

ABSTRACT

Title of dissertation: PREDICTORS OF FEELINGS OF
DEPRESSION AMONG ASIAN
AMERICAN COLLEGE STUDENTS

Katie K. Koo, Doctor of Philosophy, 2016

Dissertation directed by: Assistant Professor Julie J. Park, Department of
Counseling, Higher Education, and Special
Education

The purpose of this study is to explore the relationship between various collegiate experiences including substance use, religiosity, campus climate, academic life, social life, self-concept, satisfaction with college, and perceived feelings of depression among Asian American college students compared to other racial groups. Employing Astin's (1993) I-E-O model, the study utilized the 2008 Cooperative Institutional Research Program (CIRP) the Freshman Survey (TFS) and the follow up College Senior Survey (CSS) in 2012 with the final sample of 10,710 students including 951 Asian American students. Descriptive analysis, cross-tabulations, blocked hierarchical multiple regression analysis, the equality of the unstandardized beta coefficients from the regression analyses, and a one-way ANOVA were conducted for the data analysis.

Asian American students who are female, from low SES backgrounds, academically less achieved, frequent substance users, less religiously involved, and less satisfied with overall college experiences showed higher levels of feeling

depressed. For the rate of feeling depressed across racial groups, Asian American college students showed the highest rate of feeling depressed while White students reported the lowest rate of feeling depressed. For Asian American college students, feeling depressed in high school, hours spent per week on studying and homework, and self-confidence in intellectual ability were the most significant predictors of feelings of depression while drinking beer, drinking liquor, spirituality, failing to complete homework on time, hours spent per week on socializing, self-rated self-confidence in social ability, and satisfaction with overall college experiences were significant predictors of feelings of depression. Asian American college students spent the longest hours on studying and homework, reported the highest GPA, but showed the lowest self-confidence on intellectual ability. For all four racial groups, feeling depressed in high school and self-confidence in intellectual ability were significant predictors of feelings of depression in common. Implications for practice and directions for future research emphasize the need for better understanding the unique cultural background and impact of academic life associated with feelings of depression among Asian American college students and developing customized psycho-educational and outreach programs to meet unique needs for psychological well-being for each racial group on campus.

PREDICTORS OF FEELINGS OF DEPRESSION
AMONG ASIAN AMERICAN COLLEGE STUDENTS

By

Katie Kwon Koo

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Advisory Committee:
Assistant Professor Julie J. Park, Chair
Professor Francine H. Hultgren
Associate Professor Kimberly A. Griffin
Associate Professor Matthew J. Miller
Affiliate Assistant Professor Pepper E. Phillips

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Dedication

To my parents,

Young-soon Ryu and Dr. Oh-do Kwon,

who are my very first teachers.

&

To Bon-gul oppa,

who deserves the co-authorship of this research.

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“It takes a village to raise a child.”
- African proverb

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CHAPTER ONE: INTRODUCTION

Mental health continues to be one of the major issues on college campuses, and psychological well-being is one of the most important factors affecting the quality of life of college students. The annual report of the American Freshman: National Norms Fall 2013 (Eagan, Lozano, Hurtado, & Case, 2013) indicates that college students have demonstrated consistent decreases in emotional health and increases in stress compared to the previous years since 2002. Among psychological issues, depression is a serious form of psychological distress that is often under-diagnosed and undertreated among college students, and it may lead to negative consequences such as poor academic performance, limited social interactions, and suicide (Kessler, 2003). For individuals between the ages of 15 and 45, depression is one of the leading causes of disability in the United States (Center for Disease Control and Prevention, 2013). In the 2013 National College Health Assessment, 31% of college students who completed survey reported being so depressed that it affected their daily functions (National College Health Assessment, 2013). Furthermore, compared to other age groups, college students experience a higher risk for depression (National College Health Assessment, 2013) and the depression rate among college students increased 56% from 2003 to 2009 (Avila, 2009).

Depression is found universally across all countries and diverse ethnic/racial groups that have been investigated (Miranda, Lawson, & Escobar, 2002). However, studies found that the prevalence rates of depressive disorder across different ethnic/racial groups vary (Takeuchi, Hong, Gile, & Alegría, 2007; Breslau et al., 2006). Particularly, among different racial groups, Asian American reported the highest rate of lifetime depression (Hansin et al., 2005; Kuo et al., 2008). The high rate of depression among Asian Americans compared to

other racial groups is consistently observed in college student samples (e.g., Aldwin & Greenberger, 1987; Okazaki, 1997; Young, Fang, & Zisook, 2010).

The United States Census Bureau (2010) reported that the Asian American population comprised of 14.7 million representing 4.5% of the U.S. population, and they foresaw that the percentage of Asian Americans will rise from 4.5% to 7.8% by 2050. An important fact about this 2010 census data was that Asian Americans in general had higher-than-average educational attainment in all academic achievement categories (U.S. Census Bureau, 2010), although disparities exist between ethnic subgroups.

On college campuses, the number of Asian Americans has consistently been increasing. Until the 1970s, Asian Americans were represented in small numbers in higher education. In 1976, there were 150,000 Asian American college students in entire American universities. In 1986, there were approximately 490,000 Asian American students in colleges and universities in the U.S. (Hsia & Hirano-Nakanishi, 1995). By 2010, there were 1,240,000 Asian American students on college campuses (U.S. Census Bureau, 2010). In 2013, Asian Americans made up roughly 7.6% of all US college students (U.S. Department of Education, National Center for Education Statistics, 2014).

Despite the growing number of Asian American college students, Museus (2009) indicated that only 1% of published articles from the top journals in the field of higher education – *Journal of Higher Education*, *Research in Higher Education*, and *The Review of Higher Education*, *The Journal of College Student Development*, and *NASPA Journal* – focus on issues of Asian Americans college students. Furthermore, when it comes to mental health issues, Asian Americans are one of the “least studied groups” (Lam, Pepper, and Ryabchenko, 2004). The model minority myth or stereotype of Asian Americans may be associated with this lack of research focus.

However, existing studies indicate that Asian Americans have high rates of mental health challenges, and many researchers believe that rates of psychopathology have been underestimated in this population (Herrick & Brown, 1998; Sue et al., 1994). In addition, compared to White counterparts, Asian American college students have higher scores on measures of psychological distress such as loneliness, nervousness, isolation, depression, and anxiety (Louie, 2003). While there is growing empirical research on this growing population, there is still a gap in the literature on collegiate experiences and factors that contribute to the mental health outcomes of this constituency. In particular, data on factors contributing to Asian American college students' mental health issues, psychological well-being, and depression are scant.

Statement of the Problem

Although college campuses have tried to pay attention to students' psychological well-being more recently, universities need better and more accurate information and understanding about the unique mental health issues of a diverse student body. Despite the trend of diversifying racial/ethnic groups on campus and seriousness of depression on college campuses, only few studies have examined depression across specific racial groups of college students. In particular, research on depression related to other specific factors such as campus climate, religiosity, substance use and self-concept among different racial groups of college students is still under-developed. Although there are studies on depression related to specific factors among students in general (Davis & Stevenson, 2006; Love & Murdock, 2012; Stansbury et al., 2011), little is known about racial/ethnic differences in depression among students in higher education.

