theories emanated from social sciences such as sociology (McEwen, 2005; Torres, Jones, & Renn, 2009).

After World War I, student affairs adopted student development theory as its philosophical underpinning to strengthen its “whole student” philosophy with hopes of boosting its legitimacy and validating itself as a separate but academic educational pillar within higher education (Doyle, 2004; Magolda, 2009). Student development was also adopted to enhance and customize student learning (LaVine, 2010). In addition, student affairs professionals had hoped

that specializing in student development would garner respect from faculty and that faculty would view academic and student affairs as equals (Doyle, 2004). The Committee on the Student in Higher Education released a formal statement in 1968 informing the public of student affairs' embrace of student development. In part, the statement read,

We are convinced that the knowledge of human development from the behavioral sciences now makes possible a wider vision of what the school can accomplish and of more effective ways of teaching. American higher education has not paid enough attention to human development as a part of its mission, and the time has come for this to end-in the name of better education. (Doyle, 2004, p. 70)

However, a 1976 document by Robert Brown titled *Student Development in Tomorrow's Higher Education: A Return to the Academy* reinforced student affairs' embrace of student development to the point that the monograph became student affairs' mission statement for 2 decades (Caple, 1996; Doyle, 2004). An overarching theme of the monograph was to urge student affairs practitioners to daily incorporate student development when working with students (Barham & Scott, 2006). Reputable research by theoretical heavyweights such as Chickering was utilized as foundational support for student development, but their professional embellishments were not enough to keep student development from self-destructing by exposing its faults (Doyle, 2004). A few of student development's defects included steering student affairs educators' focus away from student learning, excluding incorporation of higher education institutions' unique missions, and exacerbating the isolation of student and academic affairs (Doyle, 2004). Student development theory eventually succumbed to its drawbacks and ceased being student affairs' primary and dominant philosophical framework in the 1980s. As such, student development was short-lived in American higher education's history (Strange, 2005).

The student development philosophy had its chorus of critics during its abbreviated lifespan (Strange, 2005); they applauded its discontinuation (Caple, 1996). Bloland, Stamatkos,

and Rogers (1994), for instance, authors of a monograph titled *Reform in Student Affairs: Critique of Students Development*, accused and sharply criticized student affairs for neglecting academic and intellectual development in its “whole” student development philosophy. The critical naysaying trio referred to the student development philosophy as a “hodgepodge of theoretical perspectives” (p. 39).

However, Bloland et al. (1994) asserted that student development had been a platinum contributor to the field of student affairs. Its most significant contribution is research on and acknowledgment of individualized student development (King, 2005). Student development’s indelible impression on the field of student affairs is still plainly visible today. Heiberger and Harper (2008) maintained that student development theories exist to assist practitioners with the development, implementation, and assessment of their daily practices. Therefore, student affairs professionals should be keenly familiar with the mixed bag of student development frameworks in academic literature, which includes typology models, maturity models, person-environment interaction models, cognitive development theories, and psychosocial theories (Komives, Longerbeam, Owen, Mainella, & Osteen, 2006; Magolda, 2009; Roberts, 2005; Strange, 2005). Student affairs professionals should know and understand human development and the various developmental stages students undergo as they “find themselves” while attending college (ACE, 1937; Rissmeyer, 2010; Strange, 2005). Student development theories will continue to be an essential tool in student affairs professionals’ toolbox (McEwen, 2005).

### **Theories of Student Involvement**

Alexander Astin’s theory of student involvement is another tool in student affairs professionals’ theoretical toolbox. It is often utilized by student affairs practitioners, academicians, and researchers to better understand student development and persistence in

college (Heiberger & Harper, 2008). The student involvement theory germinated from a 1970s longitudinal study of postsecondary dropouts and attempted to determine college environmental factors that affected retention (Astin, 1985, 1999). The study revealed that student persistence was nurtured by campus involvement (Astin, 1985). Astin (1999) defined involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 518). Astin posited that the more involved students were inside and outside the classroom, the greater the student’s development (Clark & Anderson, 2011; Chaves, 2006; Elkins, Forrester, & Noel-Elkins, 2011). Oftentimes in empirical literature, the terms “involvement” and “engagement” are interchangeable (Elkins et al., 2011). Astin (1999) identified five groups of involvement among students: “academic involvement; faculty involvement; involvement with peers; involvement in work; and involvement elsewhere” (Chaves, 2006, p. 143). Each involvement group is important. However, Astin ascertained that faculty involvement was most vital because faculty have the greatest potential to impact college students’ accomplishments (Chaves, 2006). Specifically, the two-year college segment is thirsty for more faculty involvement in comparison to four-year institutions, as dropout rates are steeper at community college than at their four-year counterparts (Astin, 1999). Chaves (2006) noted more data are needed, but the historically low faculty-student interaction in community colleges might help explain the recurring dismal retention rates. The two-year college population consists primarily of adult commuters who are juggling family and work responsibilities (Chaves, 2006). Commuter students, in general, are enrolled part-time and are less involved, less integrated, and less attached to the institution they attend (Astin, 1999). It is also common for community college faculty to teach part-time (Astin, 1999). These facts further contribute to the widening faculty-student interaction gap at community colleges.

Furthermore, Clark and Anderson (2011) and Heiberger and Harper (2008) wrote about Astin's five tenets utilized to measure college student involvement. Astin's first tenet is "Involvement requires physical and psychological energy." Students who are actively engaged inside and outside the classroom expend physical and psychological energy. The second tenet is "Involvement occurs along a continuum," which poses students use varying amounts of energy in different areas in college. Astin's next tenet posits "Involvement has both quantitative and qualitative features." This tenet denotes that student involvement is measurable. Astin's fourth tenet is "Development is proportional to quantity and quality of involvement." The time invested and involvement in an activity will determine a student's academic and personal development. The final tenet is "Educational effectiveness is related to capacity to increase involvement." Simply put, this tenet indicates that the effectiveness of institutional policies, activities, and programs is in direct relationship with their effectiveness to increase involvement.

The involvement theory underlying premise is that the more involved students are at their respective institutions, their chances of enjoying their college experience increase, and their academic development improves (Richmond, 1986). Academic development is not the only area of students' lives that improves as they get involved in college. Astin found that students' physical health improved when students participated in intramural sports (Hamrick, Evans, & Schuh, 2002). Astin also found that students' mental health improved when they exercised or participated in athletics. Astin's observation shares common ground with Chickering's first of seven vectors: *developing competence*. The vector denotes that students can develop self-confidence by being involved in athletics, for example, and improving their fitness (Chickering & Reisser, 2005).

The theory of student involvement has been embraced for several reasons. Astin (1985, 1999) posited that his involvement theory is considered to be less complex than other pedagogical theories, encompasses a longstanding understanding of theoretical memory, is multifaceted because it has drawn data from many empirical sources, and can be utilized by various postsecondary work groups. Astin's involvement theory is also different from other theories because it requires self-initiated participation from a key player in the learning process, the student (Astin, 1985, 1999). Another reason the involvement theory has been embraced is because student involvement is measurable (Astin, 1999). One downside to Astin's theory is that his research population was primarily traditional students enrolled at residential four-year colleges and universities (Chaves, 2006).

Student involvement is considered to be a key ingredient in the student success recipe (Kuh, Kinzie, & Buckley, 2007). It fosters a positive learning experience and is a sign of a robust learning environment (Astin, 1985).

### **Theories of Student Departure**

Theory of student departure is another tool in student affairs professionals' toolbox. Braxton et al. (2004) wrote extensively about the student departure theory. Their writings will be heavily utilized to discuss student departure.

Shrinking state appropriations and heightened accountability standards make it crucial for colleges and universities to retain students. College student departure has been encircled with perennial questions regarding its root causes for over 7 decades. The construct has been described as a "departure puzzle" (Braxton et al., 2004). It has had researchers, practitioners, administrators, theorists, and staff scratching their heads trying to figure it out, because high

attrition implies the institution's campus environment is inadequately promoting student success. According to the authors, nearly half of college students drop out (Braxton et al., 2004).

Many have attempted to put the puzzle pieces together. No one, though, has made longer strides than Vincent Tinto. Braxton et al. (2004) declared Tinto is considered one of the most popular academic authorities on student departure. Researchers and practitioners cite his findings in their empirical research. Tinto's student departure theory, also known as Interactionist Theory, is grounded in sociology. "Tinto views student departure as a longitudinal process that occurs because of the meanings the individual student ascribes to his or her interactions with the formal and informal dimensions of a given college or university" (Braxton et al., 2004, p. 7). He affirmed that the greater the extent of a student's academic and social integration, the stronger their commitment to the institution; thus, they are less likely to depart their educational endeavor. Social integration is defined as the comparability of the student and the institution's social system. Tinto determined social integration is significant because there is a direct relationship between social integration, students' commitment to the institution, and their motivation to graduate (Braxton et al., 2004). Tinto further claimed that incoming student characteristics such as family background and students' motivation to graduate from college influenced how much, or little, students integrated into the college culture. These incoming student characteristics are variable indicators of student persistence in college (Braxton et al., 2004).

Tinto (1975) asserted there are two types of academic integration: structural and normative. Structural integration encompasses following the implicit and explicit policies set by the postsecondary institution. Normative integration revolves around how students perceive themselves to match or relate to the campus culture.

Tinto's theory is widely accepted and respected by many, but not everyone in academia is sold on his departure theory (Kuh et al., 2007). Tinto's theory is not a one-size-fits-all approach; it has limitations (Braxton et al., 2004). His theory is delimited to voluntary departure and individual institutions rather than an entire college or university system. Another downside to Tinto's theory is that it does not sufficiently address commuter institutions. This theoretical shortcoming neglects an important higher education sector with recurring high attrition rates. Nearly 45% of first-year two-year college students depart from college in comparison to 25% of first-year students at senior institutions (Braxton et al., 2004). A probable explanation for the staggering attrition rate is that a vast majority of two-year colleges are commuter colleges comprised primarily of part-time, low-income, and first-generation students. These nontraditional students multitask college and external obligations, such as family and careers, so they spend little time on campus and even less time interacting with others on campus. These external factors can nurture emotional detachment from the institution and may contribute to student departure (Braxton et al., 2004). Ethnic populations have a greater propensity to depart from college than non-minorities.

Cohen and Brawer (2003) revealed that "black and Hispanic students are overrepresented in community colleges" (p. 407). To personalize the causes of low persistence rates among two-year institutions, more longitudinal research is needed, especially since the nontraditional student population is growing while persistence rates are declining (Bean & Metzner, 1985). Braxton et al. (2004) recommended revising Tinto's theory to be more inclusive. The authors also advocated for a student attrition theory specifically for commuter institutions.

Tinto's theoretical model is often a publicized forerunner, but there are other reputable student departure theorists worthy to be mentioned. Pascarella's causal model, for instance,

focuses on student change based upon direct and indirect effects of the institutional environment (Terenzini, 1987). Pascarella posited that the college or university's environment is molded by variables such as students' incoming characteristics, organizational characteristics, campus atmosphere, meaningful interactions on campus, and their expended effort; these factors affect how students integrate into the campus culture and if they persist (Terenzini, 1987). Bean and Metzner (1985) developed a conceptual model based on studying nontraditional students at a large urban commuter university. Unlike Tinto and Pascarella, they did not focus on integration, but rather emphasized that nontraditional students dropped out because of academic performance, intent to leave, background characteristics, and environmental factors. Bean and Metzner observed that academic performance and intent to leave were the main departure factors in their sample.

While individual student departure theories attempt to explain why students depart college, Braxton et al. (2004) asserted that "a multitheoretical approach is needed because college student departure is best characterized as an ill-structured problem" (p. 2). In other words, the attrition issue has to be combatted from different angles and perspectives to arrive at a viable solution. A single theoretical perspective is not sufficient.

Knowing dominant student population characteristics and challenges students face can help uncover student departure solutions. Two worthy examples are Amherst College and Princeton University. Personnel at these institutions observed students departing from college and probed to get more information. Turner and Hurley (2002) acknowledged that Amherst College was the first institution to offer a college health service after it was revealed that health issues caused students to drop out. Psychological problems were causing student departure at Princeton University. Princeton became the first institution to offer a mental health service.

## Theories of Student Success

Student success should be the goal of every postsecondary institution (Dunkle & Presley, 2009). It is considered one of the main elements required to enrich the college experience. Several respected authors have contributed to the student success literature. The *Higher Education Report* by Kuh et al. (2007) will be heavily utilized to discuss student success.

The importance of earning a college education should not be underestimated. Nearly 100% of all high school students intend to earn some type of postsecondary education after they graduate (Kuh et al., 2007). At least 8 out of 10 adults will need some postsecondary education to optimize their earning potential. It is widely acknowledged that adults with a college degree earn nearly \$1 million more during their time in the workforce than their counterparts who only have a high school diploma. Having some college experience will also assist students with honing social skills, such as interacting with diverse populations of people and being a team player (Kuh et al., 2007).

Colleges and universities, especially community colleges, have made earning a college degree accessible to the masses. However, college access does not equate to college success. A culture of strict accountability and transparency due, in part, to decreasing institutional funds and regional accrediting agencies' quality standards is holding colleges and universities responsible for evidencing the success of students from heterogeneous backgrounds (Kuh, 2009). With limited fiscal resources, stakeholders such as legislators want to ensure that funds allocated to higher education institutions are being utilized to promote and sustain student success on their campuses (Kuh, 2009).

What is "student success"? Schreiner (2010) claimed "there is more to a successful college experience than grades and graduation" (p. 3). The student success construct is not

easily understood. To further complicate matters, the student success construct has had multiple definitions that continue to evolve. Historically, student success's definition encompassed a combination of the mission and culture of the institution, students' goals and aspirations, institutional characteristics, retention rates, standardized test scores, college transfer rates, student satisfaction, time-to-degree, retention to the sophomore year of college, and the list continues. Recently, reputable theorists have typically defined student success as "persistence and educational attainment, or achieving the desired degree or educational credential" (Kuh et al., 2007, p. 13). The definition gets even more muddled when defining student success for two-year college students, as the student populations and missions of two- and four-year institutions are markedly different. It is understood that "student success will look different and mean different things for different types of students" (Kuh, 2011, p. 268). Multiple theoretical viewpoints should be utilized to better understand student success.

Kuh et al. (2007) acknowledged there are several variables that positively or negatively affect college students' academic success. To attempt to discuss each of these variables would be outside the scope of this writing; therefore, a few chief variables will be discussed. One primary variable that fosters student success is engagement, also referred to as involvement (Friedlander & MacDougall, 1992). Student engagement is based on the time and effort students put into their educational endeavor and how institutions utilize resources to induce participation from students from diverse backgrounds (Kuh, 2009). There is a direct relationship between engagement and persistence. Tinto postulated that the more academically and socially integrated students are on campus, the more likely they will persist and earn a college degree (Kuh et al., 2007). The importance of student engagement is supported by an annually distributed survey called the National Survey of Student Engagement (NSSE). The NSSE was developed in 1999

and is distributed to American colleges and universities to gather data on how students are engaged (Kuh, 2009). Meaningful engagement is mandatory for undergraduate students to have a rich college experience (Kuh, 2009). Another top student success variable is the level of student satisfaction with and perception of the institution. It is theorized that the more satisfied students are with an institution, the more likely they are to persist in college. Students might drop out if they perceive the campus environment is not student-friendly or if they perceive the end result of their educational goal to be of lesser value than the present resources they are expending (Kuh et al., 2007). Self-efficacy is a third student success variable. There is a direct relationship between self-efficacy and persistence. Students who are confident in themselves and their abilities will likely persist in college. Furthermore, student demographics are a chief variable that affects college students' success. Low-income, first-generation, and minority students have a unique set of academic and social challenges in comparison to their middle class, second-generation, non-minority peers. A family's socioeconomic status (SES) can promote or hamper student success (Kuh et al., 2007). Students without financial hardships are able to more closely focus their attention on their educational goals. This promotes student success. For students with financial burdens, adequate financial aid can bolster their chances to succeed, particularly for low-income and underrepresented students. Financial aid that did not require repayment (e.g., scholarships, grants, and work-study) further strengthened low-income and minority students' persistence rates. Economically disadvantaged students who did not qualify for adequate financial aid typically needed to seek employment to close the financial deficit gap. The greater the financial need, the more hours the students needed to work. Students who worked over 30 hours weekly decreased their chances of graduating from college (Kuh et al., 2007). Student success is improved, however, if students are employed on campus. Working on

campus gives them an opportunity to learn and understand the educational system from an internal perspective. The more time college students spend on campus directly increases their chance of reaching their desired educational goal. Academic preparation is also another predictor of student success. “The trajectory for academic success in college is established long before students matriculate” (Kuh, 2011, p. 258). Academically prepared students, regardless of pre-college characteristics, are more likely to succeed in college. The aforementioned variables may not affect all students. There is one variable, however, that affects all college students: individual health. Every student is impacted by their physical and mental health (Dunkle & Presley, 2009). Ernest Boyer noted, “Wellness must be a prerequisite to all else. Students cannot be intellectually proficient if they are physically and psychologically unwell” (Dunkle & Presley, 2009, p. 265).

Fostering a student success climate should be the aim of all postsecondary institutions (Kuh et al., 2007). Some student success intervention strategies are evident if institutional decision makers are familiar with the demographic make-up of the student body and understand the academic and social hurdles some students have to overcome. For instance, one-third of college students are first-generation, meaning neither parent has earned a baccalaureate degree. The federal TRIO programs are viable intervention strategies to assist this target population in succeeding in college. These competitively awarded federal TRIO grants are funded under Title IV of the Higher Education Act to increase the success rate among low-income, first-generation students in K-12 and college. Competing for and securing these federal grants is an indicator that the college is attempting to foster an environment conducive to student success, as students active in TRIO programs such as Student Support Services and McNair are more likely to persist in college (Kuh et al., 2007). In the same way, NSSE results may provide insight into possible

interventions that bolster student success on individual college campuses. Student success is beneficial to the individual student, the institution, and society as a whole (Kuh et al., 2007).

### **Prevailing Health Issues in the U.S.**

Dunkle and Presley (2009) mentioned that college student health is one predictor of student success that affects every student. A broader discussion on prevailing health issues in America will precede the discussion on college student health. The broader discussion is important because the same health issues in the larger society tend to affect every area of society, including colleges and universities. Awareness of prevailing health issues in the U.S. will foster a better understanding of the significance and impact of college student health.

The general American population's health has been compromised by four leading causes of death and a public health epidemic. Adult men and women of all ages, races, and ethnicities have been affected by heart disease, cancer, chronic lower respiratory diseases (CLRD), stroke, and the obesity epidemic. These health burdens on the American people have caused short- and long-term disabilities and complications resulting in death. Modern medical advances are enabling Americans to live longer (Fletcher, Bryden, Schneider, Dawson, & Vandermeer, 2007). Unabated health problems will exacerbate as the general population ages.

The CDC reported heart disease is the leading cause of death among adults in the U.S. Unless noted otherwise, the following data on heart disease were retrieved from the CDC's website (CDC, 2012c). People with heart disease are prone to suffering nonfatal and fatal heart attacks. Nearly one out of every four deaths is caused by heart disease. Over 600,000 people died of heart disease in 2008. The most common type of heart disease is coronary heart disease. In 2010, the overall coronary heart disease tab cost the U.S. nearly \$110 billion. Risk factors for heart disease among adult Americans are physical inactivity (53%), obesity (34%), high blood

pressure (32%), smoking cigarettes (21%), high cholesterol (15%), and diabetes (11%). Over one-third of American adults self-reported in 2003 that they had at least two of the risk factors associated with heart disease. A person can reduce the risk of heart disease by decreasing or eliminating preventable risk factors. Making healthier lifestyle choices and abating current medical conditions will assist with preventing, managing, or reversing heart disease.

An American Cancer Society (2012) publication, *Cancer Facts and Figures 2012*, publicized cancer is the second leading cause of death among the general U.S. population. Similar to heart disease, cancer is an equal opportunity disease--anyone can get cancer. *Cancer Facts and Figures 2012* was the lone reference used for these cancer facts. "Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells" (p. 1). The causes of cancer can range from tobacco use to genetic dispositions. It can be at least a decade after the use of or exposure to external risk factors such as tobacco before cancer is detected. The embryonic stages of cancer may not produce any symptoms at all, or the symptoms exhibited will depend on the type and area(s) of the cancer. However, certain cancers are preventable. Cancers related to tobacco and alcohol use, obesity, tanning, and certain infections can be prevented through behavioral changes and/or vaccines. It is estimated, for example, that 192,397 cancer deaths in 2012 will be attributed to nutritional deficiencies or obesity. Routine screenings are the key to early detection and treatment of precancerous growths and cancer. The treatment plan for cancer is based on individual assessments, but cancer is treated by one or a combination of customized therapies such as surgery, radiation, and chemotherapy.

Chronic lower respiratory diseases (CLRD) became the third leading cause of death in the U.S. in 2008 (American Lung Association, n.d.). The American Lung Association was the exclusive source cited to discuss CLRD. The CLRD is also referred to as Chronic Obstructive

Pulmonary Disease (COPD). Asthma, chronic bronchitis, and emphysema are included in the CLRD category. People who smoke or are exposed to harmful chemicals or pollution are at-risk for CLRD. Persons who smoke should cease immediately to prevent or control CLRD. A persistent cough and shortness of breath are primary symptoms of CLRD and should not be confused with the natural aging process or being unfit. A healthcare provider can prescribe an appropriate plan of care for CLRD based on an individualized assessment.

Stroke is the fourth leading cause of death in the nation (CDC, 2012d). Information from the CDC reported that a stroke occurs when the brain is deprived of blood due to a ruptured blood vessel or a blood clot (CDC, 2012d). On average, one person has a stroke approximately every minute, and about 360 people die of a stroke every day. The top three risk factors for stroke are inactivity, obesity, and high blood pressure. Family history, age, and gender are also contributing stroke factors. Numbness on one side of the body and challenges speaking and comprehending are dominant stroke symptoms (CDC, 2012e). Immediate medical attention is imperative if a stroke is suspected. Healthy lifestyles and following a physician's prescribed plan of treatment might prevent an initial or recurring stroke.

### **Obesity in the U.S.**

There is another public health threat to the American population. Currently, approximately two-thirds of Americans are overweight or obese (Levi et al., 2011). Obesity is associated with almost 300,000 premature deaths in the U.S. (Seipel, 2005). The obesity epidemic spread like a wildfire “across all states, regions, and demographic groups in the US” during the 1990s (McMahan et al., 2003, p. 329). Adult obesity rates increased in nearly 20 states in 2010 (Levi et al., 2011), and Americans are steadily becoming more overweight and obese (Sailors et al., 2010). Americans fuel the obesity epidemic by gaining one to two pounds

annually (Struble et al., 2010). “The consequences of this extra weight--more than four and half billion extra pounds altogether--are enormous” (Levi et al., 2011, p. 8). For example, Levi et al. pointed out that “nearly a third of Americans ages 17-24 are too heavy to join the military” (p. 16). Obesity is compromising national security and public safety, as the pool of candidates who qualify for careers in the armed forces or as firefighters or police officers has shrunk due to the inability to pass physical fitness evaluations (Levi et al., 2011).

High-fat diets and physically inactive lifestyles are largely to blame for Americans’ weight problem (Seipel, 2005). Overweight people are more susceptible to health conditions and chronic diseases such as Type 2 diabetes, hypertension, heart disease, stroke, cancer, and arthritis to name a few (Hoffman et al., 2006; McMahan et al., 2003; Struble et al., 2010). Below are additional data on some of the physical effects of obesity.

Eight out of 10 people with Type 2 diabetes are overweight (Levi et al., 2011). Two million people in 2010 alone, aged 20 or older, were diagnosed with diabetes in the U.S. The CDC expects one-third of adults to have diabetes by the year 2050.

Levi et al. (2011) stated obesity also causes high blood pressure and cholesterol, which can trigger a stroke or heart attack. One out of every three hypertension cases is due to obesity. Furthermore, there is a medical link between obesity and cancer. Empirical research is ongoing to determine how and why obese persons have a heightened risk of developing certain cancers such as colon and esophageal cancer.

An increased risk of permanent liver damage and acquiring kidney disease is indicative of obesity (Levi et al., 2011). The extra weight obese people carry may cause them to suffer knee and joint problems akin to arthritis and osteoarthritis. Two out of three arthritis diagnoses are given to overweight or obese people. Weight reduction will relieve some arthritic symptoms.

“For every pound of body weight lost, there is a four percent reduction in knee joint stress among overweight and obese people with osteoarthritis of the knee.” (Levi et al., 2011, p. 104)

In addition, obese persons are more resistant to HIV/AIDS treatments when compared to normal weight counterparts (Levi et al., 2011).

The aforementioned physical conditions are only some of obesity’s physical effects. The end result of these physical manifestations may not result in death, but “can make life painful and difficult for patients and their families” (Levi et al., 2011, p. 8).

Furthermore, the emotional effects attached to obesity can be devastating. Obese adults are more likely than normal weight adults to suffer from depression, anxiety, and other mental health conditions (Levi et al., 2011). Overweight people are sometimes labeled and blamed for their physical condition. Given such, society may subconsciously accept overt or covert discrimination against obese people (Seipel, 2005). Society has used harsh and demeaning adjectives and phrases such as unattractive, gluttonous, lazy, of weak character, immoral, unsightly, unhealthy, weak, stupid, lazy, dirty, sloppy, mean, ugly, awkward, noncompliant, weak-willed, and undisciplined to describe overweight people (Levitt, 2004; Pedersen & Ketcham, 2009; Seipel, 2005). “Weight discrimination has increased by two-thirds over the past decade, and has reached a rate comparable to racial discrimination” (Levi et al., 2011, p. 105). Obese people may be discriminated against in the workforce when seeking employment, and, some of them are even discriminated against by health care professionals, the same people who should be helping them improve their health (Seipel, 2005). Seipel further acknowledged that obese people, including college students, might suffer violence because of their weight. Levitt (2004) partly blamed the media for the negative stereotypes and “anti-fat prejudice” attitudes

formed and spread about obese people. Seipel (2005) cautioned society to approach and treat obesity like other diseases.

Whether obesity is considered to be a condition or a disease is an ongoing controversial and spirited topic among medical professionals. Some think obesity should be classified as a disease because obesity can impede a person's daily normal physical functionality. Medical professionals who are in favor of labeling obesity as a disease believe the subject will then get needed fiscal resources to find a solution to the problem and more medical attention and resources for obese patients (CSAPH, 2013). Other medical professionals consider obesity to be a condition because modifiable personal choices lead to obesity. Proponents of labeling obesity as a condition are concerned about "labeling 1/3 of Americans as 'ill'" (CSAPH, 2013, p. 2). These same proponents are also concerned that if obesity is categorized as a disease, research and medical dollars will go toward obesity treatments and not prevention.

Literature strongly supports that medical professionals are still divided on how obesity should be classified. The researcher is not a medical professional and is not equipped with the knowledge or expertise to make a definitive determination one way or the other. She, however, like the CDC, leans toward categorizing obesity as a condition (CDC, 2010).

### **Health Concerns in the Southern U.S.**

Americans who live in the Southern U.S. region tend to be most prone to obesity and its associated health risks such as stroke, diabetes, and heart disease (CDC, 2012a). As such, the Southern states have repeatedly been on various national top ten health lists for the wrong reasons. This unfavorable publicity has had public health researchers, scientists, practitioners, and others concerned about the health of people in the South (CDC, 2012a).

The South is more susceptible to obesity than any other U.S. region (CDC, 2012a). The South is home to 9 of the top 10 most obese states: Mississippi, Alabama, West Virginia, Tennessee, Louisiana, Kentucky, Oklahoma, South Carolina, and Arkansas. Mississippi is the most obese state followed by Alabama. Michigan is the lone non-southern state on this particular top 10 list (Levi et al., 2011). This is alarming to public health officials because obesity-related diseases such as diabetes and hypertension continue to remain highest in the South, too. Levi et al. (2011) reported that 90% of the top 10 states with the highest rates of diabetes, physical inactivity, and hypertension are in the South.

The reason(s) the South is a breeding ground for obesity and obesity-related illnesses is complex and multifaceted. A high rate of physical inactivity is one reason. In Southern states such as Alabama, Kentucky, Louisiana, Mississippi, and Tennessee, more than 70% of the counties have approximately 30% or more residents who are physically inactive during their leisure time (CDC, 2011b). Physical activity has been linked to reducing weight or maintaining a healthy weight. Maintaining a healthy weight can decrease risk factors associated with obesity, thus reducing risk factors for heart disease, diabetes, cancer, stroke, and other health problems.

Cultural norms and ethnicity can play a role in whether or not a person is physically active. Lifestyle choices that promote inactivity are more common among ethnic groups. For example, Black and Hispanic women are less likely than White women to be physically active during their leisure time (Reinberg, 2009). Ethnic women are less likely to lose, or want to lose weight, because they are accepting of their self-image. White women tend to be less accepting of their body image. Overall, minorities are more likely to be obese and experience obesity-related illnesses than non-minorities. To illustrate his point, Reinberg (2009) stated that Blacks and Hispanics have a 51% and 21%, respectively, greater prevalence to obesity than Whites.

The South, based on the 2010 Census, has a large concentration of minorities (DeNavas, Procter, & Smith, 2011). Minorities generally have limited access to healthy foods and safe communities to engage in physical activity (Reinberg, 2009). Both unhealthy nutritional diets and sedentary lifestyles contribute to obesity and other health problems. Being privy to these cultural differences is important to understanding how to win the war on obesity.

Current health issues observed in the South are not new, per se. The Southeastern U.S. region was coined the “Stroke Belt” by researchers in the 1960s because its residents often suffered strokes (Levi et al., 2011). Mississippi, Alabama, Arkansas, Georgia, North Carolina, South Carolina, and Tennessee comprised the Stroke Belt (Americans Born, 2010; Initiative to Reduce, 2004). Even today, over 50 years later, the Southeastern U.S. region has the highest number of deaths associated with strokes (CDC, 2011d); the Stroke Belt moniker is still applicable. People who live in the Stroke Belt have a 50% greater chance of dying of a stroke than someone who lives in a different U.S. region.

Researchers are now targeting the “Diabetes Belt.” The Diabetes Belt includes 644 counties in 15, mostly Southern, states (Levi et al., 2011). The Diabetes Belt is comprised of sections of “Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, West Virginia, and all of Mississippi” (Levi et al., 2011, p. 26). Diabetes Belt residents are likely to be obese, of ethnic descent, and to live sedentary lifestyles. The onset of diabetes is due to increased levels of blood glucose because of poor insulin levels or a resistance to insulin (CDC, 2011a). The CDC reported that diabetes affects nearly 26 million people in the U.S. annually. Some medical conditions related to diabetes are hypertension, kidney disease, blindness, and amputations. Diabetes is the primary cause of heart disease and strokes and is the seventh leading cause of death in the U.S. (CDC,

2011a). There are three primary types of diabetes: Type 1, Type 2, and gestational. Type 1 diabetes is caused by genetic and environmental factors and accounts for approximately 5% of diagnoses. Type 2 diabetes develops because of an insulin resistance and risk factors such as “older age, obesity, family history of diabetes, history of gestational diabetes, impaired glucose metabolism, physical inactivity, and race/ethnicity” (CDC, 2011a, p. 11). The third type of diabetes, gestational diabetes, occurs during pregnancy and is more prevalent among women who have a family history of diabetes, are obese, or are from certain ethnic backgrounds. Persons from African American, Hispanic/Latino, and American Indian descent, for instance, are at a greater risk of diabetes. Diabetes can be prevented by controlling one’s blood pressure and cholesterol through diet and exercise and scheduling routine assessments of the feet, eyes, and kidneys, or insulin treatments.

Moreover, socioeconomic status also contributes to health concerns particular to the Southern U.S. The South was the lone region that recorded an increased poverty rate, 16.9%, and an increase in the number of residents in poverty, 19.1 million (DeNavas et al., 2011). DeNavas et al. reported that the South had the largest percentage, 19.1%, of uninsured residents than any other U.S. region. In addition, people who live below the poverty level in the South are more likely to be tobacco smokers, which can cause or exacerbate diseases and disability or lead to premature death (CDC, 2011c).

Numerous health education and advocacy efforts have targeted the South to curb obesity associated health concerns and health disparities. Effective ecological interventions are required to eradicate the health burden the South is carrying.

## **Student Health as a Function of Colleges and Universities**

College students need to be healthy. Dalrymple and Purcell (1976) remarked that failing health will adversely affect student persistence and noted that college health programs will be essential in assisting with preserving “the student in his optimum state of health so that he may remain in the classroom and derive the maximum benefits from the educational process” (p. 65). There is documented historical and current evidence of an apparent connection between students’ overall health and student engagement, retention, and graduation from college. Turner and Hurley (2002, p. 1) recalled one of the earliest recorded connections between college student health and higher education was in the 1400s when Manchester College in London forbade students with “horrible and contagious infirmities” to enroll in their institution.

American colleges and universities zoomed in on the link between college student health and student persistence as early as the 17th century (Prescott, 2007). A few U.S. colleges had student exercise programs during the 17th century. Institutions mainly monitored student behavior and eating habits on campus to maintain student health (Prescott, 2011). The importance of student health was reiterated in 1749 when Benjamin Franklin wrote a proposal for a new institution (now known as the University of Pennsylvania). He remarked that students “should be frequently exercised in running, leaping, wrestling, and swimming” to keep them healthy and their bodies strong (Prescott, 2011, p. 464). In 1845, Amherst College sent information to parents informing them of health “dangers [that] attend College life” (Prescott, 2007, p. 1). The circular Amherst College parents received listed drunkenness, illicit sexual encounters, gambling, and smoking as some of the “dangers” associated with college. The institution’s president, William A. Stearns, submitted a report about student health concerns to the board of trustees after some Amherst students’ physical or mental health declined, students

withdrew from the institution, or students died. The report, in part, stated “no one thing has demanded more of my anxious attention than the health of the students” and that students’ health problems existed because “physical exercise is neglected, the laws of health are violated, the protests, and exhortations of instructors and other friends are unheeded” (Prescott, 2007, p. 30).

President Stearns later remarked in 1856:

Students of our colleges have bodies which need care and culture as well as the intellectual and moral powers and which need this care at the same time with higher education. 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 and crippling the energies and destroying the prospects of now a few who remain, is, in my opinion, wholly unnecessary if proper measures could be taken to prevent it. (Turner & Hurley, 2002, p. 2)

Stearns observed that optimal student health and intellectual and moral development were both equally important and that student health positively or negatively influenced student persistence. He further observed that student health not only affected retention rates, but it affected the learning environment as well. Stearns’ observations led to action. Amherst College is credited with developing the first college health service. The health service targeted students’ physical health (Prescott, 2011). The rationale for offering the health service was that bodily exercise would ward off emotional issues. The college then established a Department of Physical Education and Hygiene which required each student to undergo a medical examination upon arrival on campus and to take a mandatory hygiene course. Dr. John W. Hooker was appointed Amherst’s Professor of Hygiene and became the first medical doctor in the nation to be directly financially compensated by a higher education institution.

Sexism in higher education during the 1870s also contributed to the discussion about the connection between student health and college persistence (Prescott, 2007, 2011). Allegations claimed that women did not possess the intellectual or physical capacity to undergo, let alone

complete, college studies. The rationale was that engaging in intellectual activities borrowed energy from men's and women's physical bodies. Medical publications substantiated the claim that women's brains were not as developed as men's brains and that women's physical bodies could not sustain the energy needed to power the brain for the scholarly activities (Prescott, 2011). It was hypothesized that women who enrolled in college would suffer mental and physical decay and, subsequently, drop out. A book by a Harvard medical professor, Dr. Edward Hamond Clarke, *Sex in Education: or, A Fair Chance for the Girls*, reinforced the belief that neither women's bodies nor brains could handle college studies (Prescott, 2007). It was also believed that women's reproductive systems made them more susceptible to physically and mentally breaking down. Women were sometimes denied college admission based on these challenged ideologies.

The beginning of the 20th century was familiar with health epidemics as well as common sicknesses and diseases (Turner & Hurley, 2002). American college administrators became more concerned about student health and its influence on students' academic achievements and felt obligated to assist students with improving their health. There was an underlying presumption that improving student health through physical fitness and nutrition would produce fruitful byproducts such as minimizing or halting various kinds of contractable and incontractable diseases, improving students' quality of life, and enhancing the overall college learning environment. Student health was integrated into the institutional culture at the University of California in 1900 when the university became the first institution to create a holistic health program by offering both medical and infirmary services to students after faculty began noticing disappointing class attendance (Turner & Hurley, 2002). A subsequent investigation revealed that students were absent from class due to sickness and not because of irresponsible behavior.

Mental health services were integrated into higher education in 1910. A psychiatrist named Dr. Steward Paton developed the first mental health service at Princeton University after learning students were dropping out of college because of mental issues (Prescott, 2011).

Today, the higher education sector is expected to “strengthen upon environmental determinants of health, learning, retention, and productivity within their campus culture and to make a commitment to support community standards and resources that protect the health and human potential of learning community members” (Turner & Hurley, 2002, p. 311). College students’ parents and other stakeholders are holding postsecondary institutions responsible for the welfare of enrolled students (Dalrymple & Purcell, 1976). A type of *in loco parentis* has been suggested by some parents (Prescott, 2007). Institutions are attempting to meet this societal expectation to address student health. As an illustration, California State University-Chico, for example, requires students to read a book titled *Fast Food Nation* as part of its freshman orientation course (Levi et al., 2006); the book chronicles the effects fast food has on college student health. Another tool postsecondary institutions are utilizing is the National College Health Assessment Survey. The survey is administered in American colleges and universities and helps health educators assess and understand the current state of college students’ health and its influence on “retention, learning, and quality of campus life” (Turner & Hurley, 2002, p. 323). Despite the valuable college health survey and ongoing research, there are still lingering unanswered questions about the connection between student health and engagement, retention, and graduation: “Does the health of college students decline or increase as a result of their college experience?” and “How does maintaining and improving the health of students enhance learning, retention, and academic success?” are examples (Turner & Hurley, 2002, p. 324).

However, there is no question that a growing body of scholarly literature supports how optimal health is imperative to college persistence and academic achievement (Turner & Hurley, 2002).

## **Organizational Structures for Addressing Student Health Concerns at Four-year**

### **Institutions**

Student health ties together several complex components: education, health and medicine. The diverse group of stakeholders include “students, faculty, administrators, doctors, nurses, educators, and lawmakers” (Prescott, 2007, p. vii). Dalrymple and Purcell (1976) expressed that an effective organizational structure is essential to address student health concerns because “health is an important dimension of education” (p. 27). There is, in fact, a direct relationship between student health and academic success (Fullerton, 2011). College students’ unique health needs and current medical gaps have led higher education institutions to structure their organizations to assist in addressing students’ health needs.

The organizational structure for addressing health concerns at four-year institutions varies from one institution to another. Each institution’s mission may be different, but four-year institutions have structured their organizations to address college and university students’ health concerns in three primary ways: by developing fruitful partnerships, by acquiring input from health professionals and students before developing programs and services, and by utilizing their health centers. These approaches are becoming more widespread to stretch limited resources, to broaden offered health services, and to improve student health.

Collaborations and partnerships are critical to addressing student health at senior institutions (Fullerton, 2011). In order to offer quality and comprehensive health to university communities at a reasonable cost, organizational collaboration is key. This synergy pools together essential human, fiscal, and physical resources and enhances health promotion service

offerings (Dalrymple & Purcell, 1976; Fullerton, 2011). For example, university health and wellness and recreation centers can partner to create a one-stop shopping approach; the collaborations will allow for more students, including special student populations such as nontraditional students, to be reached (Fullerton, 2011). Fullerton also discovered that universities are reconstructing or building new facilities to advance the one-stop health approach to meet changing student health needs, further explaining that there is a bonus for institutions when they refurbish or build new campus health facilities and offer comprehensive health services: These universities are given a recruitment edge when attempting to attract new students. Some university health-related departments have chosen to remain separate and declined to pool together their resources due to their perspective that specialization is an appropriate reason for separation.

Another way four-year institutions have structured their organizations to meet students' health needs has been to obtain input from health education professionals on campus prior to developing and implementing health goals and interventions (Dalrymple & Purcell, 1976). These health professionals typically fall under the student affairs department at four-year institutions (Hirt et al., 2003; Janosik, Carpenter, & Creamer, 2006; Sandeen, 2004). Some four-year organizational structures are designed to receive input regarding health education services from their students as well. The success of health programs increases when student input is considered (Prescott, 2007, 2011). Prescott (2007) acknowledged that getting students involved impacts national health not simply college health. The rationale is that if students are involved in college health, "the more likely they are to be intelligent leaders and planners in community health matters at a later period" (p. 136).

The campus health center also plays an integral role in addressing student health concerns at senior-level institutions. Health centers enable students to see a health care professional on campus. Traditionally, according to Brindis and Reyes (1997), more funds are allocated to support four-year institutions' health centers as opposed to community colleges. The health services offered also depend on institutional characteristics such as size and budget (Keeling & Heitzmann, 2003). A collaborative spirit, involving the right people around decision-making tables, and sufficiently funded health centers are essential ingredients to ensuring health promotion initiatives are comprehensive, effective, and sound. Regardless of the organizational approach or combination of approaches taken, Dalrymple and Purcell (1976) discovered that it is more difficult for universities to meet changing student health needs and societal expectations regarding student health when their organizational structures are top-heavy.

### **A Description of Community Colleges**

Cohen and Brawer (2003) are two leading experts on the history and profiles of community colleges and the students who attend them. They defined "community college" as "any institution regionally accredited to award the associate in arts or the associate in science as its highest degree" (p. 5). The Carnegie Foundation for the Advancement of Teaching (n.d.) classifies an institution as a community college if less than 10% of total undergraduate degrees awarded are bachelor's degrees. Community colleges, also referred to as junior colleges, have existed for over a century. Each state has at least one community college, and over half of all undergraduates are enrolled in community colleges. Approximately one-half of college students who receive a four-year degree were enrolled in a community college sometime during their college tenure (Kirkwood & Riegelman, 2011). According to Floyd (2003), the two-year college segment enrolls more credit and noncredit students than any other higher education segment.

Two-year colleges remain popular because of their open admissions policy, close proximity to students' homes, small student-to-faculty ratio, and economical tuition.

Two-year college students are also the most ethnically and economically diverse student body in higher education (Floyd, 2003). Community colleges' open admissions policy allows people from diverse backgrounds the opportunity to acquire a college degree, personal enhancement, and vocational development. The ethnicities represented in a two-year institution's student population are largely determined by the colleges' surrounding communities. The community college population is characterized by older part-time, commuter students with family and work obligations. Another dominant characteristic of community college students is they tend to possess modest academic achievement and to be from low-income backgrounds (Cohen & Brawer, 2003). Community college students strive for four primary educational goals: to earn an associate's degree, transfer general courses to a senior institution, acquire or develop job readiness skills, and fulfill personal enrichment goals (Kuh et al., 2007). Community colleges cannot be boxed into a particular mold. Social environments shape community colleges. As such, the role of community colleges will continue to change and adapt to societal factors.

### **Measures Taken by Community Colleges to Address Student Health Concerns**

College students adopt lifestyle habits during college that will promote or hinder overall good health for many years to come (Sax, 1997). The prevalence of community colleges makes them a resourceful catalyst by which health concerns among community college students can be addressed. Quintiliani et al. (2011) emphasized two-year colleges can be important interventionists when it comes to addressing health issues among their students, particularly nutrition and physical fitness concerns. Quintiliani et al. also acknowledged that two-year

institutions have been strategically positioned to reach a diverse group of students. Because community colleges' open admissions policy attracts students from varied backgrounds, an assortment of health issues accompanies students (Nichols, 1973). Yet, "health issues fail to receive a great deal of attention from trustees, administrators, or most faculty" on two-year college campuses (Floyd, 2003, p. 27).

The American Association of Community Colleges (AACC) announced that health should be interwoven throughout the community college experience (AACC, 1999). Community colleges have taken measures to address health concerns among their students. Incorporating academic affairs is one primary way community colleges address student health concerns. Prescott (2011) and Linnan et al. (2010) postulated that family, academic, and career obligations may prohibit students from remaining on campus for an extended period of time before or after their scheduled classes; therefore, it is critical that academic affairs assist with addressing health concerns. The AACC agreed that the classroom is a viable avenue to promote student health. "Beyond the classroom, the AACC student found a far less systematic and thorough treatment of health issues on community college campuses" (Floyd, 2003, p. 28). Academic affairs has been incorporated on some two-year college campuses by allowing nursing students to offer free blood pressure checks and health consultations to enrolled peers (Linnan et al., 2010). Kirkwood and Riegelman (2011) found that almost 60% of our nation's nurses were trained at a two-year college. Community colleges can also offer more health promotion degrees in areas such as nutrition for students to learn more about health and wellness and to address student health concerns. Some faculty are not interested in promoting health education on campus; a longstanding competitive relationship between academic affairs and student affairs may be the root cause of some faculty members' disapproval or lack of participation in health promotion

activities (Prescott, 2011). In addition, community colleges can partner with the surrounding community to combine resources and address health issues among students and the community simultaneously (Hurley, Turner, & Floyd, 2000).

Community colleges face challenges when attempting to address student health. Quintiliani et al. (2011) stated that the two-year population has historically lacked access to nutritional and physical activity interventions. Another challenge to addressing health concerns in two-year colleges is scarce empirical research (Sax, 1997). Floyd (2003) hypothesized that two-year institutions did not receive as much research attention as four-year institutions, because most community colleges are non-residential. Another challenge is that some two-year colleges do not have the funds needed to provide extensive health services, if any at all (Floyd, 2003).

**Services offered by health centers.** Postsecondary institutions are not required to offer health services; some institutions choose to offer health services to affirm the institution's mission and to foster student success (Keeling & Heitzmann, 2003). Approximately 80% of students attend institutions with some direct healthcare offerings (Brindis & Reyes, 1997). An estimated 10 million college students make over 20 million health center visits annually. The approximate price tag attached to these visits each year is \$1.4 billion. Traditionally, more funds are allocated to support four-year institutions' health centers and services versus their two-year relatives.