Asian Americans are a less frequently examined racial group among other racial groups on college campuses especially in the area of depression (Lam, Pepper, and

Ryabchenko, 2004). In contrast to the public's view of Asian Americans as high achievers and well-adjusted individuals, researchers have reported that Asian Americans have higher levels of mental distress compared to White students (Okazaki, 1997; Uba, 1994; Louie, 2003). The pattern of higher levels of depression among Asian Americans compared to other racial groups has been shown among college student populations (Aldwin & Greenberger, 1987; Kinzie, Ryals, Cottingham, & McDermott, 1973; Marsella, Kinzie, & Gordon, 1973; Okazaki, 1997; Louie, 2003). In addition, several studies have examined different factors related to depression such as campus climate as a predicting factor of depression (Cress & Ikeda, 2003), religiosity and social support as predictors of depression (Chang, 2010), the relationship between substance abuse and depression (Iwamoto, Liu, & McCoy, 2011), and the impact of cultural values on depression (Lund, Chan, & Liang, 2014). Each of these studies has focused on only the relationship of one factor with depression, but no study has looked at numerous factors at once in order to understand what variables are related to depression specifically. This gap suggests that exploring the relationship between multiple factors and depression in this population will be beneficial to understand the phenomena and to work with Asian American students' psychological well-being.

Although a growing number of studies have focused on specific factors impacting depression among the Asian American population, relatively little is known about the relationship between depression and multiple collegiate experiences of Asian American college students. Given the dearth of empirical studies on this specific topic and population, systematic empirical studies on the relationship between depression and multiple college experiences among Asian Americans college students are necessary.

With the growth of the Asian American population in the coming years and depression being a serious detriment to collegiate outcomes, it is clear that more focus and

attention is necessary to learn more about the relationship between Asian Americans and depression. Thus, this study will help fill the gap in the literature. As this constituency continues to grow on college campuses, it is critical to have a comprehensive understanding of Asian American college students and how college environments and experiences impact depression in this group compared to that in other racial groups on campus in order to better serve students' needs and ensure success in college. In addition, counseling literature shows that Asian Americans are less likely to seek help for mental or emotional struggles than other racial groups although they show higher level of mental distress (Phuong, 2008; Zhou, Siu, & Xin, 2009). Given the fact that Asian American students have their own unique cultural background related to mental health and help seeking tendencies, the study aims to contribute to the limited body of literature on Asian American students' collegiate experiences and depression by elucidating multiple factors predicting depression among this population.

Purpose of the Study

The purpose of this study is to explore the relationship between various collegiate experiences and perceived feelings of depression among Asian American students using data from the 2008 Freshmen Survey (TFS) and 2012 College Senior Survey (CSS) conducted by the Cooperative Institutional Research Program (CIRP) in the Higher Education Research Institute (HERI) at the University of California at Los Angeles (UCLA). Specifically, three research questions guide this study:

- 1) How does the rate of feeling depressed among Asian American college students vary by gender, social class, and college experiences (e.g., substance use, religiosity, academic performance, and satisfaction with college) during college?

- 2) After controlling for students' characteristics, what college environment factors and collegiate experiences predict feelings of depression among Asian American college students?
- 3) How does the rate of feeling depressed among Asian American college students differ from other racial groups (e.g., White, African American, and Latino students), and do predictors of feeling depressed among Asian American college students differ from other racial groups?

Significance of the Study

Findings from this study will help faculty members, student affairs professionals, and higher education institutions better understand the factors contributing to depression in Asian American college students. By filling a gap in the depression and mental health literature regarding Asian American collegiate experiences and environments, this study will help inform and improve current educational programs and student affairs services provided by student affairs professionals and scholar practitioners for Asian American students in relation to their college environment.

The current study adds to the body of research on Asian American college students, and is significant as the study will contribute to the field of student affairs and higher education. This study will help inform the practice of student affairs professionals, scholar practitioners, and researchers in their work with this growing and complex constituency. It is important to pay attention to the factors that affect Asian American college students' depression and mental health in order to understand this population to make the corrective changes and programs to better serve their academic, social, and psychological needs.

Definition of Terms

This section provides definitions of key terms used in this study.

Asian American

Asian American is defined as an individual living in the United States, who self-identifies as being of Asian descent, both Asian alone or Asian in combination with one or more races. In the present study, only U.S. citizens and permanent residents were included and Asian international college students were excluded in this category.

East Asian ethnicities include Chinese, Taiwanese, Japanese, and Korean groups. Southeast Asian ethnicities include but are not limited to Indonesian, Thai, Laotian, Cambodian, Vietnamese, Malaysian, Hmong, and Filipino groups. South Asian ethnicities include Indian groups. Furthermore, Pacific Islander ethnicities include Hawaiian, Guamanian, and Polynesian groups. Only those who identify themselves as having an East Asian, Southeast Asian, South Asian or Pacific Islander descent are included in this study. For this study, the term Asian American is used as the umbrella term for all Asian American participants. Of the approximately 50 different ethnic groups, Chinese, Filipino, Indian, Vietnamese, Korean, and Japanese are the largest Asian Ethnic populations in the U.S. (U.S. Census, 2010). Table 1.1 displays the largest Asian ethnic populations in the U.S.

Table 1.1 Asian Populations by Ethnicity from the 2010 U.S. Census

Ethnicity	Population
Chinese, except Taiwanese	3,779,732
Filipino	3,416,840
Asian Indian	3,183,063
Vietnamese	1,737,433
Korean	1,706,822

As a group, Asian Americans are considered as heterogeneous, with approximately 50 ethnic groups, each group made with their own culture, language, and socio-demographic backgrounds and status as well as immigration stories (Das, 2010). Although each ethnic group has different cultural norms and values, Asian Americans also share significant similarities in their Asian cultures and values such as collectivism, family oriented culture, conformity to norms, hierarchical relationship, humility, the avoidance of shame, and emotional self-control (Kim, Atkinson, & Umemoto, 2001).

Depression

We all feel down or sad occasionally, but these sad feelings are usually temporary and disappear after a few days. However, depression is different because depressive feelings and symptoms negatively affects normal functioning and daily life of both depressed patients and those who care for them.

Depression is a psychological disorder defined by having a depressed mood most of the time indicated by subjective report such as feelings of sad and feelings of hopelessness, or observation made by others such as appears tearful, decreased/ loss of interest in activities once pleasurable including sexual activities, sleep disorders, fatigues and decreased energy level, psychomotor agitation observable by others, feelings of worthlessness or excessive guilt, difficulty concentrating, recurrent suicidal ideation (DSM-V-TR; American Psychiatric Association, 2013).