Health centers initially focused on treating physical sicknesses until the 1970s (Dunkle & Presley, 2009). The main focus is now health prevention. An array of health services are offered by institutions. "There are universal concepts that impact upon the provision of health promotion, health protections, disease prevention, and clinical care to college students" (Swinford, 2002, p. 311). The scope of services offered depends on both institutional and

societal factors. Institutional characteristics such as size, location, whether it is public or private, buy-in from administrators, and financial leverage are a few contributing factors that influence which health services are offered (Brindis & Reyes, 1997). Webb et al. (1997) interjected that societal factors such as parents' expectations influence health offerings as well. Health services on postsecondary campuses can range from providing solely first-aid to providing access to campus infirmaries and hospitals (Nichols, 1979). Some health services generally offered by health centers are women's services, preventative health screenings, diagnostic services, and treatment of infections, eating disorders, and sexually transmitted diseases (Grace, 1997). The services are typically offered at times that accommodate students' schedules. Some institutions are merging their health services with larger healthcare systems to stretch resources. Grace posited the downside to merging the services may be the loss of needed preventative health programs and services.

Health education professionals are helpful interveners when it comes to college student health, because they might prevent some health problems (Grace, 1997).

### **Health Problems in the College Population**

The typical age range for college students is 18-29 (James & Bonds, 2006). Although college students are viewed as healthy, they are a "medically neglected age group in our population" (Dalrymple & Purcell, 1976, p. 63). Physicians are usually trained in the confines of hospitals, and most hospitalized patients are generally not college-aged. Given such, physicians have limited opportunity to learn about college students' specialized needs. Dalrymple and Purcell remarked that some private physicians prefer to keep medical interaction between them and college students limited because students generally exhibit minor symptoms, are irresponsible with doctors' appointments, and do not pay their bills.

It is well documented that college students partake in risky health behaviors (Floyd, 2003). Certain health risk behaviors are attached to the college student population because of the life transitions and academic stressors they face (Dalrymple & Purcell, 1976). Chickering's *developing competencies* vector addresses students' physical health, self-care, and connects their lifestyles choices to both student development and health risks (Covarrubias, 2007-2008). For instance, male college students are more prone than female college students to engage in risky health behaviors such as drinking alcohol, having multiple sexual partners, and not wearing a seatbelt (Covarrubias, 2007-2008). Some studies also indicate that male college students "exercise less, eat fattier food, and are significantly less likely to perform self-exams to identify early signs of cancer" (Covarrubias, 2007-2008, p. 37). Society's "macho man" expectations of males may be one factor that has led to male college students' potentially destructive lifestyles.

It would be outside the purview of this writing to detail an exhaustive list of health risk behaviors college students face. Some top health problems among college students are drug use, sexual irresponsibility, emotional challenges, intentional and unintentional injuries, nutritional deficiencies, and physical inactivity (Grace, 1997). These risky health behaviors can be found among two- and four-year college students, although the CDC's 1995 NCHRBS found that community college students were more likely to engage in health-compromising behaviors (CDC, 1997). The NCHRBS was the first national survey tool implemented to measure health-risk behaviors among college students. The CDC implemented the NCHRBS in 1995 to assess and track student health behaviors (CDC, 1997; Douglas, Collins, Warren, Kann, Gold, Clayton, & Kolbe, 1997).

Drug abuse encompasses alcohol and tobacco use. College presidents consider alcohol to be the main student health issue (Grace, 1997). Approximately 80% of college students consume

alcohol (CDC, 2011e). College students consume more alcohol than their peers who are not in college (Ruthig, Marrone, Hladkyj, & Robinson-Epp, 2011). Alcohol abuse is in some way responsible for one-fourth of student deaths. Drinking alcohol has been exaggerated with the advent of binge drinking. Binge drinking is when males drink five or more alcoholic drinks or females drink four or more alcoholic drinks in a short period of time (CDC, 2011e). Drinking alcohol can lead to irresponsible sexual encounters, smoking, fighting, and preventable automobile accidents.

Smoking tobacco is also a current health concern among the college population. “Reducing cigarette smoking in the young adult population is a national health priority” (Cronk, Harris, Harrar, Conway, Catley, & Good, 2011, p. 1). According to the authors, over six million college students have smoked within the past 30 days. Cigarette smoking is the number one cause of preventable death in America (CDC, 2012b; Grace, 1997). Second-hand smoke is as harmful as smoking (CDC, 2011e).

Sexual health education is important on college campuses. Eight out of 10 college students have had intercourse by age 20, and most sexually transmitted diseases (STDs) are incurred by persons age 25 or younger (Grace, 1997). Sexual exploration can result in unplanned pregnancies and even sexual assault. Grace is concerned that students often delay visiting the health center for reasons related to sexual health and that health center professionals are only treating symptoms rather than focusing on prevention.

Students’ emotional health is also a health concern among college students. Downs and Ashton (2011) revealed that college students are at an increased risk of mental issues. The traditional college student segment falls within the average age group that the risk of “major” mental health issues is present (Dunkle & Presley, 2009). Stress associated with college, for

example, can affect a person's mental and physical health (Downs & Ashton, 2011). It can exacerbate student health issues (Liang, Lee, Tam, Bridges, & Keating, 2007). Respondents in a nationally represented survey indicated stress as their primary hindrance to academic achievement (Dunkle & Presley, 2009). Common stressors among college students are financing their college education, academic stress, and family and work obligations. Stress can cause depression and anxiety and even cause students to withdraw from college. Which stressors affect students and how they affect students is individualized, but students should learn to properly cope with stressors. How students handle stress will likely spill over into adulthood (Grace, 1997). Chickering's second vector, *managing emotions*, indicates it is important for college students to increase self-awareness of their feelings and emotions and to manage them accordingly.

College students are susceptible to intentional and unintentional injuries. These injuries include automobile accidents, suicide, and homicide (Grace, 1997). Firearm injuries have increasingly contributed to student deaths among youths and young adults.

The next two categories of health concerns particular to the college population are nutritional deficiencies and physical inactivity. College students consume a lot of fast food while in college and are most are likely to be live sedentary lifestyles (Grace, 1997). How nutritional inadequacies and physical inactivity is contributing to the obesity epidemic will be discussed in greater detail later.

The aforementioned health concerns appear on nationally recognized health organizations' radars as root causes of injury, disease, and premature death among college students. The American College Health Association (ACHA) is one such organization. The ACHA was established in 1920 and monitors health risk behaviors among students (ACHA,

2009). Its overall mission is to promote healthy college and university communities by providing professional development and services to its members and tracking relevant health trends and changes among postsecondary students. The ACHA inaugurated a national survey in 2000 to gather health data from students across the U. S. in an attempt to determine health factors that may thwart a student's academic success. The survey instrument, still being utilized today, is called the ACHA-National College Health Assessment (ACHA-NCHA). Over 500,000 students from 435 postsecondary institutions participated in the ACHA-NCHA from spring 2000 to spring 2008. The ACHA-NCHA builds upon one of its nationally acclaimed CDC-sponsored forerunners, the NCHRBS.

Monitoring student health should be ongoing and extended. Too often college health has been defined by a single point in time in students' lives, leaving long-term health changes unmonitored (Ruthig et al., 2011). The information gathered from national health surveys, for instance, is vital to health promotion on college and university campuses. External to the military, college and university campuses are plush environments where scores of students can be reached with health promotion interventions (Brindis & Reyes, 1997). College may be the final opportunity for students to trade unhealthy behaviors for healthy ones.

### **Student Nutrition and Physical Inactivity as a Concern of Colleges and Universities**

Few studies have targeted college student health. Unhealthy nutritional habits and sedentary lifestyles are top contributors to the growing obesity epidemic (Huang, Harris, Lee, Nazir, Born, & Kaur, 2003; Pedersen & Ketcham, 2009). Administrators and faculty have been conversing "the past few years" about the obesity epidemic on college campuses (Sparling, 2007, p. 1). Huang et al. wrote that the most dramatic obesity spike (7.1% to 12%) was found among 18- to 29-year-olds with some college education, between 1991 and 1997. The prevalence of

obesity among 18- to 29-year-olds with some college education jumped to 14% and 21% by 2001. Currently, over 30% of college students are either overweight or obese (Freedman, 2010). This is concerning because college students are at risk of sustaining the weight throughout adulthood (Desai et al., 2008; Hlaing, Nath, & Huffman, 2007).

It is not uncommon for students to gain weight their first year in college (Racette et al., 2005). The added pounds are popularly referred to as “Freshman 15,” indicating freshmen will gain 15 pounds their freshman year of college (Vella-Zarb & Elgar, 2009). The problem is compounded even more because incoming students are arriving on campus already obese. Sparling (2007) referred to incoming overweight and obese college students as “super-sized.”

A study revealed that 90% of college students did not consume more than five servings of fruits and vegetables a day (Dunkle & Presley, 2009). Colleges have added fuel to the fire by outsourcing food services to fast-food restaurants. Results from a 2001 survey of business officers unveiled that 50% of colleges outsourced between one to three services. Food service (75%) and vending (63%) were in the top five of contracted services (Moore, 2002). Moore also noted that “The top reasons colleges and universities chose to outsource were better equipment, time-savings, cost containment, operations improvement, and professional management” (p. 42). Are colleges’ priorities in the right place when considering outsourcing food services and vending?

Physical inactivity among college students is also contributing to obesity on college and university campuses. Milroy, Wyrick, Bibeau, Strack, and Davis (2012) agreed that American college students in general are not getting enough physical exercise. Students should get at least 30 minutes of exercise 5 days a week to help ward off obesity and its many associated diseases (CDC, 2011e).

An institution is more likely to foster an environment that encourages physical health if students' physical health is an acknowledged priority (Webb et al., 1997). Sparling (2007) pointed out that colleges' roles are to foster supportive environments and to make choosing healthy options easier and more convenient for students. Healthy communities in higher education are deliberately developed (Jackson & Weinstein, 1997). Healthy environments are developed because responsible individuals create environments that promote healthy lifestyles (Jackson & Weinstein, 1997). Creating a healthy environment begins with governing bodies, boards of trustees, boards of higher education, regents, and the like who ensure that their vision reflects the importance of individual and community health. "What greater gift can a college or university community give to its alumni than a long and healthy life?" (Jackson & Weinstein, p. 240).

### **Physical Effects of Poor Diet and Physical Inactivity on College Students**

College students are already susceptible to physical health issues (Downs & Ashton, 2011). Physical inactivity and poor nutrition exacerbate health issues. Research shows there are no advantageous physical effects of obesity to individual health. The consequences of obesity are chronic diseases, disability, a reduced quality of life, and premature death. Being overweight or obese places students at risk for serious health consequences later in life (Hlaing et al., 2007). Focusing on college students' physical health is a critical aspect of student development that may be unintentionally or intentionally overlooked on college campuses (Sandeen, 2004).

### **Emotional Effects of Poor Diet and Physical Inactivity on College Students**

The chronic illnesses and diseases that are associated with obesity are burdensome enough, but the emotional and psychological scars are agonizing. The emotional effects of obesity, for instance, may have a long-term grasp on some college students' psychological

health. Some college students have battled obesity and its adverse emotional effects since childhood; therefore, colleges and universities inherit students with psychological unbalances (Seipel, 2005). The psychological unbalances can manifest in different forms, including body dissatisfaction and disordered eating.

Watkins, Christie, and Chally (2008) explained “body image is the subjective level of contentment with one’s appearance and is measured by determining discrepancy between actual and ideal weight and attitudes regarding level of satisfaction with appearance” (p. 95). Men and women struggle with body image issues, although body image issues seem to be more pronounced among women. The Behavioral Risk Factor Surveillance System (BRFSS) data from 2000 found that about half of all U.S. women were on diets in comparison to approximately 30% of men (Wharton, Adams, & Hampl, 2008). Males may have a negative self-image due to pressures to have a muscular body.

Body dissatisfaction is one of the strongest predictors in the development of eating disorders (Levitt, 2004; Massey-Sokes & Meaney, 2006). It is well documented that feelings of depression, anxiety, and poor self-esteem are connected to emotional eating (Sailors et al., 2010). Chickering’s second vector, *managing emotions*, theorizes that these same negative feelings can impede a student’s academic progress if the feelings “become excessive or overwhelming” (Chickering & Reisser, 2005, p. 186). Female college students are more susceptible to eating disorders than the general population due to body dissatisfaction and feelings of social isolation (Struble et al., 2010). *Establishing identity*, Chickering’s fifth vector, is one theoretical philosophy utilized by student affairs researchers and practitioners to help students become more comfortable with their bodies and increase their self-confidence (Chickering & Reisser, 2005).

Higher education institutions should create a sense of belonging for students so they feel safe and that their psychological needs are met (Jackson & Weinstein, 1997).

### **Effects of Obesity on College Success**

There is a longstanding and documented direct relationship between student health and academic success (Nichols, 1973; Sandeen, 2004). Empirical research has found that student health plays a pivotal role in whether or not first-year students persist at a university (Fletcher et al., 2007). Physically and emotionally unhealthy students are more prone to academic strain (Becker, Cooper, Atkins, & Martin, 2009). Conversely, if students feel their best overall, then their academics will likely reflect that (George, Dixon, Stansal, Gelb, & Pheri, 2008). Health is not the sole factor to college success, but it is a crucial factor.

Health conditions such as obesity and behavioral choices related to diet and exercise can positively or adversely affect students' academic success. Overall, obesity can impede academic performance (Hoffman et al., 2006). This is primarily because obesity is associated with depression, anxiety, and eating disorders (Levi et al., 2011). Levi et al. noted that obese people were more likely to suffer from depression than their normal weight peers. Approximately 20% of undergraduate students suffer from depression (Ruthig et al., 2011). The authors also found in one study that clinically depressed college students had lower test scores and a half letter grade difference in grade point average (GPA) by the time the academic year ended. In another study, nearly half of college participants recalled that their mental or emotional health had affected their academic performance (Downs & Ashton, 2011).

Negative psychological emotions such as depression can be traced back to and found among obese children in Grades K-12 (Ruthig et al., 2011). Some of these same psychological issues such as low self-esteem and depression may follow students to college and attempt to

thwart their academic and personal success. This research is important for higher education institutions to be aware of because obese children are prone to become obese adults.

Institutions should use empirical research to develop comprehensive health promotion programs that will foster a healthy campus culture and improve students' academic success. Floyd (2003) posited that the college culture is as important as academic instruction when it comes to student success. Fletcher et al. (2007) stated that college students typically consider themselves to be successful if they are healthy, academically progressing, and graduate by their set goal.

### **Summary**

American higher education's mission has always been to educate the whole student. Student well-being is a recurring theme throughout the "whole student" philosophy. Student affairs is responsible for student well-being. Student affairs' mission mirrors higher education's mission to educate the entire student intellectually, physically, socially, emotionally, and spiritually.

The purpose of educating the whole student is to maximize student potential and foster student success in college and in life. This should be the goal of all postsecondary institutions. There are many factors that affect student success. Student health is one factor that affects all college students. "Students are whole persons. How they feel affects how well they think" (NASPA, 1987, p. 9). There is a direct relationship between student health and academic success.

Based on higher education and student affairs' mission to educate the whole student, college students should be physically developed while in college. Over 30% of American college students are overweight or obese. There are many contributing factors to obesity, but

two leading controllable contributing factors are sedentary lifestyles and unhealthy diets. Obesity is the root problem of a host of physical problems, including heart disease, Type 2 diabetes, and hypertension. Obesity can also lead to emotional problems such as depression. College student obesity is concerning because students are likely to maintain the excess weight throughout adulthood. College may be the last resort for some students to make positive lifestyle changes. In addition, obese students may not persist in college, because emotional hindrances such as depression might hinder their academic progress.

Four-year and two-year students deal with some of the same health issues. Obesity is a concern both education sectors share. Two-year institutions, in fact, may observe more diverse health issues among students because of their open admissions policy. Given such, why are fewer research and health education and promotion funds allocated to four-year institutions? And why is scholarly literature about community college student health scarce?

More than 30% of all college students are overweight or obese. Four-year institutions get most of the student health research attention and funding. This research will investigate what, if anything, U.S. public, two-year colleges in the SACS region are doing to address obesity among their students. The SACS region was selected because obesity is more pronounced in the Southern U.S. region when compared to other national regions. This research is important because it will bring awareness of the growing obesity epidemic and might lead to interventions that will foster student success and retention. This research will also add value and quantity to scarce empirical research.

CHAPTER III:  
METHODOLOGY

**Introduction**

The primary purpose of this quantitative study was to explore what, if anything, public, two-year colleges in the SACS region are doing to address obesity among their students. College administrators have been concerned about student obesity (Sparling, 2007). Over 30% of college students are overweight or obese (Freedman, 2010). Hlaing et al. (2007) warned that being overweight or obese may contribute to preventable diseases, disability, and premature death. Obese college students are at risk of sustaining the unhealthy weight throughout adulthood, because obesity is not “easily reversible” (Desai et al., 2008, p. 109).

The study was designed to obtain quality information that can be utilized by postsecondary institutions to generate awareness, spark dialogue, and brainstorm interventions. The data acquired will add to existing empirical literature and fill gaps in literature regarding community colleges and community college student health. Chapter III will discuss the theoretical framework, study population, data source, data tool/collection, and research questions.

**Theoretical Framework**

This study was framed by the direct relationship between student health and academic success (Fullerton, 2011; Nichols, 1973; Sandeen, 2004), the 1937 and 1949 *Student Personnel Points of View*, and Healthy Campus 2020. Healthy students are more likely to persist in college (Becker et al., 2009; Dalrymple & Purcell, 1976; George et al., 2008; Turner, & Hurley, 2002).

The 1937 and 1949 *Student Personnel Points of View* emphasized the importance of college student health. Furthermore, ACHA's Healthy Campus 2020 initiative developed its mission and goals to promote longer, healthier lives for postsecondary employees and students. Healthy Campus 2020's mission encompasses five key strategies:

- Identify current and ongoing nationwide health improvement priorities in higher education.
- Increase campus community awareness and understanding of determinants of health, disease, and disability and the opportunities for progress.
- Provide measurable objectives and goals that can be used at institutions of higher education.
- Engage multiple stakeholders to take actions that are driven by the best available evidence and knowledge to strengthen policies, improve practices, and empower behavior change.
- Identify and promote relevant assessment, research, and data collection needs.

(ACHA, n.d., p.1)

Healthy Campus 2020 also has five overall goals that support its mission:

- Create social and physical environments that promote good health for all.
- Support efforts to increase academic success, productivity, student and faculty/staff retention, and life-long learning.
- Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of the entire campus community.

- Promote quality of life, healthy development, and positive health behaviors.

(ACHA, n.d., p. 1)

Overall there is limited empirical data on college student health (Huang et al., 2003; Pedersen & Ketcham, 2009). One hypothesis for the scarce data is that college students are perceived to be insusceptible to infirmity; and, generally, college students are healthy. There is an even greater deficiency in postsecondary literature regarding community college students' health. There are two recurring possible reasons for the scarce literature on community college student health. One theory is that most college wellness interventions target on-campus students. A majority of two-year institutions are commuter colleges (Floyd, 2003). Another theory is that fewer funds are allocated to research and support community college health in comparison to allocations to four-year institutions for the same purposes (Floyd, 2003; Brindis & Reyes, 1997).

### **Study Population**

Cohen and Brawer (2003) defined "community college" as "any institution regionally accredited to award the associate in arts or the associate in science as its highest degree" (p. 5). The terms *community college* and *two-year college* will include technical colleges and be used interchangeably throughout the study.

The SACS region is comprised of 11 states: Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia. Initially, the dataset consisted of a total of 320 institutions, including U.S. public, two-year SACS-accredited colleges classified as rural, suburban, and urban. Seventy-three percent (235 institutions) were rural-serving small, medium, and large. Thirteen percent (40 institutions) were suburban-serving single and multicampus, and 14% (45 institutions) were urban-serving single and multicampus. The investigator further delimited the dataset by excluding institutions that

were not SACS-accredited although they were located in SACS's region. Thus the study population shrank by 31 institutions, from 320 institutions to 289.

The final study population included 289 U.S. public, two-year SACS-accredited colleges classified as rural, suburban, and urban. See Appendix A for a list of the 289 institutions and their classifications. Seventy-four percent (213 institutions) are rural-serving small, medium, and large. Twelve percent (36 institutions) are suburban-serving single and multicampus, and 14% (40 institutions) are urban-serving single and multicampus. Some of the institutions do not have *community college*, *technical college*, or *junior college* as part of their formal institutional names but are still considered to be two-year colleges. Some two-year institutions in the study population award bachelor's degrees. The Carnegie Classification 2010 Basic System considers a two-year college to be a two-year college if the percentage of bachelor's degrees awarded is less than 10% of the total number of degrees awarded.

### **Data Source**

The main data source from which the study population was retrieved was IPEDS, an existing national database. The IPEDS Data Center enabled the customization and retrieval of all public technical and community colleges classified as rural, suburban, and urban in the SACS region. The information in IPEDS was gathered from annual surveys that were distributed to colleges and universities that receive federal financial aid assistance (National Center for Education Statistics [NCES], n.d.). Postsecondary institutions that receive federal financial aid are required to complete the surveys in order to continue to receive federal funds. The NCES has administrative oversight of IPEDS (NCES, n.d.).

## **Data Tool/Collection**

ACHA's 2012 Faculty and Staff Health and Wellness Survey provided guidance in constructing the research study's survey instrument. The 2012 Faculty and Staff Health and Wellness Survey was an appropriate guide because it gathered health data from individual institutions. Although the 2012 Faculty and Staff Health and Wellness Survey gathered data relating to employee health, the survey questions were adaptable to garner intuitional data about college student health. The link to the survey is [http://www.acha.org/Surveys\\_Data/docs/ACHA\\_Faculty\\_Staff\\_Health\\_Wellness\\_Survey\\_2012.pdf](http://www.acha.org/Surveys_Data/docs/ACHA_Faculty_Staff_Health_Wellness_Survey_2012.pdf). The ACHA survey was not tested for validity and reliability because the survey gathered factual data only; therefore, reliability and validity tests were not implemented or needed. In the future, a more structured Faculty and Staff Health and Wellness Survey will require validity and reliability testing. However, ACHA sought to acquire face validity. Face validity is achieved when, upon review, the survey appears to measure what it is supposed to measure (Creswell, 1994). The researcher consulted with professionals during the survey instrument's development. The researcher sought to counter her positionality during the study's survey development. The researcher was conscious of her biases and attempted to prevent them from interfering with the study by recognizing and sharing them with the reader early during the study. An objective colleague with an earned doctorate from a respected accredited institution reviewed Chapters 1-3 and provided feedback to the researcher. The propensity to be biased during the research study was further diminished given the fact that the study is a quantitative study rather than a qualitative study. The data collected were basically objective facts. Qualitative research provides more room for the researcher to interpret the data (Creswell, 1994). In addition, it was required for the researcher's advisor's IRB (Institutional Review Board) training certification to

be up-to-date. The IRB approved the research study; the study's approval number is EX-13-CM-097. See Appendix B for a copy of the IRB approval letter. UA's IRB approved the survey instrument and study.

The tailored cross-sectional electronic survey was then used to collect data from 289 senior student affairs administrators at U.S. public, two-year SACS-accredited institutions. The adapted electronic 17-item survey instrument's purpose was to collect data from senior student affairs administrators at 289 public U.S. two-year SACS-accredited institutions in Fall 2013. "A *survey* design provides a quantitative or numeric description of some fraction of the population--the sample--through the data collection process of asking questions of people" (Creswell, 1994, p. 117). The online survey was utilized to collect institutional demographics (Part I) and obesity-related information (Part II). The survey can be completed in approximately 15 minutes. A copy of the survey is located in Appendix C. The overall goal of this study's online survey instrument was, similar to the 2012 ACHA Faculty and Staff Health and Wellness Survey, to gather and present factual information. As employees of a public higher education institution, all potential participants complete questionnaires like the one being employed in this study on a fairly regular basis.

There are advantages and disadvantages to sending an electronic survey. Hoonakker and Carayon (2009) commented that technology has made transmitting data convenient, efficient, and economical. Electronic transmissions can be quickly sent to numerous people from a remote location for "free" with little effort. Another benefit of electronic surveys is that it is easy to track who has, or has not, responded. Downsides to Internet surveys are that some emails sent may be returned to the sender due to a changed email address or typing error. Another disadvantage is some people might not have Internet access. Almost two billion people had

Internet access in 2008 (Hoonakker & Carayon, 2009). The unavailability of Internet access was basically considered a nonissue in this study since the study population consisted of senior-level student affairs administrators at public, two-year colleges. Upon hire, full-time employees at these institutions are typically assigned an email address.

The greatest disadvantage of using electronic surveys to gather data is the typically low response rate. “A high response rate is not only desirable but also an important criterion by which the quality of the survey is judged” (Hoonakker & Carayon, 2009, p. 352). On average, the response rate for electronic surveys is approximately 11% smaller than other survey methods (Jin, 2011). Shinn, Baker, and Briers (2007) pointed out that in over 30 studies, Internet surveys averaged a 37% response rate. The same response rate was anticipated for the current study.

Several hypotheses exist to explain why the response rate is generally lower for electronic surveys. One hypothesis is that people are skeptical of opening emails from people they do not know or recognize (Hoonakker & Carayon, 2009). Another possible reason for the low response rate is that people are so inundated with emails and spam that they intentionally or unintentionally overlook emails (Jin, 2011). Jin also mentioned that respondents may not complete or return surveys they consider to be lengthy. It is important to note, however, that survey response rates have decreased for all survey mediums (Sheehan, 2001). Given the advantages and disadvantages of electronic surveys, the researcher believed an online survey was the best medium for the research study.

A tool called *Qualtrics* (<http://www.qualtrics.com>) was used to distribute the informed consent form and administer the survey while protecting respondent anonymity. *Qualtrics* is an electronic survey instrument that gathers and tracks survey data. UA has a licensing agreement

with *Qualtrics*, and the university's faculty, staff, and students can use the software for free for research purposes.

Descriptive statistics were used to interpret survey data. "When there are large amounts of data that need to be interpreted, descriptive statistics are used to organize and summarize them" (Holcomb, 1998, p. v). Utilizing a survey and descriptive statistics best met the needs of the study. Data were collected, analyzed, and interpreted, which allowed population generalizations; however, the generalizations may not be indicative of all two-year colleges.

### **Research Questions**

The following research questions were used to guide the study:

1. What, if anything, are public, two-year colleges in the SACS region doing to address obesity among their students?
2. What percentage of two-year institutions has conducted a comprehensive assessment/study of their students' physical health in the past five years?
3. If two-year colleges are not addressing obesity, why not?
4. Are there any institutional publications or policies (i.e., college mission statement, strategic plan, college catalog, student handbook, etc.) that exist, or are slated to be developed, that address students' physical health, particularly obesity?

Each of the research questions was answered by collecting survey data and using simple descriptive statistics. The survey consisted of two parts. Most survey questions were closed-ended. Part I of the 17-item survey, questions 1-6, retrieved demographic information that described the population. The demographic portion of the survey retrieved data about the respondent's job title, the state in which the respondent's institution was located, whether or not the institution was primarily a commuter institution, the respondent's institution's current

academic year student enrollment, the percentage of students who receive financial aid, and if the respondent's institution was a member of the ACHA. Total population percentages for survey questions 1-6 were organized in a frequency distribution table. A narrative explained data in the frequency table. Institutional characteristics were used to examine the following assertions: (1) obesity and its comorbidities are more prevalent in the Southern U.S. than nationally, (2) students who attend commuter institutions are less likely to receive health promotion information, (3) socioeconomic status plays a role in a person's health, and (4) community colleges are less likely to be ACHA members.

Part II of the survey included questions 7-17. These questions retrieved obesity-related information regarding how students' physical health, particularly obesity, is addressed at American public SACS-accredited community colleges. Survey questions in Part II gathered information that provided answers to the four research questions framing the study. The survey should have taken respondents approximately 15 minutes to complete.

Descriptive statistics were used solely to explore and describe the present situation based on the four research questions framing the study. Descriptive statistics consisted of frequency distributions tables. Frequency distributions take the raw data collected and organize it in a table based on classes and frequencies (Bluman, 2009). The class is the category under which raw data are grouped, and the frequency is how often a data value occurs, thus the term "frequency." A class can be either qualitative or quantitative. Percentages were added to frequency distribution tables, because raw numbers alone do not provide a detailed explanation.

Percentages allow for data comparisons. Percentages were calculated by using the formula  $\% =$

$\frac{f(\text{frequency})}{n(\text{total number of values})} \times 100\%$ . Bluman (2009) explained that frequency distributions are

beneficial because they organize data, provide a visual picture of how data are distributed, and allow data comparisons.

Research Question 1 (What, if anything, are public, two-year colleges in the SACS region doing to address obesity among their students?) drove the study and was answered by survey items 9, 10, 13, 14, 16, and 17. Questions 9, 10, and 17 were multiple choice questions that gathered useful data on if and how institutions addressed obesity among their students. Questions 13 and 14 were presented in a matrix table. A matrix table includes several related multiple choice questions with the same answer options. The questions in the matrix table were listed in columns, the answer options were listed in rows. Respondents were restricted to selecting one answer per row. Questions 13, 14, and 16 each included “Other” as an answer option if the other predetermined answer responses were not applicable. Respondents were requested to specify their answer in the given text box if they chose “Other.” Text boxes gave respondents the freedom to provide any answer or explanation outside the predetermined answer options. *Qualtrics*’ expert technical support staff strongly suggested that the researcher not include the “Other” option as part of the matrix table but instead put the text box directly under the matrix table so data output would not be affected. Survey question 16 is unique in comparison to the other survey items because respondents were encouraged to “check all that apply.” Question 16 is a multiple response question. This question was used to gather information on which health education and promotion techniques are being used by the total population. The survey question’s variables are not mutually exclusive. Raw data for the whole population was exported into SPSS® for statistical analysis. SPSS’s® multiple response and frequencies commands were used to calculate descriptive statistics and create a single frequency distribution table with percentages for each of the predetermined response options. “Other” is

one of the data values respondents have the option of selecting if none of the other predetermined options fit their institution's particular situation or if there is another applicable response option that is not listed. Again respondents were requested to specify their response to "Other." These responses were reviewed for themes and discussed in a narrative. Research Question 2 (What percentage of two-year institutions has conducted a comprehensive assessment/study of their students' physical health in the past 5 years?) was satisfied by survey questions 7 and 8. These survey items assessed institutions' acquisition of baseline student health data (question 7) and the number of full-time equivalent staff was devoted to assess student health (question 8). Question 8 was an open-ended question. Raw population data for these questions were exported into SPSS® for statistical analysis. A frequency distribution table with percentages summarized the data. A narrative explained the frequency table data.

Research Question 3 (If two-year colleges are not addressing obesity, why not?) was answered by survey item 15. The goal of survey question 15 was to retrieve reasons why obesity was not addressed at U.S. public SACS-accredited community colleges. Possible remedies to frequent population responses can be brainstormed. Survey question 15 was the second and final multiple response question. Respondents were able to select several response options that are not mutually exclusive. Raw data for the entire population were exported into SPSS® for statistical analysis. The statistical program's multiple response and frequencies functions created one frequency distribution table that included percentages for all the response options. *Qualtrics'* "answer range" function was applied to question 15. The function was enabled to allow respondents to select up to five answer options. If respondents selected more than five responses, they received an error message stating that up to five responses was the limit. Respondents did not receive the error message if they selected fewer than five responses or if

they opted to skip the question altogether. Respondents had the option of selecting “Other” by specifying their response in a text box below the question. These responses were exported into SPSS® for statistical analysis. A frequency distribution table with percentages summarized the data. A narrative explained the data in frequency tables.

The fourth and final research question (Are there any institutional publications or policies [i.e., college mission, strategic plan, college catalog, student handbook, etc...] that exist, or are slated to be developed, that address students’ physical health, particularly obesity?) was answered by survey items 11 and 12. Questions 11 and 12 aided in determining how formally integrated student health is in the community colleges’ campus culture and were presented in matrix tables. Again, respondents were restricted to selecting one answer per question. Question 11 included an “Other” answer option just in case the other predetermined answer responses were not applicable. Respondents were requested to specify their answer in the text box below the question if “Other” was the best answer. Based on *Qualtrics*’ expert technical support staff, it was best to put the text box directly under the matrix table instead of including it as part of the matrix table. The researcher was still able to collect respondents’ “Other” responses. The entire population’s responses to questions 11 and 12 were exported into SPSS®. The data were described in a frequency distribution table that included percentages. Frequency table data were explained in a narrative.

The researcher realized that the senior student affairs administrators who took the survey are busy people. It might have been easy for them to inadvertently overlook a survey question. Therefore, the researcher enabled *Qualtrics*’ “request response” function for each survey question. This helpful feature informed respondents if they missed a survey question on the page and highlighted the question/s the respondent intentionally or unintentionally skipped. *Qualtrics*

then provided respondents the options to either “answer the question” or “continue without answering.” Respondents had the right to skip any question/s or to opt out of taking the survey at any time without a penalty. “Request response” simply served as a gentle notification that an item/s had not been answered; the *Qualtrics* feature had the potential to increase item response rates.

Respondents were given an opportunity to provide “additional comments” at the end of the survey. Data retrieved from open-ended survey questions can be informative but very challenging to use in comparison to closed-ended survey data (Esuli & Sebastiani, 2010). However, the survey’s “additional comments” section was necessary, because respondents had a chance to provide data and insights that, possibly, the researcher did not consider. Comments from the “additional comments” section were not coded and entered into SPSS® due to time constraints and the large sample size, but comments were carefully reviewed for themes. The themes were discussed and some respondents’ comments were shared.

Table 1 is a summary of how survey questions were used to retrieve data that answered the study’s four research questions and how descriptive statistics were used for data analysis (see Table 1). Survey items 1-5 were purposely omitted from Table 1, because they were used solely to provide demographic information. The collected survey data provided a regional snapshot of institutions’ current standing regarding addressing college student obesity. The data are beneficial for state and regional comparisons.

### **Conclusion**

This section described the methods by which the study was undertaken to determine what, if anything, U.S. public SACS-accredited two-year institutions are doing to curb obesity among their students. Chapter IV will present results of the research.

Table 1

*Research Organizational Chart*

Research Questions	Survey Items	Descriptive Statistics Used
<p>Research Question 1: What, if anything, are public, two-year colleges in the SACS region doing to address obesity among their students?</p>	<p>Survey Items 9,10,13,14,16 and 17: 9. Has your institution formed an interdisciplinary committee that addresses obesity needs of your students? 10. During the last 12 months, did your institution offer obesity education/information to your students? 13. During the last 12 months, did any of the institutional departments below offer obesity prevention services (e.g., healthy food and beverage options, free exercise classes, obesity fact sheets and brochures) to students? If other, please specify. 14. During the last 12 months, were obesity prevention programs offered to your students by your institution? If other, please specify. 16. How does your institution deliver obesity-related health education and promotion information to your students? Check all that apply. 17. During the last 12 months, did your institution offer obesity treatment (e.g., weight loss programs) to your students?</p>	<p>Raw data for the whole sample were exported into SPSS® for statistical analysis. SPSS’s® multiple response and frequencies commands were used for Item 16 only. Frequency distributions with percentages representing the whole sample were the descriptive statistics used to summarize data for the entire population. Specified “Other” responses were carefully analyzed for themes. A narrative explained data in the frequency tables and the themes.</p>
<p>Research Question 2: What percentage of two-year institutions has conducted a comprehensive assessment/study of their students’ physical health in the past five years?</p>	<p>Survey Items 7 and 8: 7. Does your institution assess your students’ physical health and wellness behaviors and status? 8. How many full-time equivalent staff does your institution employ to assess your students’ physical health and wellness behaviors and status? Fill in the blank.</p>	<p>Raw population data were exported into SPSS® for statistical analysis. A frequency distribution table with percentages summarized the sample data. A narrative explained data in the frequency table.</p>
<p>Research Question 3: If two-year colleges are not addressing obesity, why not?</p>	<p>Survey Item 15: 15. Please select which, if any, barriers have challenged the success of your institution’s obesity prevention programs (Please choose up to five only.).</p>	<p>Raw data for the whole sample were exported into SPSS® for statistical analysis using SPSS’s® multiple response and frequencies commands. A frequency distribution table with percentages. Specified “Other” responses were carefully analyzed for themes. A frequency distribution table with</p>

		percentages summarized data for the entire sample. A narrative explained data in the frequency tables.
<p>Research Question 4:  Are there any institutional publications or policies (i.e., college mission, strategic plan, college catalog, student handbook, etc...) that exist, or are slated to be developed, that address students' physical health, particularly obesity?</p>	<p>Survey Items 11 and 12:  11. Indicate if any of the following institutional statements address, or are expected to address, student obesity. If other, please specify.  12. Does your institution have written policies on the items below?</p>	<p>The entire sample's responses were exported into SPSS®. Data were described using a frequency distribution table that included percentages. A narrative explained data in the frequency table.</p>

## CHAPTER IV:

### FINDINGS

#### **Introduction**

The purpose of this quantitative study was to review what, if anything, U.S. public, two-year SACS-accredited colleges classified as rural, suburban, and urban are doing to address obesity among their student populations. Every single college student is affected by his/her mental and physical health (Dunkle & Presley, 2009). Nichols (1973) and Sandeen (2004) agreed that there is a direct relationship between college student health and academic success. Healthy students are more prone to learn and remain in college until they reach their academic goal (Becker et al., 2009; Dalrymple & Purcell, 1976; George et al., 2008; Turner, & Hurley, 2002). According to Sax (1997), there is a gaping hole in empirical literature on community college students' health.

Community colleges are critically important to the higher education sector. Almost 50% of all undergraduates attend community colleges, and community colleges enroll more credit and noncredit students than any other educational sector (Floyd, 2003). In this study, the researcher sought to fill a void in empirical literature, give community colleges a personalized voice in scholarly literature, and to bring awareness about obesity among community college students to the forefront so that effective micro- and macro-interventions can be brainstormed, developed, applied, and evaluated for continuous improvement.

This chapter presents the data gathered from the 17-item cross-sectional, electronic survey distributed in Fall 2013 to senior student affairs professionals at 289 U.S. public, two-

year SACS-accredited colleges classified as rural, suburban, and urban. Descriptive statistics were used to analyze survey data.

Based on the Carnegie Classification 2010 Basic System, 74% (213 institutions) of the institutions were rural-serving small, medium, and large. Thirteen percent (36 institutions) were suburban-serving single and multicampus, and 14% (40 institutions) were urban-serving single and multicampus (see Table 2).

Table 2

*Number of Institutions Invited to Participate in the Study Population Based on the 2010 Carnegie Classification*

2010 Carnegie Classification	<i>f</i>	% of Total Sample
Rural-serving small, medium, and large	213	73.7%
Suburban-serving single and multi-campus	36	12.5%
Urban-serving single and multi-campus	40	13.8%
Total Invited	289	100.0%

The 289 invited institutions' geographic locations stretched across SACS's 11-state region. Twenty-four institutions were in Alabama, 20 institutions were in Florida, and 33 institutions were in Georgia. Sixteen institutions represented Kentucky. Louisiana and Tennessee had the smallest number of institutions, 9 and 13, respectively. North Carolina had 58 institutions, South Carolina had 16 institutions, and Mississippi had 15 institutions. Texas had 62 institutions, the most of any state in the total sample. And, finally, Virginia had 23 institutions. North Carolina had the highest survey return rate (over 20%); Tennessee had the lowest survey return rate (3%). When each individual state's response percentage was compared, South Carolina had the largest response percentage (56%) while Tennessee had the smallest (23%). South Carolina represented approximately 6% of the SACS institutions invited

to participate in the study, but the state’s individual survey response percentage was almost 60%, the highest among the 11 states. Louisiana had the second highest survey response percentage, 44%, although the state represented the smallest percentage (3%) of SACS institutions invited to participate in the study. The total survey response rate was 33%. The data are organized in Table 3.

Table 3

*SACS Institutions’ Survey Response Rate*

State	SACS Institutions		Surveys		
	Number Invited	% of SACS institutions	Returned Surveys	% of Returned Surveys	Response Percentage
Alabama	24	8.3%	6	6.3%	25%
Florida	20	6.9%	8	8.4%	40%
Georgia	33	11.4%	8	8.4%	24%
Kentucky	16	5.5%	6	6.3%	38%
Louisiana	9	3.1%	4	4.2%	44%
Mississippi	15	5.2%	5	5.3%	33%
North Carolina	58	20.1%	21	22%	36%
South Carolina	16	5.5%	9	9.5%	56%
Tennessee	13	4.5%	3	3.2%	23%
Texas	62	21.5%	17	17.9%	27%
Virginia	23	8.0%	8	8.4%	35%
Total	289	100.0%	95	100.0%	33.0%

**Results**

**Consent Form**

The IRB approved consent form preceded the electronic survey sent to 289 senior student affairs administrators. Respondents selected *Yes* or *No* regarding whether or not they read,

understood, and agreed to the consent form. Respondents who answered *No* were taken to the end of the survey and thanked for their time. Respondents who answered *Yes* proceeded to the first survey question. Only those who proactively indicated their understanding of the study information and wished to take part were presented with the opportunity to see and complete the survey. Out of 96 respondents, 95 (99%) consented to participate in the study by taking the survey. One respondent (1%) decided not to participate in the research study. The survey response rate was 33% (see Table 3). The overall response rate was lower than the researcher anticipated, but the study's findings are still relevant and useful baseline data.

Survey items 1-5 in Part I of the survey gathered professional information about the respondents and demographic information about their respective institutions.

*Demographic question 1: Please indicate your job title.* This was an open-ended, text entry survey question which enabled respondents to manually enter their job title into a text box. Out of 95 respondents, 94 (99%) self-reported their job titles. See Appendix D for an alphabetized list of respondents' job titles. Their titles varied based on the institution and the scope of their responsibilities, but 75% (71 respondents) indicated they were either Vice President of Student Affairs or Vice President of Student Services. Other senior-level leadership positions indicated were Chief Student Affairs Officer, Vice Chancellor of Student Affairs, and Deans of Student Affairs, Services, and Development. Some might or might not consider a dean's position to be a senior-level position. This, however, depends upon the institution's governance and organizational structure. Three respondents indicated they were Wellness Directors/Specialists. One respondent did not indicate a job title. Table 4 presents respondents' categorized job titles.

Table 4

*Respondents' Job Titles*

Job Titles	<i>f</i>	% of Total Sample
Vice President	71	74.7
Dean	16	16.8
Chief Student Affairs Officer	2	2.1
Wellness Director/Specialist	3	3.2
Vice Chancellor of Student Affairs	2	2.1
No Response	1	1.1
Total	95	100.0

*Demographic question 2: In which state is your institution located?* All 95 respondents responded, and 100% of the 11 states invited to participate in the study were represented. North Carolina had 21 respondents, the most of any other state. Together North Carolina and Texas represented over one-third of the responses. Texas had 17 respondents. Tennessee had three respondents, the smallest number of participants. Louisiana had four respondents (see Table 3).

*Demographic question 3: Is your institution primarily a commuter institution?* All 95 respondents (100%) answered this question. A majority of respondents, 87 (92%) indicated that their institution was a commuter institution. The remaining eight respondents (8%) indicated the opposite. Table 5 represents collected data.

Table 5

*Is Your Institution Primarily a Commuter Institution?*

Commuter Institution?	<i>f</i>	% of Total Sample
Yes	87	91.6
No	8	8.4
Total	95	100.0

*Demographic question 4: What is your institution's current academic year student enrollment?* One hundred percent of respondents answered the survey question. Two categories, 2,000 to 4,999 and 5,000 to 9,999, received two-thirds of the responses. Table 6 presents the data.

Table 6

*Respondents' Institutions' Current Academic Year Student Enrollment*

Student Enrollment	<i>f</i>	% of Total Sample
Under 1,000	5	5.3
1,000 to 1,999	8	8.4
2,000 to 4,999	36	37.9
5,000 to 9,999	28	29.5
10,000 to 14,999	5	5.3
15,000 to 19,999	6	6.3
20,000 to 24,999	1	1.1
25,000 to 29,999	1	1.1
30,000 to 39,999	1	1.1
40,000 +	4	4.2
Total	95	100.0

*Demographic question 5: What percentage of students at your institution is currently receiving financial aid?* All 95 respondents answered the question. The top two responses were

71%-80% and 81%-90%. Over 40% of respondents acknowledged that between 71% and 90% of their students received financial aid. Ten percent of respondents indicated that 91% to 100% of their students were financial aid recipients. The data are presented in Table 7.

Table 7

*Percentage of Students Currently Receiving Financial Aid*

Students Receiving Financial Aid	<i>f</i>	% of Total Sample
21%-30%	1	1.1
31%-40%	6	6.3
41%-50%	14	14.7
51%-60%	10	10.5
61%-70%	14	14.7
71%-80%	24	25.3
81%-90%	17	17.9
91%-100%	9	9.5
Total	95	100.0

*Demographic question 6: Is your institution a member of the American College Health Association?* This was the final demographic question on the survey. All respondents (100%) answered the question. Over one-half, 59 respondents (62%), indicated they were not members of the ACHA. Almost one-third of the respondents were unsure if they were members or not. Six respondents (6%) revealed they were ACHA members. Table 8 shows the data. Survey findings indicated that five of the six ACHA member institutions were commuter colleges.

Table 8

*Is Your Institution a Member of the American College Health Association?*

ACHA Member?	<i>f</i>	% of Total Sample
Yes	6	6.3
No	59	62.1
Not sure	30	31.6
Total	95	100.0

**Research Questions**

*Research Question 1: What, if anything, are public, two-year colleges in the SACS region doing to address obesity among their students?* Survey items 9, 10, 13, 14, 16, and 17 gathered data to answer the first research question.

Item 9 asked respondents, “Has your institution formed an interdisciplinary committee that addresses obesity needs of your students?” Of 95 respondents, 91 (96%) reported their institution had not formed an interdisciplinary committee that addressed obesity needs of their students. Only 3 out of 95 respondents (3%) indicated their institution had formed a specialized committee. One (1%) respondent was not sure whether or not a committee had been established (see Table 9).