In this study, variables capturing a clinical diagnosis of depression are not included. Thus, the current study captures students' perceived feelings of depression.

Stress

Stress is the relationship between a person and a specific environment that the person appraises to be taxing or to exceed his/her resources and to endangers his/her well-being (Hancock & Desmond, 2001). Lazarus and Folkman (1984) argue that stress is a state of being that results from an individual's appraisal that a particular stressor is perceived as a source of harm, loss, threat, or challenge.

Since the late 1970s, the biological and sociological aspects of stress have been extensively studied. According to Selye (1976), stress is viewed as a physical or biological response to any environmental demand which can cause what he called the "general adaptation syndrome" which is a physical condition developed after exposure to a stressor for a certain period of time. From a sociological perspective, Pearlin and Schooler (1978) considered stress as external life-strains that impact individuals' emotional state.

Psychological Well-being

Well-being is a highly complex construct related to human nature that refers to a person's optimal psychological functioning and experience (Andrew & Whitney, 1976). Although there has been a lack of agreement on definition on well-being among researchers, Diener (2000) established the concept of wellbeing as "Wellbeing is an individual's subjective evaluation of one's life evaluations that are both affective and cognitive. People experience wellbeing when they feel many pleasant and few unpleasant emotions, when they are engaged in interesting activities, when they experience many pleasures and few pains, and when they are satisfied with their lives. (p. 34)."

Conceptual Frameworks

The Input–Environment–Outcome Model

In this study, Astin's (1993) College Impact Model is employed to conceptualize the relationship among pre-college characteristics (inputs), college experiences (environments), and depression (outcome).

The Input-Environment-Output (I-E-O) model has been used as a conceptual framework in a body of college impact and higher education literature. Astin (1993) argued that the I-E-O model can be used to understand and examine what factors in the college environment impact students' development. The main purpose of the I-E-O model is to measure the impact of the environment by controlling for certain input variables. What researchers want to examine through the I-E-O model is how students change, and why certain students change in different ways compared to other students. To understand development, two time periods are needed to determine the impact of college environments: input and output. Educators derive answers to the research questions about what happens to students between the input and output time periods. Thus, the fundamental question of the I-E-O model is "What happens in the environment?" (Astin, 1993).

The I-E-O model represents the student's developmental condition before (inputs), during (environment), and after (outcome) college. Inputs refer to student characteristics at the time of a student's entry into college, while environments refer to the various experiences that the student is exposed to and experiences during college. Environments in the I-E-O model not only refer to college environments that impact student development but also include students' experiences, students' involvements, attributes, and opinions during their four years of college. In other words, environments in this model capture students' collegiate experiences during their four years of college. Lastly, outcomes refer to the

student's characteristics after exposure to various environments in college. Given its focus on the before, during, and after time points of students' experiences, educators can obtain the details regarding the value of certain environments relative to target outcomes using the I-E-O model.

The I-E-O model provides an appropriate framework for understanding Asian American college students' depression and predictors of depression. As discussed in the previous section, the literature on Asian American college students' depression indicates that college environments and students' experiences affect students' mental health. In the present study, students' gender, race, SES, and past experience of depression in high school will be examined as input variables. Various college environments (e.g, institution type, campus racial climate) and Asian American students' collegiate experiences (e.g., substance use, involvement in religion, academic performance, social life, self-concept, and satisfaction with college experiences) are conceptualized as environmental variables. Feelings of depression will be explored conceptually as an outcome variable.

In sum, the methodology of the study is guided by Astin's I-E-O Model (Astin, 1993), which provides both the research and statistical framework to examine the impact of collegiate experiences on depression among Asian American college students. Applying Astin's (1993) I-E-O framework to this study, collegiate experiences are the college environment of interest in predicting depression, as the students' mental health outcome. Table 1.2 shows a visual depiction of the conceptual framework of this study.

Table 1.2 I-E-O Model and Variables

Inputs	Environment	Outcomes
<p>Block 1 <u>Students' Characteristics:</u> Gender Socio-economic Status (SES) Parental Marital Status Native English Speaker</p> <p><u>Pre-college experiences:</u> High School Substance Use High School Religiosity High School Academic Life High School Social Life High School Self-concept Perceived Feelings of Depression in High School</p>	<p>Block 2 Substance Use</p> <p>Block 3 Religiosity</p> <p>Block 4 Campus Climate</p> <p>Block 5 Academic Life</p> <p>Block 6 Social Life</p> <p>Block 7 Self-concept</p> <p>Block 8 Satisfaction with Overall College Experience</p>	<p>Perceived Feelings of Depression</p>

Holistic Wellness Model

This study also employs the Holistic Wellness Model developed by Chandler and colleagues (1992) to frame the conceptualization of how depression and collegiate experiences are associated with other elements of wellness. Chandler and colleagues (1992) present six dimensions of wellness: intellectual, physical, spiritual, occupational, emotional, and social. They assert that all six of these realms of wellness have an impact on general wellness. Depression can be included in the category of emotional wellness.

According to the Holistic Wellness Model, the areas of wellness are all interrelated. This study considers the relationship between each realm of wellness and depression. More specifically, the examination of the association between students' religiosity and depression in this study reflects the theoretical relationship between spiritual wellness and emotional

wellness in the Holistic Wellness Model. The examination of the relationship between students' social life on campus and depression in this study reflects the theoretical relationship between social wellness and emotional wellness. Furthermore, the examination of the association between students' academic performance and depression in this study is guided by the theoretical relationship between intellectual wellness and emotional wellness. I will use the Holistic Wellness Model as a conceptual frame while I control for various college environments and collegiate experiences associated with other realms of wellness in addition to measuring students' perceived feelings of depression.

Overview of Research Methodology

A quantitative method using secondary data analysis of responses to the 2008 Freshmen Survey (TFS) and 2012 College Senior Survey (CSS) of the Cooperative Institutional Research Program (CIRP) by the Higher Education Research Institute (HERI) at the University of California at Los Angeles (UCLA) will be employed for this study. UCLA HERI data is the largest longitudinal national dataset that examines college environments and collegiate experiences, and includes responses from approximately 2,700 institutions. Using Astin's (1993) I-E-O- model as the conceptual framework for the research design of this study, statistical methods utilized in this study include cross-tabulation, ANOVA, correlation, and hierarchical multiple regression. The next chapter will provide a review of literature on the topics and issues of this study.

CHAPTER TWO: REVIEW OF THE LITERATURE

The chapter will provide an overview of the literature on Asian American college students, as well as a review of literature on depression and its related factors among college students in general with a particular emphasis on Asian American college students. The first section of the chapter will explore literature on Asian Americans and Asian American college students. The second section will explore literature on depression in general, and depression among college students and for Asian American college students. The third section will explore literature on associated factors of depression among college students and Asian American college students such as socioeconomic status, substance use, religiosity, campus climate, academic life, social life on campus, self-concept, and satisfaction with college.

Asian Americans and Asian American College Students

This section will explore the literature related to Asian Americans and Asian American college students. Specifically, the section will highlight the factors that affect this population overall, and their experiences in college.

Asian Americans

The Asian American population has grown and expanded exponentially in recent years, contributing significantly to the ongoing transformation and diversification of the racial composition of American society. The 2010 Census reported that the Asian American population in the United States increased 46% in ten years to 14.7 million (4.5 % of the U.S. population), making it the fastest growing group of all racial groups in the U.S. (U.S. Census Bureau, 2000, 2010).

Although there are within group variations and differences between the many ethnic groups within Asian Americans such as educational achievement, socio-economic status,

immigration history, and cultural background, Asian Americans have been viewed as one ethnic group under a concept of “model minority” myth (Uba, 1994). This myth of Asian Americans stems from their purported ability to overcome their minority disadvantage with hard working tendencies, strong motivation, relatively high family income and social class, educational achievement, and lower rates of mental illness (Sue, 1981). The model minority myth has influenced the public’s view that Asian Americans experience less social and psychological problems, including mental disorder (Crystal, 1989). However, the model minority myth is not consistent with the research indicating that Asian Americans experience psychological problems and social distress. For example, Asian Americans experience stress producing issues that Whites do not experience such as racism, immigration and legal status, and minority status (Atkinson & Gim, 1989). Young, Fang, and Zisook (2010) also reported that Asian American students may experience more acute distress on college campuses compared to other college students. Detailed descriptions of college experiences and mental health among Asian American college students will be presented in the later section on depression and associated factors among this population.

Asian American College Students

Approximately 55% of Asian Americans enroll in college. In 2013, Asian Americans made up roughly 7.6% of all US college students (U.S. Department of Education, National Center for Education Statistics, 2014). On average, Asian Americans have attained more education than any other ethnic group in the United States. In 2010, 50.8% of Asian Americans between 17 and 25 years of age had a college degree or higher level of education, while 43.3% of White Americans, 38.4% of African Americans, and 31.9% of Hispanic in the same age group achieved this education level (Snyder & Dillow, 2012). However, rate of educational attainment varies within the Asian American population. For example, 50% of

Chinese Americans aged 25 to 64 have attained four or more years of college education while 46% of Filipinos and 68% of Indians aged 25 to 64 hold a bachelor's degree or higher (Asian American Justice Center and Asian Pacific American Legal Center, 2011).

Although Asian Americans are a rapidly growing racial group in both the nation and higher education, there are still very few published studies on issues relating to Asian American college students (Museus, 2009), as noted in chapter one. This lack of attention to Asian American college student research may reflect their invisibility in higher education research. Researchers have proposed to explain this lack of research including Asian American students' "invisibility" in higher education (Museus & Maramba, 2011), and misunderstanding of Asian American students in higher education studies. Maramba and Museus (2011) argue that the "model minority" stereotype is one of the factors influencing misunderstandings and misconceptions of Asian American population. In the next section, I will describe the impact of model minority stereotype on the view of Asian Americans and Asian American college students.

The Impact of the Model Minority Myth

The "model minority" figure is prevalent in much of the research literature on Asian American college students. Osajima (2003) has asserted that the narrative of the model minority stereotype is a tool to exploit Asian Americans for the benefit of the elite in the U.S. racial hierarchy.

Researchers have indicated that there are various biases and stereotypes about Asian Americans that have permeated Western society (Nakanishi & Nishida, 1995). These stereotypes are perpetuated through the media and society as a whole and affect perceptions and interactions with this population. Studies have shown that some of the problems and difficult issues that Asian Americans experience are due to the proliferation of the model

minority myth, and its stereotype that Asian Americans are hard working people who are academically and socially well accomplished in society. This stereotype may underestimate the needs of Asian Americans (Museus, 2009).

A common stereotype associated with the model minority myth is the assumption that Asian Americans show higher academic achievement because they possess the knowledge and skills to succeed at all levels of education (Yeh, 2002). The reports from The National Commission on Asian American and Pacific Islander Research in Education (CARE, 2008) showed that educational professionals from various educational settings believe that Asian American students will succeed academically without support. School faculty members often have the model minority myth ingrained in their views of Asian American students and do not recognize that this population contend with issues similar to those that other minority groups face (CARE, 2008). Furthermore, Asian Americans may experience extra pressure and anxiety to meet the expectations of this stereotype from their society, family, teachers, and peers. Because the model minority myth assumes that Asian Americans do not need help or they can endure under any condition, Asian American college students may strive for success, have difficulties to ask for help when needed, and minimize or ignore their needs (CARE, 2008).

Having reviewed the literature on the target population of this study, Asian American college students, I next explore the literature on the main topic of the study-depression in the following sections along with review on related factors.

Depression

In reviewing the literature regarding depression, I will explore the literature on depression in general and depression among college students first. To follow, a review of depression among Asian American college students will be discussed. Depression is a severe

psychological disorder that plagues many Americans and is one of the leading causes of major distress in the United States. According to the National Institute of Mental Health (NIMH, 2009), approximately 19 million, or 9.5 % of Americans are afflicted with some form of depression in each year. Major Depressive Disorder (MDD) is one of the most common forms of depression, affecting approximately 14.8 million (6.7 % of) Americans (NIMH, 2009). Major Depressive Disorder is characterized by presence of five symptoms lasting at least two weeks: diminished mood, loss of interest in activities, weight loss, insomnia or hypersomnia, and fatigue or loss of energy (Riley, Treiber, & Woods, 1989). Other common symptoms include feelings of hopelessness and thoughts of suicide. Depression is one of the main predictors of suicidal thinking and suicide attempts (Beautrais, Joyce, & Mulder, 1999). The affective symptoms of depression include sadness and anhedonia, which suggests that depressed individuals experience negative emotions more frequently and positive emotions less frequently (Riley, Treiber, & Woods, 1989). In other words, depressed individuals experience greater intensity of anger while experiencing decreased levels of happiness and satisfaction. Additionally, the experience of one depressive episode greatly increases the chance of further episodes (Valdivia & Rossy, 2004).

Depression in College Students

Depression is especially prevalent among college students in the United States. According to American College Health Association's National College Health Assessment (ACHA-NCHA, 2000), approximately 10.3% of college students were diagnosed with depression. The depression rate among college students increased to approximately 14.9% in 2004 (ACHA-NCHA, 2004) and 16.4% in 2012 (ACHA-NCHA, 2012). Furr, Westefeld, McConnell, and Jenkins (2001) found that 53% of college students reported feeling

depressed since entering college and 9% of students had suicidal ideation at least since they entered college. Eisenberg and colleagues (2009) found that students with anxiety and depression experience loss of interest and pleasure in everyday things, resulting in poorer academic performance overall.