Table 9

*Has Your Institution Formed an Interdisciplinary Committee That Addresses Obesity Needs of Your Students?*

Formed an Interdisciplinary Committee?	<i>f</i>	% of Total Sample
Yes	3	3.2
No	91	95.8
Not sure	1	1.1
Total	95	100.0

The three institutions that had formed an interdisciplinary committee had some other common survey responses. All of them had a Health Promotion/Wellness Department that offered obesity prevention services (e.g., healthy food and beverage options, free exercise classes, obesity fact sheets and brochures) to students during the last 12 months. Each institution offered obesity education within the past year on an ongoing or periodic basis. Two of the institutions had written policies on providing physical activity opportunities to students; the third expected to implement a similar policy within the next year. The three respondents' common survey responses could have possibly been influenced by the fact that they have an interdisciplinary committee in place to address student obesity. Of the 91 institutions that had not formed an interdisciplinary committee, descriptive statistics found that 51 institutions, nearly 60% of them, did not have a Health Promotion/Wellness Department. Fifty-eight institutions, over 60%, had not offered obesity education within the past year on an ongoing or periodic basis, and over half of the 91 institutions, 49, did not have written policies on providing physical activity opportunities to students.

Survey item 10 asked, "During the last 12 months, did your institution offer obesity education/information to your students?" One hundred percent of respondents answered the question. Over 60% (58 respondents) indicated *no* to this question. A distant second, 25% (24 respondents), indicated their institutions periodically offered obesity education/information to their students. Seven percent (7 respondents) were not sure if their institution offered obesity education/information to students. Six percent (6 respondents) offered obesity education/information to students on an ongoing basis (see Table 10).

Table 10

*During the Last 12 Months, Did Your Institution Offer Obesity Education/Information to Your Students?*

Offered Obesity Education/Information?	<i>f</i>	% of Total Sample
Yes, ongoing	6	6.3
Yes, periodically	24	25.3
No	58	61.1
Not sure	7	7.4
Total	95	100.0

Survey question 13 inquired, “During the last 12 months, did any of the institutional departments below offer obesity prevention services (e.g., healthy food and beverage options, free exercise classes, obesity fact sheets, and brochures) to students? If other, please specify.” From 90 to 94 out of 95 respondents provided an answer to each of the matrix questions. Campus recreation/fitness center (46%), health promotion/wellness (43%), and Human Resources (Benefits Office or similar area within HR) [37%] were the top three departments respondents said offered obesity prevention services at their institutions within the past year. There were 12 (1%) text responses in the *Other* category. One theme from text responses was that some of the answer options did not apply to their institutions because they were two-year colleges and/or commuter colleges; a *Not applicable* answer option was suggested by a respondent. The same respondent indicated that he/she selected “not sure” for the survey question. Other comments noted the Student Government Association’s (SGA) involvement. One institution’s SGA launched the “U-Knighted 4 Fitness” campaign in 2012-2013. During the campaign, the SGA offered weekly activities on campus. Another respondent mentioned how their SGA provided healthy snacks at campus events and offered free exercise classes. Meanwhile, another respondent informed the researcher that their institution sponsored a *Biggest*

*Loser* weight-loss contest. Respondents also commented that their cafeteria offered healthy food choices and student activities and the fitness center collaborated to integrate obesity prevention measures on campus. Another respondent mentioned a “Peer Wellness Program” but did not provide any specific details. Table 11 provides a breakdown of the data based on the institutional departments respondents selected.

Table 11

*Institutional Departments that Offered Obesity Prevention Services*

Institutional Departments	Yes	No	Not sure	Responses
Campus Recreation/Fitness Center	43 (46%)	46 (50%)	4 (4%)	93
Dining Services	33 (35%)	56 (60%)	5 (5%)	94
Environmental Health and Safety	9 (10%)	80 (85%)	5 (5%)	94
Health and Wellness Committee/Coalition	25 (27%)	60 (65%)	8 (9%)	93
Health Promotion/Wellness	40 (43%)	51 (54%)	3 (3%)	94
Human Resources (Benefits Office or Similar Area Within HR)	34 (37%)	53 (57%)	6 (6%)	93
Intercollegiate Athletics	29 (31%)	61 (65%)	4 (4%)	94
LGBTQ Resource Center	0 (0%)	87 (95%)	5 (5%)	92
Medical Center	7 (8%)	81 (87%)	5 (5%)	93
Women’s Resource Center	3 (3%)	83 (92%)	4 (4%)	90

Survey item 14 asked, “During the last 12 months, were obesity prevention programs offered to your students by your institution? If other, please specify.” From 92 to 94 respondents out of 95 provided an answer to each of the matrix questions. On-site physical activity and/or fitness (58%, 54 respondents), providing healthy choices in vending machines

(45%, 42 respondents), and on-campus walking programs (39%, 37 respondents) were commonly offered by the institutions on either an ongoing or periodic basis (see Table 12).

Table 12

*Breakdown of Obesity Prevention Programs Offered*

Obesity Prevention Program Offered?	Yes, ongoing	Yes, periodically	No	Not sure	Responses
Health Risk Assessment (e.g., survey, interview, etc...) with coaching follow-up	5 (5%)	10 (11%)	75 (80%)	4 (4%)	94
Health Risk Assessment (e.g., survey, interview, etc...) with no coaching follow-up	5 (5%)	11 (12%)	72 (77%)	6 (6%)	94
Labeling healthy food choices in the cafeterias	13 (14%)	6 (6%)	72 (77%)	3 (3%)	94
On-campus walking program	19 (20%)	18 (19%)	55 (59%)	2 (2%)	94
On-site physical activity and/or fitness education/program	39 (42%)	15 (16%)	38 (40%)	2 (2%)	94
Providing healthy choices in vending machines	26 (28%)	16 (17%)	46 (49%)	6 (6%)	94
Self-care books/tools	9 (10%)	11 (12%)	67 (72%)	6 (6%)	93
Signage to encourage stairwell use	2 (2%)	6 (7%)	82 (88%)	3 (3%)	93
Subsidies/reduced price for off-campus Fitness/Recreation Center memberships	13 (14%)	6 (7%)	71 (77%)	2 (2%)	92
Weight management program	11 (12%)	10 (11%)	71 (76%)	2 (2%)	94
Weight screenings	8 (9%)	13 (14%)	70 (74%)	3 (3%)	94

There were four (4%) *Other* text responses. Two respondents commented that their cafeteria or restaurant offered healthy food options. One respondent specifically mentioned a student-led SGA initiative in 2012-2013 that offered healthy cafeteria options based on the U.S. Department of Agriculture's *Choose My Plate* program. Other comments mentioned a wellness class offered

to students at the institution’s fitness center and how faculty, staff, students, and alumni were able to use the fitness center for free. At one institution, “activity fees” enabled students to get a campus fitness center membership. In sum, an overwhelming majority of respondents stated they did not offer the predetermined obesity prevention programs to their students. In fact, respondents selected the *No* answer option over two and one-half times more than *Yes, ongoing* and *Yes, periodically* combined (see Table 13).

Table 13

*During the Last 12 Months, Were Obesity Prevention Programs Offered to Your Students By Your Institution?*

Obesity Prevention Program Offered?	<i>f</i>	% of Total Sample
Yes, ongoing	150	14.5%
Yes, periodically	122	11.8%
No	719	69.8%
Not sure	39	3.8%
Total	1030	100.0%

Survey question 16 asked, “How does your institution deliver obesity-related health education and promotion information to your students? Check all that apply.” Ninety-three out of 95 respondents (98%) answered the question. Because respondents were able to select all answer choices that applied to their institution, a total of 190 answer selections were made. The wellness/health fair/event answer option was the most popular delivery method of obesity-related health education and promotion information. Forty respondents (21%) selected this answer option. Almost the same number of respondents, 39 (21%), indicated the question was *None/not applicable*. Email (mass send) and flyers were popular responses, too. Together email (mass send) and flyers accounted for 50 responses (26%). Five *Other* text responses provided

additional feedback from respondents. One respondent indicated that their institution offered a wellness class that delivered obesity-related health education and promotion information to students. In that same vein, another respondent commented that physical education was part of the core curriculum to earn an associate degree; students are required to take a class called *The Healthy American*. Another respondent commented that its designation as a military junior college required students to participate in a physical fitness/wellness program and physical training. A third respondent stressed that wellness was interwoven and emphasized throughout the campus community. The final two comments indicated that athletes were given regular fitness exams and health information and that Student Activities covered the personnel cost to operate a campus “weight center” (see Table 14).

Table 14

*Delivery of Obesity-related Health Education and Promotion Information to Students*

Delivery Method	<i>f</i>	% of Total Sample	% of Respondents
Email (mass send)	24	12.6%	25.3%
Flyers	26	13.7%	27.4%
Health coaching	3	1.6%	3.2%
Health tracker	1	0.5%	1.1%
Links to resources (e.g., CDC)	12	6.3%	12.6%
Lunch-and-learn sessions	8	4.2%	8.4%
Newsletters (online or paper)	11	5.8%	11.6%
Nurse online	2	1.1%	2.1%
Social media	12	6.3%	12.6%
Text messaging/instant messaging	2	1.1%	2.1%
Web-based portal	5	2.6%	5.3%
Wellness/health fair/event	40	21.1%	42.1%
None/not applicable	39	20.5%	41.1%
Other	5	2.6%	5.3%
Total	190	100.0%	

Question 17 inquired, “During the last 12 months, did your institution offer obesity treatment (e.g., weight loss programs) to your students?” All 95 survey participants responded to question 17. Although 13 (13%) institutions offered obesity treatment to students on an ongoing or periodic basis, 81 respondents (85%) did not. One respondent (1%) was unsure whether or not the institution offered obesity treatment to their students (see Table 15).

Table 15

*During the Last 12 Months, Did Your Institution Offer Obesity Treatment?*

Offered Obesity Treatment?	<i>f</i>	% of Total Sample
Yes, ongoing	6	6.3
Yes, periodically	7	7.4
No	81	85.3
Not sure	1	1.1
Total	95	100.0

*Research Question 2: What percentage of two-year institutions has conducted a comprehensive assessment/study of their students’ physical health in the past five years?* Survey items 7 and 8 answered Research Question 2. Item 7 inquired, “Does your institution assess your students’ physical health and wellness behaviors and status?” All 95 survey participants responded to survey item 7. Eighty-six respondents (91%) did not assess students’ physical health and wellness behaviors and status. A total of seven respondents (7%) assessed students’ physical health and wellness behaviors and status annually or more frequently or either every other year. Two respondents (2%) were not sure if their institution assessed students’ physical health and wellness behaviors and status. Table 16 presents the survey findings.

Table 16

*Does Your Institution Assess Your Students' Physical Health and Wellness Behaviors and Status?*

Assess Students' Physical Health, Wellness Behaviors and Status?	<i>f</i>	% of Total Sample
Yes (annually or more frequently)	6	6.3
Yes (every other year)	1	1.1
No	86	90.5
Not sure	2	2.1
Total	95	100.0

Item 8 inquired, “How many full-time equivalent staff does your institution employ to assess your students’ physical health and wellness behaviors and status? Fill in the blank.” This was another open-ended question that required participants to manually enter a text answer. There were 87 out of 95 responses to this question. The answers ranged from *Not sure* to *five full-time equivalent staff*. Zero was, by far, the most popular response. Seventy respondents (74%) indicated no full-time equivalent staff was dedicated to assessing their students’ physical health and wellness behaviors and status. One respondent indicated that the outsourced service was offered solely to athletes. Of the six institutions that indicated they were ACHA members, survey findings found that five of them employed at least one full-time equivalent staff member to assess students’ physical health. Table 17 presents the results of survey data for item 8.

The researcher cross-analyzed survey item 8 (number of full-time equivalent staff) and demographic question 5 (current academic year student enrollment). An institution whose current student enrollment was 10,000-14,999 had the most, five, full-time equivalent staff devoted to assess students’ physical health and wellness behaviors and status. An institution

with at least 40k students employed four full-time equivalent staff. Institutions in the study with the following current academic student enrollments did not employ any full-time staff to assess students' physical health and wellness behaviors and status: below 1,000; 25,000-29,999; and 30,000-39,999.

Table 17

*Number of Full-time Equivalent Staff to Assess Students' Physical Health*

Number of Full-time Equivalent Staff	<i>f</i>	% of Total Sample
0	70	73.7
1	4	4.2
1.5	1	1.1
2	6	6.3
3	2	2.1
4	1	1.1
5	1	1.1
Not sure	1	1.1
Outsource-athletes only	1	1.1
No response	8	8.4
Total	95	100.0

*Research Question 3. If two-year colleges are not addressing obesity, why not?* Research Question 3 was answered by survey item 15. Item 15 asked respondents to “Please select which, if any, barriers have challenged the success of your institution’s obesity prevention programs. (Please choose up to five only.)” Out of 95 respondents, 94 (99%) answered the survey question. Collectively, the 13 answered options received a total of 215 responses. The cost to offer the program and lack of staff resources tied for the most responses. Each answer option received 38 (18%) responses. A short distance behind, in second place, was *None/not applicable*. Thirty-four (16%) respondents indicated addressing obesity did not apply to their institution. Twenty-

five (12%) respondents cited a lack of student interest as challenging the success of an obesity prevention program. Nine *Other* responses (4%) were indicated. Some acknowledged that addressing obesity was not a priority, and they needed more staff, if any, to manage an obesity program. One respondent indicated addressing obesity was not part of the institution's mission. The lack of funding was another common theme among the comments. A respondent noted that addressing obesity was not emphasized on the state level; therefore, funding was not available to support it. Other reasons given for not addressing obesity on their campuses were that the institution was a commuter college, and the topic had not been discussed on campus (see Table 18).

Table 18

*Why Obesity is Not Addressed*

Reasons Why Obesity is not Addressed	<i>f</i>	% of Total Sample	% of Respondents
Confidentiality concerns	6	2.8%	6.3%
Cost of offering the program	38	17.7%	40%
Demonstrating program results	1	0.5%	1.1%
Effective marketing	7	3.3%	7.4%
Lack of access to data	10	4.7%	10.5%
Lack of student interest	25	11.6%	26.3%
Lack of integration with other programs/services	14	6.5%	14.7%
Lack of participation by the target population	8	3.7%	8.4%
Lack of senior management support	6	2.8%	6.3%
Lack of staff resources	38	17.7%	40%
Lack of participation by students	16	7.4%	16.8%
Regulatory issues such as HIPAA	3	1.4%	3.2%
None/not applicable	34	15.8%	35.8%
Other	9	4.2%	9.5%
Total	215	100.0%	

*Research Question 4. Are there any institutional publications or policies (i.e., college mission, strategic plan, college catalog, student handbook, etc.) that exist, or are slated to be developed, that address students' physical health, particularly obesity?* The fourth and final research question was answered by survey items 11 and 12. Question 11 asked respondents to “Indicate if any of the following institutional statements address, or are expected to address, student obesity. If other, please specify.” One hundred percent of respondents answered survey item 11. An overwhelming majority, at least 88%, selected *No* to each answer option (i.e., college mission, college catalog, strategic plan, and student handbook) when asked if their institutional statements addressed student obesity (see Table 19). Five respondents provided a text entry answer in the *Other* text box. A couple of the respondents commented that their institutional statements addressed student health and wellness but not obesity specifically. One respondent indicated that “more than 70% of our students must maintain height and weight standards to pursue a career in the United States military.” Another respondent wrote that their wellness center offered health, nutrition, and physical education classes, which addressed obesity, every day.

Table 19

*Indicate If Any of the Following Institutional Statements Address, Or Are Expected to Address, Student Obesity?*

Institutional Statement Addresses Obesity?	Yes	No	Expected within the next year	Not sure
College Mission	4 (4%)	89 (94%)	1 (1%)	1 (1%)
College Catalog	2 (2%)	89 (94%)	1 (1%)	3 (3%)
Strategic Plan	4 (4%)	87 (92%)	2 (2%)	2 (2%)
Student Handbook	4 (4%)	84 (88%)	3 (3%)	4 (4%)

Question 12 inquired, “Does your institution have written policies on the items below?” (i.e., offering students healthy food and beverage choices in the cafeteria and/or on-campus food outlets, offering students healthy food and beverage choices in vending machines, providing students healthy food and beverage choices at functions/events, and providing physical activity opportunities to students). All 95 respondents responded to each of the four questions in the matrix table. Most respondents indicated their institutions did not have written policies (see Table 20). Thirty-nine respondents (41%) indicated that their institutions provided physical activity opportunities to students. This physical activity answer option was the highest of any of the four categories. A few, eight respondents (2%), indicated they were expecting to have written policies within the next year.

Table 20

*A Breakdown of Written Policies and Respondents’ Responses*

Written Policies on these Items?	Yes	No	Expected within the next year	Not sure	Responses
Offering students healthy food and beverage choices in the cafeteria and/or on-campus food outlets	18 (19%)	75 (79%)	1 (1%)	1 (1%)	95
Offering students healthy food and beverage choices in vending machines	23 (24%)	70 (74%)	1 (1%)	1 (1%)	95
Providing students healthy food and beverage choices at functions/events	21 (22%)	70 (74%)	2 (2%)	2 (2%)	95
Providing physical activity opportunities to students	39 (41%)	50 (53%)	4 (4%)	2 (2%)	95
Total Responses	101 (26.6%)	265 (69.7%)	8 (2.1%)	6 (1.6%)	380

The respondents had the opportunity to provide “Additional Comments” at the end of the survey. Twelve respondents provided additional comments. A couple of themes emerged. The

first theme was the importance of the obesity topic. Some thanked the researcher for heightening awareness about the issue and even acknowledged that their institution should or could do more to address student obesity. Conversely, others did not consider the obesity topic important at all and affirmed their stance by making comments such as the topic was not a “big issue” and “Our institution focuses on student learning and graduation. It has traditionally not been a part of our programming.”

A second recurring theme was collaboration among campus departments and the community. One person remarked that their orientation class “educates the students on fitness and the prevention of obesity during the college age years.” Several respondents mentioned that their health, physical education, and nutrition classes were instrumental in addressing student obesity. Another respondent remarked that on- and off-campus students can take advantage of the institution’s health and wellness offerings. One respondent informed the researcher about its collaboration with Weight Watchers; the organization had been invited to its largest campus to offer classes. Another respondent chimed in on partnering with the community. The participant commented that most of their students are the “working poor,” and their institution has provided a food pantry, thanks to donors, to assist students with basic food needs. Per the respondent, this is the institution’s priority right now. Other recurring themes, as discussed earlier, were the lack of funding and the fact that the institutions are two-year colleges and/or commuter institutions.

One final comment in the “Additional Comments” section was that the survey was “challenging,” because “wellness and obesity are similar but very different.”

### **Findings**

The purpose of this research was to review what, if anything, U.S. public, two-year colleges accredited by SACS, and classified as rural, suburban, and urban, are doing to address

obesity among their student populations. Descriptive statistics were used to paint a regional picture of the total population's efforts.

### **Finding 1**

*Based on descriptive statistics, it appears that more can be done to address student obesity at these two-year, SACS-accredited institutions.* A few of the institutions had put forth some effort to address obesity by, for example, offering on-site physical activity and/or fitness options, healthy vending machine options, and walking programs. However, it was uncommon for the institutions to have institutional departments that offered obesity prevention services. Thus, the likelihood of extending obesity prevention programs to students was very slim. Over 60% of respondents had not offered obesity education/information to students in the past 12 months. More than 20% of respondents believed that distributing obesity-related health education and promotion information to students did not apply to them. Institutions that distributed obesity-related health education and promotion were most likely to distribute the information at a wellness/health fair event. Ninety-six percent of the institutions had not formed an interdisciplinary committee that addressed student obesity. While 6% of respondents indicated they were ACHA members, over five times as many were not sure if they were ACHA members or not. Most respondents, 62%, indicated that they were not ACHA members.

### **Finding 2**

*Institutions were not likely to conduct a comprehensive assessment/study of their students' physical health.* Over 90% of the institutions did not assess students' physical health and wellness behaviors and status. A tiny portion of the institutions, 7%, assessed students' physical health and wellness behaviors and status annually, or more frequently or every other year. Two respondents (2%) were not sure whether or not their institution assessed student

health. More than 70% of institutions did not employ any full-time equivalent staff to assess students' physical health and wellness behaviors and status.

### **Finding 3**

*Financial resources affect if and how student obesity was addressed.* Respondents often voiced how fiscal resources were not available to develop and implement programs and to employ staff to administer the programs. Survey results found that a lack of fiscal resources and staff were respondents' top two barriers that prevented them from addressing student obesity. Over 70% of respondents did not employ any full-time equivalent staff to assess their students' physical health and wellness behaviors.

### **Finding 4**

*It appears some of the institutions are collaborating.* A few respondents commented that their institutions collaborated with others on- and off-campus to address student obesity. From student-initiated (e.g., SGA-sponsored) activities outside the classroom to formal health, wellness, and nutrition classes, a few of the institutions collaborated with others. One respondent, however, indicated that all students earning an associate degree were required to take a physical education course. Institutions need to conduct extensive research before implementing a mandatory health course that would include obesity education. A combination of institutional data and data from external sources should determine whether or not an across-the-curriculum health course is offered.

### **Finding 5**

*Campus culture seems to play a role in how student obesity is viewed and addressed.* Nearly one-fifth of respondents did not believe that addressing obesity was applicable to their institution. A few respondents commented that addressing student obesity was unimportant to

their institutions and to state-level policymakers; therefore, it was not addressed. Nearly 90% of respondents indicated that student obesity was not addressed in their college mission, college catalog, strategic plan, and/or student handbook. Two institutions cited how the campus culture promoted students' optimal physical health. One institution required students earning an associate degree to take a physical education course. The second institution required students to meet certain weight and height restrictions to acquire a military career. Other respondents indicated how they hosted activities on campus that promoted obesity prevention and control.

### **Finding 6**

*Forming an interdisciplinary committee that addresses student obesity might increase the likelihood of obesity control and prevention services.* Only three out of 95 respondents indicated that their institution had formed an interdisciplinary committee that addressed obesity. Ninety-one respondents had not formed a committee. One respondent was not sure whether or not a committee had been established. Each of the three institutions that had formed an interdisciplinary committee had a Health Promotion/Wellness Department that offered obesity prevention services and obesity education to students during the past 12 months. Two of the institutions had written policies on providing physical activity opportunities to students; the third expected to implement a similar policy within the next year. Conversely, of the 91 institutions that had not formed an interdisciplinary committee, over half of them, 51 institutions, did not have a Health Promotion/Wellness Department. Out of the 91 respondents, 58 had not offered obesity education within the past year, and 49 out of the 91 institutions did not have written policies on providing physical activity opportunities to students.

## Summary of Findings

The study's six findings were grounded in sound conceptual frameworks and substantiated by empirical literature. The findings are not indicative of all two-year colleges, but the data are still meaningful.

The first finding revealed that some institutions attempted to address curbing obesity, but some institutions chose not to because the topic was perceived as unimportant and/or addressing obesity did not apply to them. This is unfortunate that some of the institutions did not view student obesity as important when obesity is "common" among college students (Prescott, 2011, p. 468). This finding illustrated that the entire student is not being developed at some institutions. Educating the whole student is higher education's mission (ACE, 1937, 1949; Doyle, 2004; Palmer & Zajonc, 2010). Students' physical development is a part of the educating the whole student (Doyle, 2004). Aside from the military, college and university campuses have the opportunity to reach countless students with health promotion interventions (Brindis & Reyes, 1997). Healthy students are more likely to persist in college and reach their academic goal (Becker et al., 2009; Dalrymple & Purcell, 1976; George et al., 2008; Turner, & Hurley, 2002). When students reach their academic goal, it is an indicator that the institution fosters student success (Kuh et al., 2007), which is favorably viewed by accrediting agencies, governing entities, state legislators, and the general public. If students dropout, the institution will lose income generated from tuition (Brindis & Reyes, 1997). Kuh et al. (2007) stated that student success is advantageous to the individual student, the institution, and society. Institutions need to recognize student obesity's potential to impact students, the institution, and society and capitalize on their accessibility to students to curb obesity.