More recently, the National College Health Assessment (2014) found that 15.3% of the students had felt depressed within the past month and had felt that it was difficult to concentrate and function. Of the students sampled, 12.8% had been formally diagnosed with depression. Furthermore, 9.3% of students sampled had seriously considered suicide during their lifetime while 5% of the students sampled disclosed that they had intentionally hurt themselves within the past year. The percentage of suicide attempts is cause for concern. In 2012, 30,000 Americans committed suicide, and the numbers are underreported due to suicide being recorded as an accidental death in some instances (NCHA, 2012).

Approximately 10% of the suicides in 2013 involved people between the ages of 15 and 24 (American Foundation for Suicide Prevention, 2013). On college campuses, intervention and assistance for suicidal students seems to be lacking when we consider the above figures. The establishment of a healthy living community that focuses on health related issues including emotional, physical, and overall well-being may be what students need to get through these emotional and psychological difficulties.

In the next section, I will review the literature on depression among Asian American college students.

Depression among Asian American College Students

Depression has been identified as one of the most common presenting concerns among ethnic minority college students (Constantine, Chen & Ceesay, 1997), and depression rates tend to differ across ethnicity on campus (Chang, 2010).

In contrary to the model minority stereotype that Asian Americans are a well-accomplished and high achieving group, researchers have indicated that Asian Americans report higher levels of mental distress compared to White Americans (Okazaki, 1997; Young, Fang, & Zisook, 2010) with the highest level of distress found among foreign-born and recently immigrated Asian Americans compared to other racial groups (Sue & Zane, 2009). The pattern of Asian American students' higher levels of distress compared to other ethnic groups is reflected in college campuses (Aldwin & Greenberger, 1987; Okazaki, 1997; Young, Fang, & Zisook, 2010). For example, Korean American students show more depressive symptoms compared to White students (Aldwin & Greenberger, 1987; Hovey, Kim, & Seligman, 2014); and Japanese American students report more depressive symptoms compared to other racial groups and Chinese students report more somatic symptoms (Marsella et al., 1973). Okazaki (1997) and Young and colleagues (2010) found in their studies that Asian American college students show higher level of depression compared to their White counterparts. In addition to depressive symptoms, Asian American college students show higher levels of social anxiety and psychological distress (Gregersen, Nebeker, Seely, & Lambert, 2004) than other racial groups. Kearney, Draper, and Baron (2005) found that Asian American students had the highest levels of psychological distress than any other ethnic groups in 40 different college campuses. Asian American students experience more social and academic stress than other racial groups (Ying, Lee, & Tsai, 2004).

A number of studies found unique symptoms of depression that Asian Americans experience. For example, Yang and WonPat-Borja (2007) argue that somatic complaints go along with affective complaints among Asian American patients who suffer from depression. Another study examined the association between cultural aspect, depression, and

somatic symptoms among Asian women and found a significant positive correlation between high depression rate and somatic symptoms such as weakness, dizziness, abdominal upset, aches and pains, and palpitations (Arnault & Kim, 2008). These two studies suggest that somatic symptoms of depression are a unique aspect of depression observed in the Asian American population.

Several researchers have examined different factors related to depression in Asian American students such as campus climate as a predicting factor to depression (Cress & Ikeda, 2003), religiosity and social support as a predictor of depression (Chang, 2010), the relationship between substance abuse and depression (Iwamoto, Liu, & McCoy, 2011), and the impact of cultural values on depression (Lund, Chan, & Liang, 2014). More details about associated factors with depression among Asian American college students will be discussed in the later section. In the next section, I will present the summary of literature on factored related to depression among college students.

Factors Associated with Depression among College Students

Given the nature of the current study, which investigated the predictors of depression among Asian American college students, this section will review literature related to associated factors of depression among college students and Asian American college students. First, I will present the review on college related stress in general followed by stress among ethnic minority students including Asian American students specifically. Then I will explore literature on associated factors of depression that I will investigate in this study such as substance use, religiosity, campus climate, academic life, social life on campus, self-concept, and satisfaction with college.

Furr et al. (2001) reported that, overall, 37% of college students in their sample understood that depression was a serious problem, and of the students who were depressed,

47% believed it was a serious issue. 28 percent of students stated that promoting on-campus services was essential when they were asked what measures might help for decreasing depression. Additionally, 9% of students believed it is important to educate students about depression (Furr et al., 2001). These findings indicate that advanced investigation of the factors associated with depression is necessary.

Stress among College Students

College is a new world that students must negotiate their increased autonomy and level of responsibility as they transition from being minors to young adults. This transition from the highly structured high school environment to the more flexible and unstructured college environments may cause stress. According Dyson and Renk (2006), stress occurs when a person perceives that the demands of a task exceed their resources and abilities to complete those demands. High levels of stress cause negative relational, psychological and physical outcomes such as sleep problems, decreased immune function, disruption of interpersonal relationships, substance use, and mental health issue (DiRamio & Payne, 2007).

In general, stress in college is caused by academic, social, and financial pressures. Academic stress may arise due to challenging course loads and the discrepancy between what students expect about college life while they were still in high school and the actual academic demands that they experience once they start college (Skowron, et al., 2004). For instance, first year college students who graduated high school with high Grade Point Average (GPA) may experience significant stress when their college GPA is much lower than their scores high school. Social stress may arise from dealing with unstructured college life, time management skills, and interpersonal relationships (Skowron, et al., 2004; Hurtado et al.,1998). Financial stress comes from the pressures associated with paying tuition and other college expenses. Many students report that they encounter decreased opportunities of

financial aid and increasing tuition rate while in college (DiRamio & Payne, 2007).

Researchers have found that college stress related to social interaction and academic performance is positively correlated with depression among college students in general (Dyson & Renk, 2006; O'Neill, Cohen, & Tolpin, 2004). Furthermore, researchers also found that students who report more depressive symptoms experience decreased academic performance (Deroma, et al, 2009). Although most of these studies include ethnically diverse college student samples, the majority of participants were White students. Therefore, empirical studies with a greater number of Asian American students may assist in evaluating the experience of stress among Asian American college students.

The World Health Organization has defined health as “a state of complete physical, mental, and social well-being”, and not just the absence of disease or stress. In the context of this expanded definition of health, psychological well-being and stress have emerged as important issues for understanding the nature of mental health and its impact on life. Stress and psychological well-being are interrelated but distinct concepts. Stress refers to an individual's appraisal that a particular stressor is perceived as a source of harm, loss, threat, or challenge (Lazarus & Folkman, 1984). Psychological well-being refers to optimal psychological functioning and experience. Because psychological well-being is subjective and related to positive functioning and life satisfaction, psychological well-being cannot be attained if stress exists. Consequently, stress can be used as an indirect measure of psychological well-being. In addition, psychological well-being and stress are related to but distinct from depression, which is a form of psychological distress.

In terms of well-being, students who indicate higher levels of general college stress report decreased well-being (Rodriguez, et. al, 2003). In particular, social stress is a significant predictor of well-being as a component of stressor among college students

(Rodriguez, et al, 2000). Social support and socially active involvement in college have been shown to reduce the level of stress experienced by college students. Therefore, social support and positive interpersonal interactions decrease the level of chronic distress or depression (Friedlander, Reid, Shupak, & Cribbie, 2007; Huang & Chang, 2004; Jy, 2010). Overall, it appears that social stress is the component of generic college stress that is a significant predictor of distress or well-being. Hewitt and Dyck (1986) found a link between perfectionism, stress, and depression among college students. More specifically, they found from a survey study of college students that the respondents who scored above the mean on the perfectionism scale demonstrated a positive relationship with stress and depression. Other researchers confirm that perfectionism produces various negative consequences for college students (Halgin & Leahy, 1989; Rice & Dellwo, 2002).

In a more recent study of depression and associated factors among college students, the main causes of experiencing depression were found to be academic performance, loneliness, financial issues, and relationship problems. Other causes include parental conflicts, and feelings of helplessness and hopelessness, the latter being primary cause of suicide attempts (Wang, 2013).

Researchers have noted that ethnic minority students are likely to experience unique stressors associated with their minority status in addition to the common sources of stress experienced by all college students, (Rodriguez et al, 2000; Smedley et al., 1993). In the following section, I will discuss about ethnic minority students' unique experiences in college and their stress.

College Stress among Ethnic Minority Students and Asian American Students

Researchers who have studied the well-being of ethnic minorities propose a reciprocal influence between people and their surroundings as a conceptualization of well-

being (Chavez & French, 2007). College campuses provide a unique cultural setting for the mixing of diverse social and cultural interactions that may affect a student's experience of stress (Yazedjian & Towes, 2006). Ethnic minority students have to cope with unique demands resulting from their experience as minorities (e.g., social and political disadvantages as ethnic minority students, immigration status) in addition to the typical demands of college. Social climate stress, racial discrimination stress, interracial interaction stress, within group pressure, and achievement stress are examples of stresses related to minority status (Rodriguez, et al., 2003).

Social Isolation. Ethnic minority students experience social isolation and a sense of incongruence with the campus environment when that campus has a racially hostile climate (Rankin & Reason, 2005). This is the main cause of social climate stress. However, social climate stress may be experienced differently by ethnic minority students depending on the racial composition of the campus they attend (Alvarado & Hurtado, 2013). For example, students at a racially diverse campus with a greater percentage of ethnic minority students may feel they have better support and feel less socially isolated compared to students attending a predominantly White institution (Alvarado & Hurtado, 2013). Ying et al. (2004) discussed how context plays an important role in the adaptation and adjustment of ethnic minority students at predominantly White campuses. For example, Latino students at predominantly White institutions are more likely to perceive the campus climate negatively compared to their White counterparts (Hurtado, et al., 1998).

Interracial Interaction Stress. Interracial interaction stress includes feelings that an individual experiences due to cultural self-consciousness and conflicting value systems (Chavez & French, 2007). For example, ethnic minority students are more likely to be aware of negative stereotypes related to their racial group and be concerned about conforming to

those negative stereotypes. In addition, ethnic minority students may experience racial discrimination stress based on their race such as being called racist names or experiencing unequal treatment or opportunities due to their race. In a campus with a racially diverse student body, Asian American students may experience interracial stress in their interactions with students, faculty members, and administrators from other racial or ethnic groups.

Racial Discrimination and Microaggression. Research has shown that racial discrimination is a social risk factor for psychological well-being among ethnic minority groups and is associated with mental health problems including depression, stress, and anger issues (Chakraborty & McKenzie, 2002). For example, Williams and colleagues (2003) found significant correlations among racial discrimination and lower level of self-esteem, happiness, and general life satisfaction among ethnic minority population. In addition to major discriminatory events, researchers have focused on daily race related stressful events and their relationship with psychological well-being among ethnic minorities (Ong, Fuller-Rowell, & Burrow, 2009).

For Asian Americans, empirical studies on Asian American health indicate that racial discrimination is associated with increased risk for psychological morbidity and physical illness (Crawley, Ahn, & Winkleby, 2008; Hwang & Goto, 2008; Miller, Yang, Farrel, & Lin, 2011; and Yip, Gee, & Takeuchi, 2008). For example, Miller and colleagues (2011) found racism related stress as one of significant predictors of mental health among Asian American adults. It has been well documented in Asian American immigrant history that racism is a constant and continuous part of the Asian American society and their experiences.

Racial microaggressions are a concept that reflects the impact of racism on Asian Americans. Microaggressions are defined as “brief and commonplace daily verbal, behavioral and environmental indignities, whether intentional or unintentional, which

communicates hostile, derogatory or negative racial slights and insults that potentially have harmful or unpleasant psychological impact on the target person or group” (Sue et al., 2007, p.5). Among empirical studies on racial microaggressions experienced by ethnic minorities (Nadal, 2011; Ong et al., 2013; Ong, Fuller-Rowell, & Burrow, 2009; Sue, 2010; Sue et al., 2007), researchers indicate that racial microaggression affect psychological well-being among Asian American populations (Nadal, 2011; Ong et al., 2013; Sue, 2010; Sue et al., 2007). More specifically, Nadal (2011) reported that the “perpetual foreigner” stereotype (Liang et al., 2004) is the most common class of microaggression experienced by Asian Americans. Sue (2010) demonstrated the negative impact of microaggressions on Asian American population, arguing that they may undercut their rights and opportunities and negate the significance of their identity. Furthermore, Sue (2010) reported that microaggressions can exact psychological and physical tolls on ethnic minority on college campuses. A study on Latino and Asian American students found the experience of being viewed as a perpetual foreigner was associated with more depressive and psychosomatic symptoms (Huynh et al., 2011). The above studies suggest that racial microaggression negatively affects Asian American students’ psychological well-being and causes distress.

Within-Group Pressure. Within-group pressure is experienced by ethnic-minority students as they interact with people from their own ethnic background. It includes cultural pressure to conform to the norms of their own ethnic group: for Asian American students this may include the expectation to be fluent in their heritage languages, how they should act to conform with their own culture, or what to value and believe as Asian Americans (Moon et al., 2010). Ethnic minority students’ families may also be a main source of within-group pressure. The within-group pressure among Asian Americans is due to the collectivism in their culture which emphasizes the family connection and values. Moon (2006) indicated

that the collectivist nature of Asian culture may be disrupted while student attend college, and this may cause within-group pressure and emotional issues subsequently.