The second finding revealed that institutions in the study were not likely to conduct a comprehensive assessment/study of their students' physical health. A direct relationship between student health and academic success exists (Fullerton, 2011; Nichols, 1973; Sandeen, 2004). Assessing students' physical health and developing customized interventions for students is part of educating the entire student (ACE, 1937). The implication of this finding is that if institutions are not assessing students' physical health, then they do not have any concrete data upon which to develop health programs specific to their students' needs (Swinford, 2002). A comprehensive assessment or study of their students' physical health can minimize wasting precious resources on health prevention and treatment programs that have been built upon trial-and-error. With limited fiscal resources, funds need to be used wisely and promote and to sustain student success on their campuses (Kuh, 2009).

The third finding noted that funding was a barrier that hindered institutions from addressing or adequately addressing student obesity. Fewer funds are allocated to research and support community college health in comparison to allocations to four-year institutions for the same purposes (Floyd, 2003; Brindis & Reyes, 1997). This is the case given the facts that two-year colleges educate nearly one-half of all undergraduate students (Cohen & Brawer; Floyd, 2003) and broader health issues are found among two-year students because of the institutions' open admissions policy (Nichols, 1973). The implication is that students who need obesity prevention and treatment services and programs the most are less likely to receive them (CDC, 1997; Floyd, 2003; Quintiliani et al., 2011) due to inadequate funding. Advocating for community colleges on the local, state and national levels (AACC, 2012) is also an opportunity to give student obesity a voice. ACHA (2009) advocates for and advances the health needs of students at colleges and universities nationwide. The catch is that they advocate for their

*members* (ACHA, 2009). Only 6 out of 95 institutions in the study were ACHA members. More institutions in the study need to become ACHA members or members of another reputable organization that advocates for college student health.

The fourth finding indicated that some institutions were collaborating with faculty, staff, and students to curb student obesity. The implication is that campus-wide collaborations increase the likelihood of obesity prevention services and programs succeeding (Sparling, 2007). Others implications are that student input also increases the likelihood that student obesity services and programs will succeed (Prescott, 2007, 2011) and student involvement heightens the chances that students will persist in college (Astin, 1985, 1999). Another important implication of the collaborations is that more nontraditional students are able to participate in obesity services and programs when collaborations exist at two-year institutions (Fullerton, 2011).

The fifth finding revolved around how campus culture determined how student obesity was viewed and addressed. Some institutions did not believe the topic was an important issue. The implication is that if administrators do not consider student obesity to be important, then the institution will have few, if any, prevention and treatment services (Sparling, 2007). Therefore, an important aspect of the student's life is being neglected (Doyle, 2004). Healthy People 2020 advocates for increasing awareness on college campuses about "determinants of health, disease, and disability and the opportunities for progress" (ACHA, n.d., p. 1). Health professionals should not become frustrated and abandon their willingness or efforts to curb student obesity on their campus if their institution is not interested in curbing student obesity. Institutional initiatives are only as successful as the buy-in from administrators (Sparling, 2007).

The sixth finding discovered that the institutions in the study that had formed an interdisciplinary committee to address obesity were more likely in comparison to institutions

without an interdisciplinary committee to have a Health Promotion/Wellness Department and written policies that supported curbing obesity. The study's findings are not indicative of all two-year colleges. However, the implication is that the establishment of an interdisciplinary committee to address obesity might increase the prevalence of obesity prevention and treatment services and programs at two-year institutions. Sparling (2007) stated that institutional-wide approaches are more successful.

Chapter IV presented the results of the data analyses used to answer the four research questions framing the study. Descriptive statistics were utilized to analyze the data. The next, and final, chapter will present findings and conclusions based upon data analysis and provide recommendations for policymakers, faculty, students, and practitioners, along with recommendations for future research.

## CHAPTER V:

### CONCLUSIONS AND RECOMMENDATIONS

#### **Introduction**

Again the purpose of the study was to review what, if anything, U.S. public, two-year colleges accredited by SACS, and classified as rural, suburban, and urban, are doing to address obesity among their student populations. Almost one-half of college students who received a four-year degree were enrolled in a community college sometime during their time in college (Kirkwood & Riegelman, 2011). Community colleges are ideal higher education institutions for many people because of their close proximity to students' homes, small student-to-faculty ratio, economical tuition, and their open admissions policy (Cohen & Brawer, 2003).

Considering their open admissions policy, community colleges are more likely to observe a broader range of health concerns among their students in comparison to students who attend four-year institutions (Nichols, 1973). Dunkle and Presley (2009) stated that all college students are affected by their mental and physical health. There is a direct relationship between college student health and academic success (Nichols, 1973; Sandeen, 2004). Over 30% of college students are overweight or obese (Freedman, 2010). Obesity and its physical, emotional, and social comorbidities can affect student success. According to the CDC, people who live in the Southern U. S. region are more prevalent to obesity and its comorbidities (CDC, 2012a).

This study was important because more empirical data on community college students' health are needed to fill a void in higher education literature and to increase topic awareness. Addressing student health concerns in two-year colleges is challenging because of scarce empirical research (Sax, 1997). It was pointed out by respondents several times that obesity had

not been discussed at their institutions, and it was not a top priority. Research and awareness can trigger educated, problem-solving discussions that lead to healthier American college students, college campuses, communities, regions, states, and, ultimately, a healthier country. Effective interventions have the potential to impact our global society.

The research participants who received the electronic 17-item cross-sectional survey in Fall 2013 were senior student affairs administrators at 289 U.S. public, SACS-accredited community colleges classified as rural, suburban, and urban. Descriptive statistics were used to organize, analyze, and interpret survey data. The researcher's primary goal was to simply present total sample data. The regional data collected in this study can be assessed and built upon for further research. Chapter IV presented the data and discussed some emerging themes. Chapter V will individually discuss the study's four leading research questions to highlight findings and to better understand what, if anything, public, two-year SACS-accredited American colleges classified as rural, suburban, and urban are doing to address obesity among their student populations.

## **Answers to Research Questions**

### **Research Question 1**

*What, if anything, are public, two-year colleges in the SACS region doing to address obesity among their students?* As Chapter IV discussed, six survey questions were devoted to collecting data to answer this research question. Respondents were asked if they had formed an interdisciplinary committee that addressed obesity needs among their students. The researcher found that 96% of the institutions had not formed an interdisciplinary committee--only 3% had. One percent of the total sample was not sure if their institution had formed an interdisciplinary committee or not. Almost none of the institutions had a specialized committee tasked with

addressing student obesity on their campuses. The implication of the finding is that a standing interdisciplinary committee comprised of people passionate about addressing student obesity on their campuses might decrease the chances of the topic being put on the backburner or neglected altogether. A multilayered team approach is needed because student health is complex and intertwines education, health, and medicine (Prescott, 2007). The stakeholders involved in student health are diverse and so should be designated committee members and their backgrounds.

The next survey question that gathered data to answer Research Question 1 inquired if respondents' institutions offered obesity education/information to their students during the last 12 months. Less than one-third of respondents indicated that their institutions offered obesity education/information to their students either on an ongoing or periodic basis during the last 12 months. Findings also showed that over 60% of respondents did not offer obesity education/information to their students within the past year. The implication is that students did not receive obesity education/information that could have encouraged and empowered them to make healthier lifestyle choices. Obesity education/information provision is a possible intervention strategy that was not employed by most of the sample population in the past year. This finding is consistent with Quintiliani et al.'s (2011) writings that two-year college students have lacked access to nutritional and physical activity interventions in the past. During their college years, students adopt lifestyle habits, good, bad, or indifferent, that will follow them for several years after college (Sax, 1997). Obesity education/information can help college students understand obesity, its causes, symptoms, and prevention and treatment strategies.

Additional survey findings indicated that some of the institutions offered obesity prevention programs during the last 12 months. Almost 60% of the institutions offered on-site

physical activity and/or fitness education/programs, and nearly one-half of them provided healthy vending machines choices on an ongoing or periodic basis. Nearly 40% offered an on-campus walking program. Over 70% of respondents selected *No* to each of the other answer choices such as health risk assessments, labeling healthy food choices in the cafeterias, offering self-care books/tools, displaying signage to encourage stairwell use, subsidies/reduced price for off-campus fitness/recreation center memberships, weight management program, and weight screenings. One concern was whether or not obesity prevention programs catered primarily to on-campus students. In modern society, college students can enroll and graduate from an institution without ever stepping foot on the campus. Thus, obesity prevention programs in place should include traditional and online components. Community colleges' student populations are too diverse for any of its deliverables to be one-faceted. Online interventions have the potential to be less costly than traditional programs. In one respondent's defense, he/she commented that their institution has an online component that does not require the student to physically come to the campus to take advantage of the services.

When asked which institutional departments at their institutions offered obesity prevention services (e.g., healthy food and beverage options, free exercise classes, obesity fact sheets and brochures) to students during the last 12 months, descriptive statistics found that three institutional departments did so most frequently. Nearly one-half of respondents stated that the campus recreation/fitness center provided such services. Forty-three percent selected health promotion/wellness, and nearly 40% indicated Human Resources (Benefits Office or Similar Area within HR). Respondents commented that some of the departments listed in the survey's answer options were not applicable to their institutions because of their two-year and/or commuter college designation. The implication is that there are several variables that determine

if, when, how, and which department at two-year colleges offer obesity prevention services. The institution's size and organizational structure are two important variables to consider. The organizational size and structure can be markedly different from one institution to another (Cohen & Brawer, 2003). An effective organizational structure is essential to address student health concerns (Dalrymple & Purcell, 1976).

The fifth survey question that collected data to answer Research Question 1 asked how the institutions delivered obesity-related health education and promotion information to their students. The research findings indicated that wellness/health fairs/events, sending mass emails, and distributing flyers were popular methods by which institutions delivered obesity-related health education and promotion information. The delivery methods were diverse and had the potential to reach and impact on- and off-campus students. The fact that several institutions delivered obesity-related health education and promotion information to students was a positive finding, because two-year college students have lacked access to nutritional and physical activity interventions in the past (Quintiliani et al., 2011), and they are "less likely to receive important health information" in comparison to their counterparts at four-year institutions (Boyd & Braun, 2007, p. 2).

Approximately 40% of respondents indicated that their institutions did not deliver obesity-related health education and promotion information to their students. The same percentage of respondents believed that delivering obesity-related health education and promotion information to students did not apply to them. This is unfortunate because obesity is "common" among college students (Prescott, 2011, p. 468). And Sparling's (2007) research indicated that administrators and faculty have been conversing "the past few years" about the obesity epidemic on college campuses (p. 1). If these same respondents were to gather baseline

health data from their students, such as BMI, it is probable that they will find that at least 30% of their students are overweight or obese.

The final survey item that answered Research Question 1 inquired if the institutions had offered obesity treatment (e.g., weight loss programs) to their students during the last 12 months. Eighty-five percent of respondents indicated that they did not offer any obesity treatments to students. The implication is that if left untreated, obesity's symptoms have the potential to affect student success and the institution's revenue stream.

## **Research Question 2**

*What percentage of two-year institutions has conducted a comprehensive assessment/study of their students' physical health in the past five years?* Two survey questions were tailored to retrieve data that sought to answer the study's second research question. The first survey question that retrieved data to answer Research Question 2 asked respondents if their institution assessed students' physical health and wellness behaviors and status. Descriptive statistics revealed that an overwhelming majority, over 90%, of respondents did not assess students' physical health and wellness behaviors and status. It will be challenging for two-year colleges to address obesity, budget for, and tailor applicable programs if students' needs have not been properly assessed (Sax, 1997). Institutions must first know their starting point before realistic student health goals can be set and achieved.

Survey item 8 inquired about the number of full-time equivalent staff their institution employed to assess students' physical health and wellness. Descriptive statistics showed that 74% of the institutions did not employ any full-time equivalent staff to assess students' physical health and wellness. Seven percent of the institutions employed two full-time equivalent staff to assess students' physical health and wellness.

There are community resources available to help institutions facilitate assessing students' physical health. Institutions can form partnerships with nursing students, local organizations and businesses, and/or alumni in the medical field to develop an assessment program. In addition, the ACHA and its National College Health Assessment Survey exist to assist institutions. The survey is administered to U.S. two- and four-year college students (Turner & Hurley, 2002). Its results can be instrumental in tracking student health and developing intervention strategies. These valuable resources also might increase accessibility to possible financial resources unbeknownst to survey respondents. Unfortunately though, over 60% of the study population indicated they are not ACHA members, and almost one-third are not sure if they are ACHA members or not.

### **Research Question 3**

*If two-year colleges are not addressing obesity, why not?* One survey item collected data on which, if any, predetermined barriers have challenged institution provision of obesity prevention programs. Respondents were able to choose up to 5 of the 13 answer options. A frequency analysis found that the top two selected answer options were cost of offering the program and lack of staff resources. The funding aspect is consistent with Floyd's (2003) research. Floyd pointed out that some two-year colleges do not have the fiscal resources needed to provide any health services at all let alone in-depth health services. Fewer funds are allocated to research and support community college health in comparison to four-year institutions (Brindis & Reyes, 1997; Floyd, 2003). Several respondents commented that addressing obesity was not an institutional or state-level priority. Their comments are consistent with that fact that health issues tend to be of little importance to some administrators and trustees (Floyd, 2003).

Student obesity and its possible short- and long-term retention and “bottom line” implications should be presented to senior administrators at the institutional and state-level.

#### **Research Question 4**

*Are there any institutional publications or policies (i.e., college mission, strategic plan, college catalog, student handbook, etc.) that exist, or are slated to be developed, that address students' physical health, particularly obesity?* Two questions from the electronic cross-sectional survey answered the final research question framing the study. Respondents were asked if their college mission, college catalog, strategic plan, and/or student handbook addressed, or were expected to address, student obesity. Findings indicated that at least 88% of respondents indicated “No” to each of the four answer options. The implication is that the institutions might not view the topic as being important enough to publicly acknowledge their commitment to addressing obesity by including something about it in their official institutional publications or policies. A couple of respondents revealed that their institutional statements address health, but not obesity specifically. However, one respondent from a military institution stated that over 70% of their students were *required* to meet certain height and weight requirements to pursue a U.S. military career.

The second survey item that collected data to answer Research Question 4 inquired if the institutions have written policies on items such as offering students healthy food and beverage choices in the cafeteria and/or on-campus food outlets, offering students healthy food and beverage choices in vending machines, providing students healthy food and beverage choices at functions/events, and providing physical activity opportunities to students. Descriptive statistics showed that nearly one-half of respondents provided physical activity opportunities to students. The physical activity answer option received the most responses. However, most institutions did

not have written policies on all the items specified. The implication is that the items are either not offered or not viewed as important enough by administrators that there should be written policies on them. It could also be that institutions offer the services but have not, for some reason, put it in writing. In one of the survey questions, respondents were asked if they offered healthy choices in vending machines. Forty-five percent of respondents indicated they offered healthy vending machine options on an ongoing or periodic basis. Another survey question inquired if respondents had written policies on offering healthy vending machine choices. Over 70% responded “No”. The implication is that institutions could actually be offering these services, but it is not documented. Properly documenting and marketing an institution’s services provides a more holistic picture to the community, policymakers, and funding agencies.

### **Recommendations for Policy, Practice, and Further Research**

Based upon the research study’s findings and conclusions, the researcher makes the following recommendations for institutional policy and practice:

1. *College health professionals should help the institution’s senior-level administrators and governing entities understand and make the connection between individual student health, their college mission, and student success.* Administrators and governing boards play a vital role in student success (AACCC, 2012). Descriptive statistics indicated that senior-level administrators stated that addressing student obesity was not important to them or state-level administrators. This and similar survey findings agreed with Floyd’s (2003) and Sparling’s (2007) research that student health needs more attention from two-year administrators. Sparling elaborated that “Many college and university leaders view helping overweight students as being outside the purview of higher education” (p. 1). Administrator buy-in will determine if and which health services are offered (Brindis & Reyes, 1997). Jackson and Weinstein (1997)

posited that student health should first be emphasized by institutions' governing entities such as boards and trustees.

One way to help administrators and governing entities understand and make the connection between individual student health, their college mission, and student success is to present at local, state, and national professional development conferences geared toward two-year administrators and board members. Locally, health professionals can request approval to present at a board meeting. At the state level, presenting at presidents' associations is ideal. The AACC's annual convention, for example, would provide national exposure. According to the AACC's website, everyone from trustees to students attends the convention. The health professionals' presentations must quantify in dollar amounts how much each student represents to the institution each year. The facilitator needs to incorporate a working group session for convention attendees to discuss their institutions' or governing bodies' missions and itemize how students' physical health, specifically obesity, and student success are tied to their missions.

2. *Infiltrate campus culture.* Campus culture is a crucial piece to curbing obesity on college campuses. "People make decisions every day based on their environment" (Seipel, 2005, p. 9). Jackson & Weinstein (1997) noted it is pointless to attempt to address student obesity without considering the institution's environment.

Below are a few of several ways that institutions should incorporate student obesity prevention and treatment into their campus culture. Institutions should decrease the amount of unhealthy foods and beverages available to students in the cafeteria and vending machines or remove the unhealthy options altogether (Quintiliani et al., 2011; Levi et al., 2006; Sparling, 2007). Since two-year college students usually come from economically disadvantaged backgrounds (Cohen & Brawer, 2003), the cost of healthy food and beverage options on campus

needs to be affordable (Levi et al., 2006). Institutions should also create a culture of health by offering health-related associate degrees (Kirkwood & Riegelman, 2011; Linnan et al., 2010). Community colleges need to improve in this area. “Fewer than 2% of community colleges offered public health or related associate degrees in the 2009-2010 academic year” (Kirkwood & Riegelman, 2011, p. 220). Another way to support a healthier campus culture is by integrating a mandatory across-the-curriculum health course that incorporates health and nutrition information. The students need the health information, “so you have to bring the information to them whether it’s a classroom, or the cafeteria” (Quintiliani et al., 2011, p. 382). One of the institutions in the study required all students earning an associate degree to take a nutrition course. A mandatory across-the-curriculum transferrable course is an option that needs to be carefully considered because of community colleges’ special populations (Cohen & Brawer, 2003) and because low tuition is one of two-year colleges’ selling points (AACC, 2012; Cohen & Brawer, 2003). Infiltrating the campus culture is a powerful strategy against curbing obesity. Sparling (2007) noted that the overall goal of infiltrating the culture is to make it easy for two-year college students to make healthy decision while on campus. Sparling also noted, however, that a buy-in from administrators is mandatory for the obesity initiative, or any initiative, to be successful.

3. *Pursue external funding from both public and private sources.* The AACC (2012) found that community colleges enrolled almost an additional two million students in the past ten years while state funding has remained stagnant or decreased. Although health promotion programs aimed at curbing obesity do not have to be expensive (Sparling, 2007), respondents emphasized that funding was a barrier to offering obesity prevention and treatment programs and services to students. This finding was consistent with Floyd’s (2003) research that two-year

colleges did not have the financial resources to provide in-depth health services, if any.

Community colleges need to identify and secure external funding sources. These funds would be instrumental in beginning, continuing, or expanding obesity prevention and treatments offerings to students.

Funding opportunities are available for two-year institutions. For instance, the Association of Schools of Public Health–CDC cooperative agreement collaborated with the AACC to provide funding for baseline health data to be collected from two-year colleges to determine what proportion of institutions offered public health degrees or certificates (Kirkwood, 2011). Competitive grants are another example of an external funding opportunity available to two-year colleges. The Department of Health and Human Services, for instance, has a “Grants/Funding” tab on its website, <http://www.hhs.gov>, that lists grants resources (Thornton & Johnson, 2010). One of the resources is Grants.gov at <http://www.grants.gov/web/grants/home.html>. Grants.gov connects prospective grantees to a repository of federal funding opportunities, eligibility information, and application instructions. At this writing, obesity-related grants are available on the Health and Human Services’ website for which public and state controlled higher education institutions can apply. The institution’s health educators and institutional advancement department need to collaborate on preparing grant applications. The grant writers have experience preparing grant proposals, and the health educators have experiential knowledge that can enhance the grant proposal. If the institution does not have resident experts who can prepare competitive and competent grant proposals, then the institution needs to outsource it to a grant writer who has a proven track record of securing grants. The outsourced grant writer still needs to collaborate with the institution’s health education professionals.

4. *Assess students' physical health and wellness behaviors and status.* More data are needed about college students' physical health and wellness (Fletcher et al., 2007). Over 90% of the sample population did not assess students' physical health and wellness behaviors and status. Institutions need to be “determining the physical and mental health status of the student, providing appropriate remedial health measures, supervising the health of students, and controlling environmental health factors” (ACE, 1937, p. 4). The institution needs to set attainable and measurable student health goals (Sparling, 2007). Healthy Campus 2020 could assist institutions with setting student health goals (ACHA, n.d.). It is difficult to develop effective targeted health services and programs if the population's health status is unknown.

The first step to assessing students' physical health and wellness behaviors and status is secure senior-level administrators' full support (Sparling, 2007). Assuming this is the case and an interdisciplinary committee has been established to address student obesity, then the committee needs to inventory its access to available resources and infrastructure, set realistic student health goals, and develop an implementation strategy. The committee should reach out to the CDC and ACHA for assessment ideas and strategies, expertise, and funding opportunities (ACHA, n.d., Kirkwood, 2011). Once this groundwork has been established, the institution can proceed with assessing students' physical health and wellness behaviors and status. One way to assess students' physical health and wellness behaviors and status is to gather data through primary research such as surveys (Sivik et al., 1992). The collected data should be analyzed by the interdisciplinary committee's designated researcher/s. Another option to assess students' physical health is for students to self-report their BMI to the interdisciplinary committee's designated point-of-contact, or, if a mandatory health class is incorporated into the curriculum, the instructors should collect students' BMI using a BMI calculator. Regardless of the

institutions' resources, strategies, and action plan, the end result needs to be customized data-driven programs and services that tie into the institution's mission (Swinford, 2002).

5. *Tailor obesity programs and services to meet the needs of off-campus students.* It is challenging to reach off-campus college students (James & Bonds, 2006), but it is important that obesity programs and services cater to them as well. Over 90% of the institutions in the study were commuter institutions. This finding confirmed published research that most two-year institutions are non-residential (Chaves, 2006; Cohen & Brawer, 2003; Floyd, 2003; Nichols, 1979). The research study found that institutions often provided on-campus obesity control and prevention services. Yet literature reveals that commuter students are typically not on campus for extended periods before or after their classes (Linnan et al., 2010; Prescott, 2011). Effective obesity interventions are multidimensional.