Achievement Stress. Finally, achievement stress refers to a student's concern over academic performance and success. According to Ying, Lee, and Tsai (2004)'s argument, in many cases, ethnic minority students may feel they have to prove to others that they received admissions to college based on their academic excellence rather than to meet a race based quota. Due to the strong emphasis on educational achievement and parental involvement in Asian culture, Asian American students may feel pressure for high academic performance. Parental pressure has had adverse psychological effects on many Asian American students, some of whom have expressed these effects through extreme behavior. This achievement pressure is reflected in the recent case of an Asian American high school senior who made up a story about being admitted to two prestigious universities, Harvard and Stanford, and that the CEO of Facebook had called her to propose a possible collaboration (Washington Post, 2015). To support her claims, the student fabricated admission documents and several correspondences from Harvard and Stanford. This hoax arose from the overwhelming pressure to succeed that this student felt from her parents, peers, and her Asian American community (The Independent, 2015). This incident is an extreme example of a negative psychological outcome for Asian American students who feel high levels of achievement stress from their Asian community.

In this section, I presented the review on college related stress in general followed by stress among ethnic minority students and Asian American students specifically. In the next section, I will explore literature on associated factors of depression that I will investigate in this study such as substance use, religiosity, campus climate, academic environment, social life on campus, and self-concept.

Substance Use

In spite of ongoing national efforts to reduce substance use among college aged population, binge drinking and smoking have increased among young adults between the ages of 18 and 23 (Glendhill-Hoyt et al., 2000). College students' binge drinking has been identified as a major problem in public health (Ham, 2003). College students have higher rates of binge drinking and alcohol use compared to people of the same age group who are not attending college (Dawson et al., 2004; Slutske, 2005). In Wechsler et al.'s (2002) study on alcohol use, approximately 33% of students at Harvard began using substances including marijuana during their college years.

Several studies have demonstrated the link between mental health and substance use. Husky and colleagues (2008) analyzed the data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) and found that alcohol use and smoking are significantly associated with major depression. Epidemiologic studies have reported a significant correlation between nicotine dependence and mood disorders including anxiety disorder (Hagman et al., 2008; Morissette et al., 2007). In addition, a significant association between anxiety and heavy drinking episodes was found in Stewart, Zvolensky, and Eifert's (2001) report and Weitzman's (2004) study.

For college students, studies have reported associations between symptoms of depression and anxiety and substance use among college students (Patterson et al., 2004). In addition, researchers identified negative effects of substance use behaviors such as co-occurring psychological disorders (Dawson et al., 2004), consuming other drugs (Vickers et al., 2004), and poor academic performance in college (Wechsler et al., 2004). While most substance use studies of college students have focused on White students, there are a few studies reporting on substance use among Asian American college students (e.g., Iwamoto,

Corbin, & Fromme, 2010; Iwamoto, Lejuez, Hamilton,& Grivel, 2015). Studies present the relationship between depression and substance use and among Asian American college students (Iwamoto & McCoy, 2011; Otsuki, 2003), substance use and perceived peer group influences among Asian American college students substance use (Iwamoto, Liu, & McCoy, 2011), the model minority stereotype, and psychological distress among Asian American young adults (Iwamoto, Lejuez, Hamilton,& Grivel, 2015), and Asian cultural values and substance use (Iwamoto & McCoy, 2011; Yi & Daniel, 2001). Although there are number of studies on substance use and mental health issues among college students in general, empirical studies on the associations between substance use and psychological distress among Asian American college students are still underdeveloped except for studies by Iwamoto and McCoy (2011), Liu and Iwamoto (2007), Otsuki (2003), and Yi and Daniel (2001). Thus a systematic analysis on the link between substance use and mental health when controlling for other factors among this population is needed to fill the gap in the literature.

Religiosity

Religiosity can be defined as the manifestation of an individual's world views, life values, beliefs, and behavioral guidelines based on the tenets of one's religion and involvement in religious practices or religious organizations (Mickley, Soeken & Belcher, 1992). In the United States, about 75% of Americans find support and aid from their religion (Princeton Religion Research Center, 2012). According to Koenig and Larson (2011), approximately 90% of Americans identify with some type of religious faith and 10% do not partake in any religious practices.

Historically, there have been various views and interpretations on the relationship between mental health and religiosity. Several researchers have found that religious beliefs

and practices play an important positive role in an individual's quality of life and psychological well-being (Berry & York, 2011; Koenig, 2009; Rostosky, Danner, & Riggle, 2010). For example, Berry and York (2011) found that higher levels of religiosity were significantly associated with lower levels of depression in adult patients. Similarly, Kirchner and Patino (2010) found that higher religiosity and spirituality was correlated with lower anxiety and depression levels among female patients. Some researchers have reported that religious interventions were more effective in treating depressed patients than were non-religious interventions or no intervention at all (Azhar & Varma, 1995; Razali, Hasanah, Aminah, & Subramaniam, 1998; Toh & Tan, 1997). These studies show a strong association between religiosity and depression in general.

The positive impact of religiosity on an individual's mental health has also been found in college student samples. For example, Zullig, Ward, and Horn (2006) conducted a study on college students' perceived health and religiosity in 522 college students and found that students who described themselves as religious were more likely to report higher mental health compared to peers who described themselves as non-religious. Similarly, Bowen-Reid and Smalls (2004) found that having religious practices was related to healthier and positive psychological well-being in college students.

Furthermore, Briggs and Shoffner (2006) investigated the relationship between religiosity and depression among 188 college students and 242 midlife adults and found a negative correlation between depression and religiosity in both groups, whereby individuals with strong religiosity show lower symptoms of depression. In Taliaferro and colleagues' (2009) study on the relationship between spiritual well-being and suicidal ideation among 457 college students, they found that students' spiritual well-being was negatively associated with suicidal ideation.

Although a number of empirical studies have been published on the link between religiosity and depression among college student populations, few studies have focused on ethnic minority students' religiosity and depression. Several researchers have highlighted the relationship between religion and health among students of color on campus. For example, Bowen-Reid and Smalls (2004) found a link between religion and psychological well-being among African American college students; Park and Millora (2010) explored a relationship between ethnic minority college students' psychological well-being and spiritual well-being; Jang and Johnson (2004) investigated an association between religion and mental health among African American college students; and Musgrave, Allen, and Allen (2002) studied on religion and health of women of color. However, except for Park and Millano's (2010) finding on spiritual well-being as a strong predictor of psychological well-being among Asian American college students, relatively little is known about the relationship between depression and religiosity in Asian American college students particularly.

Although there are several studies examining the impact of religiosity or spirituality on Asian American college students' experiences such as religiosity and substance use (Luk et al., 2013); religiosity and cultural background on help seeking behavior (Ting & Hwang, 2009); and religiosity and postsecondary degree attainment (Lee, Puig, & Clark, 2007), few of these studies have specifically focused on the relationship between religiosity and depression in Asian American college students. Given the dearth of empirical studies on this specific topic and population, systematic empirical studies on the relationship between depression and religiosity among Asian Americans college students are necessary.

Campus Climate

Confirming the above mentioned argument on stress among minority students in college, Jing (2005) found that approximately 40% of college students experienced being

treated differently due to their age, gender, race, or disability at least once in college, and they also reported that they think college is not hospitable for students with minority status. According to Soloranzo (1997), ethnic minority students feel like to be treated as “outsiders” or “the others”. Discrimination or mistreatment on campus can result minority students feel invalidated and weak, consequently, this may negatively affect student psychologically or educationally.