Technology needs to be used to reach off-campus students (Quintiliani et al., 2011). For instance, a weekly health tip could be texted and/or emailed to students. Social media outlets such as Twitter and Facebook should also be utilized to share health information with students. The interdisciplinary committee should develop an online health component that is accessible on the institutions' website. The web-based component should include educational information and resources on obesity prevention and treatment, nutrition, and physical activity (Harvey-Berino, Pope, Gold, Leonard, & Belliveau, 2012). Harvey et al. also believe that web-based programs should include an interactive component should be interactive. For instance, students should be able to post comments or engage in live chats with others. Alongside its accessibility, another advantage to an online health program is that it is simultaneously catering to off-campus and on-campus students. The interdisciplinary committee needs to collaborate with resident experts in the technology, distance education, wellness, and health sciences departments to set-up the

program on the institution's website and to provide content. Computer instructors and student leaders should be involved to help students who are interested in the web-based obesity program but are not computer savvy. The interdisciplinary committee should coordinate individual or group computer training sessions for interested students. Astin posited that the more involved students were inside and outside the classroom, the greater the student's development (Astin, 1985, 1999; Clark & Anderson, 2011; Chaves, 2006; Elkins et al., 2011). Tutorial videos should be put on the website as well.

6. *Develop holistic obesity services and programs.* Effective health interventions need to focus on both prevention and treatment interventions (ACE, 1937; ACE, 1949). It was uncommon for the two-year institutions in the study to offer obesity prevention programs. Obesity is the second highest single cause of *preventable* death among Americans (Levi, Chan, & Pence, 2006).

Obesity prevention programs at two-year institutions can take many forms. One example is that the institution's campus-wide health team can coordinate with the nursing department for nursing students (Linnan et al., 2010) to provide free vital signs assessments (e.g., blood pressure, heart rate, etc.) and cholesterol readings. Another example is to use technology (Quintiliani et al., 2011) such as the institution's website and social media outlets to provide obesity prevention tips and resources to students. A designated person on the interdisciplinary committee should provide content to the technology team for the website. A designated person can collaborate with the public relations department to provide content for the institution's social media outlets. According to Sparling (2007), the institution can offer healthier food and beverage options on campus. Auxiliary services would need to be involved in discussions related to food and beverage options available to students.

Based upon the research study's findings and conclusions, the researcher makes the following recommendations for further research:

1. *Conduct the same quantitative study on U.S. public, two-year colleges in other accrediting regions.* The quantitative study can be replicated in other accrediting regions to review what, if anything, their accredited U.S. public, two-year institutions classified as rural, suburban, and urban are doing to address obesity among their student populations. An accrediting region cross-analysis could determine how similar or different the institutions' demographics are, if the institutions share common obesity outreach efforts, and if the same obesity program and service barriers transcend accrediting regions. The information could be used to share ideas and best practices with others. The data collected could also be analyzed based on the institutions' Carnegie Classifications and/or their commuter or residential status.

2. *Conduct the same quantitative study to compare U.S. public and private two-year institutions.* The quantitative study can be replicated to compare what two-year public and two-year private institutions classified as rural, suburban, and urban in the same or different accrediting regions are doing, if anything, to address obesity among their student populations. The study could determine if there are any similarities or differences between two-year public and two-year private institutions regarding if and how student obesity is addressed. The study could also probe into how senior administrators' perceptions and fiscal resources affect obesity programs and services offered. Collected data could be analyzed based on Carnegie Classification, accrediting region, institutions' commuter or residential status, and/or student or institutional demographics.

3. *Conduct the same quantitative study to compare two- and four-year institutions.* The quantitative study can be replicated to compare if and how public and/or private two-year and

four-year institutions in the same or different accrediting regions address student obesity. An analysis could be undertaken to compare obesity control and prevention outreach efforts based on student and institutional demographics. The study could also seek to compare senior administrators' perception of how student obesity affects student success and retention. The study could also investigate and compare the percentage of institutions' budget that goes toward addressing obesity; this could be further analyzed by determining the average dollar amount spent on each student to address obesity.

4. *Get two-year college students' perspective on addressing obesity.* The quantitative study can be adapted and used as a foundation to get public, two-year college students' feedback on student obesity. The study could get students' feedback on whether or not they were aware of the statistics regarding college student obesity. The research study could investigate if and how obesity and its comorbidities have affected students' academic success. Student interest in obesity control and prevention services provided by the institution could be measured using the Likert Scale or a similar measuring tool. The study could also gather ideas from students about ways to address student obesity at their respective institution. The study can be delimited to U.S. SACS-accredited institutions classified as rural, suburban, and urban and the data could be disaggregated and analyzed based on their rural, suburban, and urban classifications.

5. *Compare online and traditional obesity prevention and treatment programs at two-year institutions.* A research study could be undertaken to conduct a cost analysis between traditional and online obesity prevention and treatment programs at public, two-year SACS-accredited institutions or institutions in another accrediting region classified as rural, suburban, and urban. The data could be used to conduct a cost analysis that compares the cost to develop and implement traditional and online obesity prevention and treatment programs. The study

could also investigate if the online or traditional obesity prevention and treatment program invoked more student participation and why. The perceived or measurable effectiveness of the online and traditional obesity prevention programs could be investigated as well.

6. *Conduct a domestic and international comparison study.* The survey instrument used in the quantitative study could be adapted and used to compare how public SACS-accredited two-year institutions in the U.S. are addressing obesity in comparison to international colleges and universities. The comparison study could examine students' and administrators' knowledge and perception of college student obesity. The research could also compare which programs and services the institutions offer to students and how the programs and services are delivered. The study could conduct a cost analysis of the overall amount spent to curb obesity and the average amount spent on each student to curb obesity.

7. *Attempt to measure the effects of obesity on retention, student success, and costs.* Quantifying this information can help local, state, and federal policymakers better understand and make the connection between obesity and retention, student success, and costs. The data could possibly be used as leverage to increase topic awareness, advocacy, and financial support to address college student obesity. The study could define a specific period of time and identify and interview students who dropped out of college because of obesity-related issues. The primary data could assist in determining the number of students affected, how students were impacted, and calculating the institution's lost revenue (e.g., tuition and fees). Depending on study population and sample size, the researcher might or might not be able to make generalizations. However, it is also possible that the findings might provide a foundation for generalizations that extend beyond the scope of the study. The CDC could partner with the

AACC by identifying or creating assessment instrument, conducting research and collecting data, and providing funding.

8. *Explore administrators' perception of students' interest in obesity programs and services.* Approximately 12% of survey respondents noted that their institution did not address obesity because of a lack of student interest. The researcher was not sure if respondents' feedback had been concretely substantiated or not. A future study could inquire about administrators' perceptions of a lack of student interest in obesity programs and services and the basis for their perceptions. If their perceptions were based on student attendance at institution-sponsored programs and services then, for example, the study could delve into which past programs and services the institution offered (for a specified period), the time and location (i.e., on- and/or off-campus) they were offered, how students were informed, delivery methods, and student attendance. The findings would confirm or refute administrators' perception of students' lack of interest and provide administrators direction on how to move forward with addressing student obesity.

9. *Investigate why administrators believe addressing obesity does not apply to their institution.* Thirty-nine respondents stated delivering obesity-related health education and promotion information to students did not apply to their institution. Other respondents commented that student obesity topic not a priority or important to them or state-level administrators. A study could probe into the basis of administrators' reasoning and if their perceptions are research-based. If so, the study should indicate the type of research used and its validity. For example, if the institution polled their students, the study should investigate how and when students were polled, by whom, and the sample size in relation to the overall student body.

10. *Explore community college students' perspective on and interest in obesity prevention and treatment programs and services.* A lack of student interest was one reason respondents' institutions did not address student obesity. A future study could tailor survey and/or interview questions that probe into whether or not students are interested in obesity prevention and treatment programs and services and their reasoning. Students' awareness of current or previous obesity programs and services offered by the institution should be a part of the study. The study's sample population should adequately represent the student body. Students' feedback could be used by researchers, administrators, practitioners, and faculty. Researchers could use the data to build upon for further exploration of the topic. Administrators could use the data to compare their perceptions of student interest in obesity programs and services with students' perceptions. The study might provide insight on students' awareness of and interest in the obesity programs and services offered at the institution and the reason for students' participation, or lack thereof. The study might also provide insight on how faculty can get involved to stimulate student interest in the institution's obesity programs and services. For instance, faculty could let students out of class early to attend programs and/or offer extra credit for participating.

### **Conclusion**

The purpose of this study was to review what, if anything, U.S. public, two-year colleges accredited by SACS classified as rural, suburban, and urban are doing to address obesity among their student populations. The findings provided the reader with a regional snapshot of how the total population addressed obesity.

The research findings showed that the two-year colleges in the study should consider extending their efforts to do more to address obesity. Three prevailing themes throughout the

study were whether addressing obesity was important or not, institutions lacked the financial and human resources to address obesity, and internal and external collaborations have enabled institutions to address obesity on varying scales.

Addressing obesity is an important issue. As previously discussed, currently over 30% of college students are overweight or obese and the statistic is expected to worsen (Freedman, 2010). There are no positive short-term and long-term effects of obesity. Obesity and its comorbidities, in part, affect individual health (Hoffman et al., 2006; McMahan et al., 2003; Struble et al., 2010), academic performance (Downs & Ashton, 2011), health care costs, and national security and public safety (Levi et al., 2011). According to Levi et al. (2011), the pool of qualified candidates has decreased due to the inability to pass physical fitness evaluations. Mixed sentiments among the senior-level administrators who participated in the study surfaced. Some senior-level administrators thought addressing obesity was important and needed more exposure. Some even thanked the researcher for conducting the study. Others conveyed the message that addressing obesity was not important to their institution or state-level administrators. Both perspectives were found in empirical literature. Scholarly research has confirmed that college administrators have been concerned about student obesity (Sparling, 2007). At the same time, literature supports that health issues tend to be of little importance to some administrators and trustees (Floyd, 2003). It is important for policymakers on all levels to be informed about obesity and its potential impact on intrapersonal and interpersonal levels.

Two-year colleges are already operating on the bare minimum after shrinking state funding in recent years. It was not a surprise when respondents mentioned that financial limitations were a barrier to addressing obesity on their campuses. The study found that institutions simply did not have the financial resources for programs or to hire program staff.

This is understandable because two-year colleges enroll more credit and noncredit students than any other educational sector (Floyd, 2003). The financial resources are needed because their students experience a broader range of health issues because of their open admissions policy and diverse student body (Nichols, 1973). Awareness about how student obesity affects academic success, society, and institutions' bottom line might generate other financial streams such as local, state, and federal grants that specifically target two-year institutions. An interdisciplinary committee comprised of internal and external stakeholders can produce possible ideas to generate funds to address obesity.

Additionally, internal and external collaborations must be formed to stretch fiscal and human resources and to enable more services to be provided to students. Respondents echoed how on-campus collaborations between academic and student affairs and organizations off-campus developed and implemented programs that addressed student obesity. The more at-risk the student population, the more the institution needs to collaborate. The two-year college population is generally older low-income, first-generation, minority students with family and career obligations (Cohen & Brawer, 2003). When considering collaborations, community college administrators must remember to include input from one of the most important stakeholders: the two-year college student. Administrators need buy-in from the study body. Program success increases if student input is considered. There should be no lone rangers when addressing obesity; it is too complex. A team approach is the best approach.

According to ACE (1937, 1949), the mission of higher education is still to educate the “whole” student. Physically developing the student is a very important part of the student. Every student is impacted by health (Dunkle & Presley, 2009). Healthy students are more likely to persist in college (Becker et al., 2009; Dalrymple & Purcell, 1976; George et al., 2008; Turner,

& Hurley, 2002). Literature supports that college students should acquire skills in college that help them maintain their physical health. Community colleges are in a prime position to address student obesity because of their accessibility, open admissions policy, and student diversity. Community college students are a “captive audience” and more prone to be obese than four-year students. Addressing obesity among two-year college student populations should be a priority to all stakeholders.

This study was significant because published research on college student health is limited. Literature on community college student health is even more limited (Sax, 1997). This study’s research-driven baseline data provided a rare glimpse into what public, SACS-accredited two-year colleges classified as rural, suburban, and urban are doing to curb student obesity on their campuses. The SACS region was particularly significant because obesity and its comorbidities are more prevalent in the Southern U.S. region (CDC, 2012a). Community college student obesity is not a new topic in literature, but the context in which the study was framed and explored was unique to the total population and contributed to empirical literature.

According to descriptive statistics, the study’s findings were clear. Some institutions in the study were offering obesity prevention services and programs but it was not common. Some institutions did not believe obesity was important or an issue; therefore, addressing it did not apply to their institution. The study revealed that it was not likely for the institutions to conduct a comprehensive assessment or study of their students’ physical health. Several respondents stated that financial resources affected if and how student obesity was addressed. Some institutions indicated they were collaborating with others to address obesity. Obesity was not addressed in most of the institutions’ institutional publications or policies. Institutions with

interdisciplinary committees that addressed obesity were more likely to have offered obesity prevention services and obesity education to students during the past 12 months.

In closing, the researcher's recommendations were based on the study's findings and literature. College health professionals should help senior-level administrators and governing entities understand and make the connection between individual student health, their college mission, and student success. Two-year college campuses need to promote a healthy campus environment and make it easy for students to make healthy decisions. Additional funding from public and private sources would assist with institutions' ability to offer obesity prevention and treatment services and programs. Finally, assessing students' physical health and wellness behaviors and status would enable institutions to develop holistic obesity prevention and treatment services and programs that cater to the needs of on- and off-campus students.

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APPENDIX A  
INSTITUTIONS IN THE STUDY POPULATION

Count	UnitID	Institution Name	City	State	Carnegie Classification 2010:
					Basic
1	101949	Alabama Southern Community College	Monroeville	AL	Rural-serving small
2	102429	Bevill State Community College	Jasper	AL	Rural-serving medium
3	102030	Bishop State Community College	Mobile	AL	Urban-serving multicampus
4	100760	Central Alabama Community College	Alexander City	AL	Rural-serving medium
5	101028	Chattahoochee Valley Community College	Phenix City	AL	Rural-serving medium
6	101143	Enterprise State Community College	Enterprise	AL	Rural-serving medium
7	101240	Gadsden State Community College	Gadsden	AL	Rural-serving large
8	101286	George C Wallace Community College-Dothan	Dothan	AL	Rural-serving medium
9	101295	George C Wallace State Community College-Hanceville	Hanceville	AL	Rural-serving medium
10	101301	George C Wallace State Community College-Selma	Selma	AL	Rural-serving medium
11	102313	H Councill Trenholm State Technical College	Montgomery	AL	Rural-serving small
12	101462	J F Drake State Technical College	Huntsville	AL	Rural-serving small
13	101161	James H Faulkner State Community College	Bay Minette	AL	Suburban-serving multicampus
14	101499	Jefferson Davis Community College	Brewton	AL	Rural-serving small
15	101505	Jefferson State Community College	Birmingham	AL	Urban-serving multicampus
16	101514	John C Calhoun State Community College	Tanner	AL	Rural-serving large
17	101569	Lawson State Community College-Birmingham Campus	Birmingham	AL	Urban-serving multicampus
18	101602	Lurleen B Wallace Community College	Andalusia	AL	Rural-serving small
19	101648	Marion Military Institute	Marion	AL	Rural-serving small
20	101897	Northeast Alabama Community College	Rainsville	AL	Rural-serving medium
21	101736	Northwest Shoals Community College-Muscle Shoals	Muscle Shoals	AL	Rural-serving medium
22	102067	Shelton State Community College	Tuscaloosa	AL	Rural-serving large
23	102076	Snead State Community College	Boaz	AL	Rural-serving medium
24	251260	Southern Union State Community College	Wadley	AL	Rural-serving medium
25	132693	Brevard Community College	Cocoa	FL	Rural-serving large
26	132709	Broward College	Fort Lauderdale	FL	Urban-serving multicampus
27	132851	College of Central Florida	Ocala	FL	Rural-serving large
28	135160	Florida Gateway College	Lake City	FL	Rural-serving medium
29	133960	Florida Keys Community College	Key West	FL	Rural-serving small
30	134343	Gulf Coast Community College	Panama City	FL	Rural-serving large
31	134495	Hillsborough Community College	Tampa	FL	Urban-serving multicampus
32	135188	Lake-Sumter Community College	Leesburg	FL	Suburban-serving multicampus
33	136145	North Florida Community College	Madison	FL	Rural-serving small

34	136358	Palm Beach State College	Lake Worth New Port	FL	Suburban-serving multicampus
35	136400	Pasco-Hernando Community College	Richey	FL	Suburban-serving multicampus
36	136473	Pensacola State College	Pensacola	FL	Rural-serving large
37	136516	Polk State College	Winter Haven	FL	Rural-serving large
38	137281	Saint Johns River State College	Palatka	FL	Rural-serving large
39	137096	Santa Fe College	Gainesville	FL	Rural-serving large
40	137209	Seminole State College of Florida	Sanford	FL	Suburban-serving single campus
41	137315	South Florida Community College	Avon Park	FL	Rural-serving medium
42	135391	State College of Florida-Manatee-Sarasota	Bradenton	FL	Urban-serving multicampus
43	137759	Tallahassee Community College	Tallahassee	FL	Rural-serving large
44	138187	Valencia Community College	Orlando	FL	Urban-serving multicampus
45	138682	Albany Technical College	Albany	GA	Rural-serving medium
46	366447	Altamaha Technical College	Jesup	GA	Rural-serving small
47	246813	Athens Technical College	Athens	GA	Rural-serving medium
48	138901	Atlanta Metropolitan College	Atlanta	GA	Urban-serving single campus
49	138840	Atlanta Technical College	Atlanta	GA	Urban-serving single campus
50	138956	Augusta Technical College	Augusta	GA	Rural-serving medium
51	139010	Bainbridge College	Bainbridge	GA	Rural-serving medium
52	140304	Central Georgia Technical College	Macon	GA	Rural-serving large
53	140331	Chattahoochee Technical College	Marietta	GA	Suburban-serving single campus
54	139250	College of Coastal Georgia	Brunswick	GA	Rural-serving medium
55	139357	Columbus Technical College	Columbus	GA	Rural-serving medium
56	138691	Darton College DeKalb Technical College	Albany	GA	Rural-serving medium
57	244446	now called Georgia Piedmont Technical College	Clarkston	GA	Suburban-serving multicampus
58	139621	East Georgia College	Swainsboro	GA	Rural-serving small
59	139700	Georgia Highlands College	Rome	GA	Rural-serving medium
60	139384	Georgia Northwestern Technical College	Rome	GA	Rural-serving medium
61	244437	Georgia Perimeter College	Decatur	GA	Suburban-serving multicampus
62	140012	Gwinnett Technical College	Lawrenceville	GA	Suburban-serving single campus
63	140243	Lanier Technical College	Oakwood	GA	Rural-serving medium

64	140085	Middle Georgia Technical College	Warner Robins	GA	Rural-serving medium
65	140599	Moultrie Technical College	Moultrie	GA	Rural-serving medium
66	140678	North Georgia Technical College	Clarksville	GA	Rural-serving medium
67	366465	Ogeechee Technical College	Statesboro	GA	Rural-serving medium
68	248776	Okefenokee Technical College Sandersville Technical College	Waycross	GA	Rural-serving medium
69	420431	now Oconee Fall Line Technical College	Sandersville	GA	Rural-serving small
70	140942	Savannah Technical College	Savannah	GA	Rural-serving medium
71	140997	South Georgia College	Douglas	GA	Rural-serving small
72	141006	South Georgia Technical College	Americus	GA	Rural-serving medium
73	368911	Southeastern Technical College	Vidalia	GA	Rural-serving small
74	139986	Southern Crescent Technical College	Griffin	GA	Suburban-serving multicampus
75	141158	Southwest Georgia Technical College	Thomasville	GA	Rural-serving small Suburban-serving single
76	139278	West Georgia Technical College	Waco	GA	campus
77	141255	Wiregrass Georgia Technical College	Valdosta	GA	Rural-serving medium
78	156231	Ashland Community and Technical College	Ashland	KY	Rural-serving medium
79	157553	Big Sandy Community and Technical College	Prestonsburg	KY	Rural-serving medium
80	156392	Bluegrass Community and Technical College Bowling Green Technical College now called Southcentral Kentucky Community and	Lexington	KY	Rural-serving large
81	156338	Technical College	Bowling Green	KY	Rural-serving medium
82	156648	Elizabethtown Community and Technical College	Elizabethtown	KY	Rural-serving medium
83	157438	Gateway Community and Technical College	Florence	KY	Suburban-serving multicampus
84	156790	Hazard Community and Technical College	Hazard	KY	Rural-serving medium
85	156851	Henderson Community College	Henderson	KY	Rural-serving medium
86	156860	Hopkinsville Community College	Hopkinsville	KY	Rural-serving medium
87	156921	Jefferson Community and Technical College	Louisville	KY	Urban-serving multicampus
88	157304	Madisonville Community College	Madisonville	KY	Rural-serving medium
89	157331	Maysville Community and Technical College	Maysville	KY	Rural-serving medium
90	247940	Owensboro Community and Technical College	Owensboro	KY	Rural-serving medium
91	157711	Somerset Community College	Somerset	KY	Rural-serving large
92	157739	Southeast Kentucky Community and Technical College	Cumberland	KY	Rural-serving medium
93	157483	West Kentucky Community and Technical College	Paducah	KY	Rural-serving large
94	437103	Baton Rouge Community College	Baton Rouge	LA	Urban-serving single campus

95	158431	Bossier Parish Community College	Bossier City	LA	Rural-serving medium
96	158662	Delgado Community College	New Orleans	LA	Urban-serving multicampus
97	160481	L E Fletcher Technical Community College	Houma	LA	Urban-serving multicampus
98	440624	Louisiana Delta Community College	Monroe	LA	Rural-serving small Suburban-serving single campus
99	158884	Nunez Community College	Chalmette	LA	Suburban-serving single campus
100	436304	River Parishes Community College	Sorrento	LA	Rural-serving medium
101	434061	South Louisiana Community College	Lafayette	LA	Rural-serving medium
102	160579	Sowela Technical Community College	Lake Charles	LA	Rural-serving small
103	175519	Coahoma Community College	Clarksdale	MS	Rural-serving small
104	175573	Copiah-Lincoln Community College	Wesson	MS	Rural-serving medium
105	175643	East Central Community College	Decatur	MS	Rural-serving medium
106	175652	East Mississippi Community College	Scooba	MS	Rural-serving medium
107	175786	Hinds Community College	Raymond	MS	Rural-serving large
108	175810	Holmes Community College	Goodman	MS	Rural-serving large
109	175829	Itawamba Community College	Fulton	MS	Rural-serving medium
110	175883	Jones County Junior College	Ellisville	MS	Rural-serving medium
111	175935	Meridian Community College	Meridian	MS	Rural-serving medium
112	176008	Mississippi Delta Community College	Moorhead	MS	Rural-serving medium
113	176071	Mississippi Gulf Coast Community College	Perkinston	MS	Rural-serving large
114	176169	Northeast Mississippi Community College	Booneville	MS	Rural-serving medium
115	176178	Northwest Mississippi Community College	Senatobia	MS	Rural-serving large
116	176239	Pearl River Community College	Poplarville	MS	Rural-serving medium
117	176354	Southwest Mississippi Community College	Summit	MS	Rural-serving small
118	199786	Alamance Community College	Graham	NC	Suburban-serving multicampus
119	197887	Asheville-Buncombe Technical Community College	Asheville	NC	Rural-serving large
120	197966	Beaufort County Community College	Washington	NC	Rural-serving small
121	198011	Bladen Community College	Dublin	NC	Rural-serving small
122	198039	Blue Ridge Community College	Flat Rock	NC	Rural-serving medium
123	198084	Brunswick Community College	Bolivia	NC	Rural-serving small
124	198118	Caldwell Community College and Technical Institute	Hudson	NC	Rural-serving medium
125	198154	Cape Fear Community College	Wilmington	NC	Rural-serving large
126	198206	Carteret Community College	Morehead City	NC	Rural-serving small
127	198233	Catawba Valley Community College	Hickory	NC	Rural-serving medium

128	198251	Central Carolina Community College	Sanford	NC	Rural-serving medium
129	198260	Central Piedmont Community College	Charlotte	NC	Urban-serving multicampus
130	198321	Cleveland Community College	Shelby	NC	Rural-serving medium
131	198330	Coastal Carolina Community College	Jacksonville	NC	Rural-serving medium
132	197814	College of the Albemarle	Elizabeth City	NC	Rural-serving medium
133	198367	Craven Community College	New Bern	NC	Rural-serving medium Suburban-serving single campus
134	198376	Davidson County Community College	Thomasville	NC	Urban-serving single campus
135	198455	Durham Technical Community College	Durham	NC	Rural-serving medium
136	198491	Edgecombe Community College	Tarboro	NC	Rural-serving large
137	198534	Fayetteville Technical Community College	Fayetteville	NC	Urban-serving single campus
138	198552	Forsyth Technical Community College	Winston Salem	NC	Suburban-serving single campus
139	198570	Gaston College	Dallas	NC	Suburban-serving multicampus
140	198622	Guilford Technical Community College	Jamestown	NC	Rural-serving small
141	198640	Halifax Community College	Weldon	NC	Rural-serving medium
142	198668	Haywood Community College	Clyde	NC	Rural-serving medium
143	198710	Isothermal Community College	Spindale	NC	Rural-serving small
144	198729	James Sprunt Community College	Kenansville	NC	Suburban-serving single campus
145	198774	Johnston Community College	Smithfield	NC	Rural-serving medium
146	198817	Lenoir Community College	Kinston	NC	Rural-serving small
147	198905	Martin Community College	Williamston	NC	Rural-serving small
148	198914	Mayland Community College	Spruce Pine	NC	Rural-serving small
149	198923	McDowell Technical Community College	Marion	NC	Rural-serving medium
150	198987	Mitchell Community College	Statesville	NC	Rural-serving small
151	199023	Montgomery Community College	Troy	NC	Rural-serving medium
152	199087	Nash Community College	Rocky Mount	NC	Rural-serving small
153	199263	Pamlico Community College	Grantsboro	NC	Rural-serving medium
154	199324	Piedmont Community College	Roxboro	NC	Rural-serving large
155	199333	Pitt Community College	Winterville	NC	Suburban-serving single campus
156	199421	Randolph Community College	Asheboro	NC	Rural-serving small
157	199449	Richmond Community College	Hamlet	NC	Rural-serving small
158	199467	Roanoke-Chowan Community College	Ahoskie	NC	Rural-serving small

159	199476	Robeson Community College	Lumberton	NC	Rural-serving medium
160	199485	Rockingham Community College	Wentworth	NC	Rural-serving medium
161	199494	Rowan-Cabarrus Community College	Salisbury	NC	Suburban-serving multicampus
162	199625	Sampson Community College	Clinton	NC	Rural-serving small
163	199634	Sandhills Community College	Pinehurst	NC	Rural-serving medium
164	197850	South Piedmont Community College	Polkton	NC	Rural-serving medium
165	199722	Southeastern Community College	Whiteville	NC	Rural-serving medium
166	199731	Southwestern Community College	Sylva	NC	Rural-serving medium
167	199740	Stanly Community College	Albemarle	NC	Rural-serving medium
168	199768	Surry Community College	Dobson	NC	Rural-serving medium
169	199795	Tri-County Community College	Murphy	NC	Rural-serving small
170	199838	Vance-Granville Community College	Henderson	NC	Rural-serving medium
171	199856	Wake Technical Community College	Raleigh	NC	Urban-serving multicampus
172	199892	Wayne Community College	Goldsboro	NC	Rural-serving medium
173	199908	Western Piedmont Community College	Morganton	NC	Rural-serving medium
174	199926	Wilkes Community College	Wilkesboro	NC	Rural-serving medium
175	199953	Wilson Community College	Wilson	NC	Rural-serving medium
176	217615	Aiken Technical College	Graniteville	SC	Rural-serving medium
177	218858	Central Carolina Technical College	Sumter	SC	Rural-serving medium
178	217989	Denmark Technical College	Denmark	SC	Rural-serving small
179	218025	Florence-Darlington Technical College	Florence	SC	Rural-serving medium
180	218113	Greenville Technical College	Greenville	SC	Urban-serving multicampus
181	218140	Horry-Georgetown Technical College	Conway	SC	Rural-serving medium
182	218353	Midlands Technical College	West Columbia	SC	Urban-serving multicampus
183	217837	Northeastern Technical College	Cheraw	SC	Rural-serving small
184	218487	Orangeburg Calhoun Technical College	Orangeburg	SC	Rural-serving medium
185	218520	Piedmont Technical College	Greenwood	SC	Rural-serving medium
186	218830	Spartanburg Community College	Spartanburg	SC	Urban-serving single campus
187	217712	Technical College of the Lowcountry	Beaufort	SC	Rural-serving medium
188	218885	Tri-County Technical College	Pendleton	SC	Suburban-serving single campus
189	218894	Trident Technical College	Charleston	SC	Urban-serving multicampus
190	218955	Williamsburg Technical College	Kingstree	SC	Rural-serving small
191	218991	York Technical College	Rock Hill	SC	Suburban-serving single campus

192	219824	Chattanooga State Community College	Chattanooga	TN	Rural-serving large
193	219879	Cleveland State Community College	Cleveland	TN	Rural-serving medium
194	219888	Columbia State Community College	Columbia	TN	Rural-serving medium
195	220057	Dyersburg State Community College	Dyersburg	TN	Rural-serving medium
196	220400	Jackson State Community College	Jackson	TN	Rural-serving medium
197	221096	Motlow State Community College	Tullahoma	TN	Rural-serving medium
198	221184	Nashville State Community College	Nashville	TN	Urban-serving multicampus
199	221908	Northeast State Community College	Blountville	TN	Rural-serving medium
200	221643	Pellissippi State Community College	Knoxville	TN	Urban-serving multicampus
201	221397	Roane State Community College	Harriman	TN	Rural-serving medium
202	221485	Southwest Tennessee Community College	Memphis	TN	Urban-serving multicampus Suburban-serving single campus
203	222053	Volunteer State Community College	Gallatin	TN	
204	222062	Walters State Community College	Morristown	TN	Rural-serving large
205	222567	Alvin Community College	Alvin	TX	Rural-serving large
206	222576	Amarillo College	Amarillo	TX	Rural-serving large
207	222822	Angelina College	Lufkin	TX	Rural-serving medium
208	222992	Austin Community College District	Austin	TX	Urban-serving multicampus
209	223427	Blinn College	Brenham	TX	Rural-serving large
210	223524	Brookhaven College	Farmers Branch	TX	Urban-serving multicampus
211	223773	Cedar Valley College	Lancaster	TX	Urban-serving multicampus
212	223898	Cisco College	Cisco	TX	Rural-serving medium
213	223922	Clarendon College	Clarendon	TX	Rural-serving small
214	223320	Coastal Bend College	Beeville	TX	Rural-serving medium
215	226408	College of the Mainland	Texas City	TX	Rural-serving medium
216	247834	Collin County Community College District	McKinney	TX	Suburban-serving multicampus
217	224350	Del Mar College	Corpus Christi	TX	Rural-serving large
218	224572	Eastfield College	Mesquite	TX	Urban-serving multicampus
219	224615	El Centro College	Dallas	TX	Urban-serving multicampus
220	224642	El Paso Community College	El Paso	TX	Urban-serving multicampus
221	224891	Frank Phillips College	Borger	TX	Rural-serving small
222	224961	Galveston College	Galveston	TX	Rural-serving medium
223	225070	Grayson County College	Denison	TX	Rural-serving medium
224	225371	Hill College	Hillsboro	TX	Rural-serving medium
225	225423	Houston Community College	Houston	TX	Urban-serving multicampus

226	225520	Howard College	Big Spring	TX	Rural-serving medium
227	226019	Kilgore College	Kilgore	TX	Rural-serving medium Suburban-serving single campus
228	441760	Lamar Institute of Technology	Beaumont	TX	campus
229	226107	Lamar State College-Orange	Orange	TX	Rural-serving medium
230	226116	Lamar State College-Port Arthur	Port Arthur	TX	Rural-serving medium
231	226134	Laredo Community College	Laredo	TX	Rural-serving large
232	226204	Lee College	Baytown	TX	Suburban-serving multicampus
233	227182	Lone Star College System	The Woodlands	TX	Suburban-serving multicampus
234	226578	McLennan Community College	Waco	TX	Rural-serving large
235	226930	Mountain View College	Dallas	TX	Urban-serving multicampus
236	227146	Navarro College	Corsicana	TX	Rural-serving large
237	224110	North Central Texas College	Gainesville	TX	Rural-serving large
238	227191	North Lake College	Irving	TX	Urban-serving multicampus
239	227225	Northeast Texas Community College	Mount Pleasant	TX	Rural-serving medium
240	420398	Northwest Vista College	San Antonio	TX	Urban-serving multicampus
241	227304	Odessa College	Odessa	TX	Rural-serving medium
242	246354	Palo Alto College	San Antonio	TX	Urban-serving multicampus
243	227386	Panola College	Carthage	TX	Rural-serving medium
244	227401	Paris Junior College	Paris	TX	Rural-serving medium
245	227687	Ranger College	Ranger	TX	Rural-serving small
246	227766	Richland College	Dallas	TX	Urban-serving multicampus
247	227924	San Antonio College	San Antonio	TX	Urban-serving multicampus
248	227979	San Jacinto Community College	Pasadena	TX	Suburban-serving multicampus
249	228158	South Plains College	Levelland	TX	Rural-serving large
250	228316	Southwest Texas Junior College	Uvalde	TX	Rural-serving medium
251	227854	St. Philip's College	San Antonio	TX	Urban-serving multicampus
252	228547	Tarrant County College District	Fort Worth	TX	Urban-serving multicampus
253	228608	Temple College	Temple	TX	Rural-serving medium
254	228699	Texarkana College	Texarkana	TX	Rural-serving medium
		Texas Southmost College Called University of Texas at Brownsville-Texas			
255	229072	Southmost College	Brownsville	TX	Rural-serving medium
256	229319	Texas State Technical College Harlingen	Harlingen	TX	Rural-serving medium
257	228680	Texas State Technical College Waco	Waco	TX	Rural-serving medium

258	408394	Texas State Technical College-Marshall	Marshall	TX	Rural-serving small
259	229328	Texas State Technical College-West Texas	Sweetwater	TX	Rural-serving small
260	225308	Trinity Valley Community College	Athens	TX	Suburban-serving multicampus
261	229355	Tyler Junior College	Tyler	TX	Rural-serving large
262	229504	Vernon College	Vernon	TX	Rural-serving medium
263	229540	Victoria College	Victoria	TX	Rural-serving medium Suburban-serving single
264	229799	Weatherford College	Weatherford	TX	campus
265	229832	Western Texas College	Snyder	TX	Rural-serving medium
266	229841	Wharton County Junior College	Wharton	TX	Rural-serving large
267	231536	Blue Ridge Community College	Weyers Cave	VA	Rural-serving medium
268	231697	Central Virginia Community College	Lynchburg	VA	Rural-serving medium
269	231873	Dabney S Lancaster Community College	Clifton Forge	VA	Rural-serving small
270	231882	Danville Community College	Danville	VA	Rural-serving medium
271	232052	Eastern Shore Community College	Melfa	VA	Rural-serving small
272	232195	Germanna Community College	Locust Grove	VA	Rural-serving medium
273	232414	J Sargeant Reynolds Community College	Richmond	VA	Urban-serving multicampus
274	232450	John Tyler Community College	Chester	VA	Suburban-serving multicampus
275	232575	Lord Fairfax Community College	Middletown	VA	Rural-serving large
276	232788	Mountain Empire Community College	Big Stone Gap	VA	Rural-serving medium
277	232867	New River Community College	Dublin	VA	Rural-serving medium
278	232946	Northern Virginia Community College	Annandale	VA	Suburban-serving multicampus
279	233019	Patrick Henry Community College	Martinsville	VA	Rural-serving medium
280	233037	Paul D Camp Community College	Franklin	VA	Rural-serving small
281	233116	Piedmont Virginia Community College	Charlottesville	VA	Rural-serving medium
282	233310	Rappahannock Community College	Glenns	VA	Suburban-serving multicampus
283	233639	Southside Virginia Community College	Alberta	VA	Rural-serving large
284	233648	Southwest Virginia Community College	Richlands	VA	Rural-serving medium Suburban-serving single
285	233754	Thomas Nelson Community College	Hampton	VA	campus Suburban-serving single
286	233772	Tidewater Community College	Norfolk	VA	campus
287	233903	Virginia Highlands Community College	Abingdon	VA	Rural-serving medium
288	233949	Virginia Western Community College	Roanoke	VA	Rural-serving large
289	234377	Wytheville Community College	Wytheville	VA	Rural-serving medium

<b>Classification</b>	<b># of institutions</b>	<b>%</b>
Rural-serving small	44	15%
Rural-serving medium	130	45%
Rural-serving large	39	13%
Suburban-serving single campus	17	6%
Suburban-serving multicampus	19	7%
Urban-serving single campus	6	2%
Urban-serving multicampus	34	12%

<b>Total:</b>	<b>289</b>	<b>100%</b>
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<b>Classification</b>	<b># of institutions</b>	<b>%</b>
Rural-serving small, medium, and large	213	74%
Suburban-serving single and multicampus	36	12%
Urban-serving single and multicampus	40	14%

<b>Total:</b>	<b>289</b>	<b>100%</b>
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APPENDIX B  
IRB APPROVAL LETTER

Office for Research  
Institutional Review Board for the  
Protection of Human Subjects



September 23, 2013

Angela Walker  
838 E. 22<sup>nd</sup> Street  
Anniston, AL 36207

Re: IRB # EX-13-CM-097: "Time to Weigh-In: An Analysis of What, If Anything, U.S. Public 2-Year Colleges in the SACS Region Are Doing to Curb Obesity among Their Students"

Dear Ms. Walker,

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given exempt approval according to 45 CFR part 46.101(b)(2) as outlined below:

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:*
- i. information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and*
  - ii. any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.*

**This approval expires on September 22, 2014.** If the study continues beyond that date, you must complete the IRB Renewal Application. If you modify the application, please complete the Modification of an Approved Protocol form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure form.

Please duplicate the IRB-approved consent language for use in the online survey.

Should you need to submit any further correspondence regarding this application, please include the assigned IRB approval number.

Good luck with your research.

Sincerely,



158 Rose Administration Building  
Box 870-27  
Tuscaloosa, Alabama 35487-0127  
(205) 948-8467  
fax (205) 348-7489  
toll free (877) 920-3066

  
Carpantato T. Myles, MSM, CIM  
Director & Research Compliance Officer  
Office for Research Compliance  
The University of Alabama

APPENDIX C  
SURVEY INSTRUMENT

Please contribute to the completion of this valuable study by taking approximately 15 minutes to complete the brief survey below. Thank you.

Please provide the best answer.

**Part 1: Demographic Information**

1. Please indicate your job title.

\_\_\_\_\_

2. In which state is your institution located?

Alabama

Florida

Georgia

Kentucky

Louisiana

Mississippi

North Carolina

South Carolina

Tennessee

Texas

Virginia

3. Is your institution primarily a commuter institution?

Yes

No

4. What is your institution's current academic year student enrollment?

Under 1,000

1,000 to 1,999

2,000 to 4,999

5,000 to 9,999

10,000 to 14,999

15,000 to 19,999

20,000 to 24,999

25,000 to 29,999

30,000 to 39,999

40,000 +

5. What percentage of students at your institution is currently receiving financial aid?

- Less than 10%
- 10%-20%
- 21%-30%
- 31%-40%
- 41%-50%
- 51%-60%
- 61%-70%
- 71%-80%
- 81%-90%
- 91%-100%

6. Is your institution a member of the American College Health Association?

- Yes
- No
- Not sure

## Part 2: Obesity-related Information

7. Does your institution assess your students' physical health and wellness behaviors and status?

- Yes (annually or more frequently)
- Yes (every other year)
- Yes (less frequently than every other year)
- No
- Not sure

8. How many full-time equivalent staff does your institution employ to assess your students' physical health and wellness behaviors and status? Fill in the blank.

\_\_\_\_\_

9. Has your institution formed an interdisciplinary committee that addresses obesity needs of your students?

- Yes
- No
- Not sure

10. During the last 12 months, did your institution offer obesity education/information to your students?

- Yes, ongoing
- Yes, periodically
- No
- Not sure

11. Indicate if any of the following institutional statements address, or are expected to address, student obesity. If other, please specify.

	Yes	No	Expected within the next year	Not sure
College Mission				
College Catalog				
Strategic Plan				
Student Handbook				
Other _____				

12. Does your institution have written policies on the items below?

	Yes	No	Expected within the next year	Not sure
Offering students healthy food and beverage choices in the cafeteria and/or on-campus food outlets				
Offering students healthy food and beverage choices in vending machines				
Providing students healthy food and beverage choices at functions/events				
Providing physical activity opportunities to students				

13. During the last 12 months, did any of the institutional departments below offer obesity prevention services (e.g., healthy food and beverage options, free exercise classes, obesity fact sheets and brochures) to students? If other, please specify.

	Yes	No	Not sure
Campus Recreation/Fitness Center			
Dining Services			
Environmental Health and Safety			
Health and Wellness Committee/Coalition			
Health Promotion/Wellness			
Human Resources (Benefits Office or Similar Area Within HR)			
Intercollegiate Athletics			
LGBTQ Resource Center			

Medical Center			
Women's Resource Center			
*Other			

14. During the last 12 months, were obesity prevention programs offered to your students by your institution? If other, please specify.

	Yes, ongoing	Yes, periodically	No	Not sure
Health Risk Assessment (e.g., survey, interview, etc.) with coaching follow-up				
Health Risk Assessment (e.g., survey, interview, etc.) with no coaching follow-up				
Labeling healthy food choices in the cafeterias				
On-campus walking program				
On-site physical activity and/or fitness education/program				
Providing healthy choices in vending machines				
Self-care books/tools				
Signage to encourage stairwell use				
Subsidies/reduced price for off-campus Fitness/Recreation Center memberships				
Weight management program				
Weight screenings				
Other				

15. Please select which, if any, barriers have challenged the success of your institution's obesity prevention programs (Please choose up to five only.).

- Confidentiality concerns
- Cost of offering the program
- Demonstrating program results
- Effective marketing
- Lack of access to data (medical, Rx claims, disability, Health Risk Assessment)
- Lack of student interest
- Lack of integration with other programs/services
- Lack of participation by the target population
- Lack of senior management support
- Lack of staff resources
- Lack of participation by students
- Regulatory issues such as HIPAA
- None/not applicable
- Other (please specify) \_\_\_\_\_

16. How does your institution deliver obesity-related health education and promotion information to your students? Check all that apply.

- Email (mass send)
- Flyers
- Health coaching
- Health tracker
- Links to resources (e.g., CDC)
- Lunch-and-learn sessions
- Newsletters (online or paper)
- Nurse online
- Social media
- Text messaging/instant messaging
- Web-based portal
- Wellness/health fair/event
- None/not applicable
- Other (please specify) \_\_\_\_\_

17. During the last 12 months, did your institution offer obesity treatment (e.g., weight loss programs) to your students?

- Yes, ongoing
- Yes, periodically
- No
- Not sure

Additional Comments:

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Thank you for completing the survey. Please feel free to contact Angela Walker, The University of Alabama doctoral student, at [amwalker@ua.edu](mailto:amwalker@ua.edu) if you have any questions or suggestions. The aggregate results can be found in The University of Alabama's electronic Dissertations & Theses Database.

APPENDIX D  
RESPONDENTS' JOB TITLES

Please indicate your job title.

1. Associate Dean of Students
2. Associate Vice President of Student Services and Enrollment Management
3. Associate Vice President Student Development
4. Associate VP of Academic and Student Services
5. Chief Student Affairs Officer
6. Chief Student Affairs Officer
7. Dean, Enrollment & Student Services
8. Dean, Student Affairs
9. Dean for Student Services
10. Dean of Student Affairs
11. Dean of Student Development
12. Dean of Students
13. Dean of Students
14. Dean of Students
15. Dean of Students (CSO)
16. Dean of Student Services
17. Dean of Student Services
18. Dean of Student Services
19. Dean of Student Services
20. Dean of Student Services
21. Dean of Student Services and Enrollment Management
22. Director and founder of the Shelton State Community College Wellness Center
23. Director of Health & Wellness
24. Executive Vice President
25. Executive Vice President
26. Executive Vice President
27. Health and Wellness Specialist
28. Interim Vice Chancellor for Student Affairs
29. Senior Vice President for Academic and Student Affairs
30. Vice-President of Student Services
31. Vice-President of Student Services
32. Vice Chancellor of Student Affairs
33. Vice President
34. Vice President
35. Vice President
36. Vice President, Enrollment and The Student Experience
37. Vice President, Student Affairs
38. Vice President, Student Affairs
39. Vice President, Student Affairs
40. Vice President, Student Development Services
41. Vice President, Student Development Services
42. Vice President - Student Services
43. Vice President/Dean of Instruction
44. Vice President for Academic Affairs
45. Vice President for Academic Affairs and Student Services
46. Vice President for Academic and Student Development
47. Vice President for Enrollment Management and Student Services
48. Vice President for Instruction and Student Services
49. Vice President For Scooba campus, EEOC, OCR, SACS, Student services/affairs, Institutional research & effectiveness

50. Vice President for Student Affairs
51. Vice President for Student Affairs
52. Vice President for Student Affairs
53. Vice President for Student Affairs
54. Vice President for Student Affairs
55. Vice President for Student Affairs
56. Vice President for Student Affairs
57. Vice President for Student Affairs and Commandant of Cadets
58. Vice President for Student Affairs and Director of Athletics
59. Vice President for Student Development
60. Vice President for Student Services
61. Vice President for Student Services
62. Vice President for Student Services
63. Vice President for Student Services
64. Vice President for Student Services
65. Vice President for Student Services
66. Vice President for Student Services
67. Vice President of Academic and Student Affairs
68. Vice President of Academic and Student Affairs
69. Vice President of Instruction and Student Services
70. Vice President of Instruction and Student Services
71. Vice President of Student Affairs
72. Vice President of Student Affairs
73. Vice President of Student Affairs
74. Vice President of Student Affairs
75. Vice President of Student Development
76. Vice President of Student Services
77. Vice President of Student Services
78. Vice President of Student Services
79. Vice President of Student Services
80. Vice President of Student Services
81. Vice President of Student Success
82. Vice President Student Affairs
83. Vice President Student Development
84. Vice President Student Services
85. Vice President for Student Affairs
86. Vice President
87. VP, Student Affairs
88. VP for Academic and Student Services
89. VP for Instruction, Student Services and Research
90. VP for Instruction and Support Services/Chief Academic Officer
91. VP for Student Development
92. VP of Academic and Student Affairs
93. VP of Student Services
94. VP Student Affairs