The campus climate includes the overall feel and structure of the campus environments, institutional policies, services provided for students and relationships and interactions with faculty, staff and administrators (Hurtado et al., 1998). The campus climate is considered as a significant factor influencing many college outcomes including retention, student departure, college adjustment and transition, and degree completion (Harper & Hurtado, 2007; Hurtado et al., 2012; Rhee, 2008). For ethnic minority students, students’ perceptions of the college environments have a significant impact on their college experience. For example, Smedley, Myers, and Harrell’s (1993) study on racial/ ethnic minority students experiences at predominantly White institutions indicates that minority students experience stressors associated with their minority status and report extreme sensitivity to the campus climate including invisible tensions with White peers and racial discrimination on campus. In Hurtado (1994)’s study on Latino students’ experiences on campus climate, minority students indicates that perceptions of racial-ethnic tension is significantly associated with students’ general satisfaction with college. These studies suggest that campus racial climate has a strong impact on the experiences of racial/ ethnic minority students on campus.

Researchers have reported that campus climates is a significant factor in shaping college outcomes and students’ experiences (Cabrera, et al., 1999), and Museus and Truong

(2009) indicated that students with different racial backgrounds may perceive and experience the same campus climate differently. Cabrera and his colleagues (1999) found that adjustment difficulties may occur when ethnic minority students experience discrimination and psychosocially stressful environments. Racial ethnic minority students may experience feelings of isolation and marginalization as well as social disengagement when they face prejudice and discrimination on campus (Davis et al., 2004). Rankin and Reason (2005) reported that racial ethnic minority students are more likely to perceive campus racial climate as hostile compared to how their White peers perceive.

For Asian American college students, the literature suggests that campus racial climate plays a significant role on Asian American college students' experiences. Researchers have reported that Asian American students experience difficulties with the campus environments at predominantly White college campuses (Museus, 2008; Rankin & Reason, 2005). For example, studies indicate that Asian American students report unwelcoming campus environments (Lewis, Chesler, & Forman, 2000), pressure from racial stereotypes and direct racism (Museus, 2008), feelings of physical unsafety (Kotori & Malaney, 2003), and a low rate of satisfaction with campus diversity (Park, 2009). These reports suggest a need for systematic analysis of Asian American students' experiences and perceptions of campus climate and the effects of those experiences.

With regard to links between campus climate and psychological well-being among Asian Americans, only a few studies have found the contribution of campus climate to psychological distress. For example, Sue et al. (2007) report that Asian American students encounter racial discrimination that can negatively affect their mental health. In Cress and Ikeda's (2003) study on the impact of negative campus climates and racial discrimination experienced among Asian American students, they found that negative climate is a predictor

of depression among Asian American students. Tawa, Suyemoto, and Roemer (2012) found a significant correlation between perceived racism and low self-esteem among Asian American students. Although there are empirical studies on campus climate and mental health among Asian American as presented above, the specific impact of campus racial climate on psychological well-being among Asian American students is still an under-researched. Thus a systematic analysis on the link between campus climate and psychological well-being among this population is necessary.

Academic Life

Walsh's (1973) argument that "our surroundings have a great deal to do with the development of our intellectual powers and personal development" (Walsh, 1973, p.1) indicates that individuals' intellectual development and well-being appear to be linked to how they experience and perceive their learning environments. For example, higher dropout rates in college among ethnic minority students are associated with inhospitable campus climates in predominantly White universities and colleges (Ponterotto, 1990). Drodz (2004) suggested that 40% of teen-age and college students are influenced by academic related depressive feeling indicating a relationship between mental health and learning environment. In addition, Cress (1999) found a strong association between college students' perceived feelings of depression and their habit of skipping classes or not completing their assignments. Student-faculty interaction has been considered as a significant factor affecting learning environments on campus. In terms of student faculty interaction for Asian American college students, researchers found that Asian American students report lower rates of student-faculty interaction compared to other racial groups and are less likely to have high quality student faculty interaction compared to other racial groups (Kim, Chang, & Park, 2009; Lundberg & Schreiner, 2004). Similarly, Kuh and Hu (2001) demonstrated that Asian

American students report significantly lower rates of student-faculty interaction compared to their White, African American, Latino, and Native American counterparts. Lundberg and Schreiner (2004) found that Asian American college students are the least likely to discuss personal issues with faculty among all other racial groups on campus. Cole (2007) reported that higher percentage of Asian American students on college campus is a negative predictor of student faculty interaction. As there is a significant association between mental health and academic engagement on college campuses, the above studies about the lower rate of student and faculty interactions among Asian American college student suggest that further exploration between learning environments and mental health among this population is necessary.

In addition to learning environments, academic performance is one of the major academic related factors associated with students' mental health on campus (Andrews & Wilding, 2004; Crocker et al., 2002; DeRoma, Leach, & Leverett, 2009). According to Crocker and colleague's (2002) argument, many college students consider their GPA as a key factor when determining self-worth.

To date, a number of studies have been conducted to systematically examine the relationship between academic performance and depression among college students. For example, Deroma, Leach, and Leyerett (2009) found a negative relationship between depression and academic performance, reporting that students with moderate levels of depression showed lower academic performance compared to student with minimal and normal levels of depressive symptoms. Similarly, Turner and colleagues (2012) reported a negative association between depression and academic grades among students in a large urban university. In Hysenbegasi, Hass, and Rowland's (2005) study, students presenting depressive symptoms demonstrated a decrease in college GPA.

Although a number of empirical studies have been published on the link between academic performance and depression among college student populations, few studies have focused on Asian American college students' academic performance and depression. Several researchers have highlighted the importance of academic performance and achievement in Asian American population in general (e.g., Bahrassa et al., 2011; Saw, Berenbaum, & Okazaki, 2013; Ying et al., 2001; Cokley & Patel, 2007), and Hui, Lent, and Miller (2013) examined the academic satisfaction as the indicator of well-being among Asian American college students. However, little is known about the relationship between depression and academic performance in Asian American college students particularly. Furthermore, Wang (2012) found academic performance to be a significant factor associated with depression among Asian college students, but the sample was collected from international students from Taiwan, not specifically from Asian American college students.

Given the dearth of empirical studies on this specific topic and population, systematic empirical studies on the relationship between depression and academic performance and academic environments among Asian Americans college students are necessary.

Social Support

Supportive and meaningful peer relationships are crucial for college students' adjustment and adaptation to college (Swenson, Nordstrom, & Hiester, 2008). If asked about how they cope with difficulties or stress, many college students may indicate that they would seek help from friends and families. Therefore, understanding students' social context and its relationship to psychological well-being is important to improving students' mental health on campus.

Social support is strongly associated with an individual's well-being and emotional

health. As a psychosocial coping method that positively impacts one's personal resources and self-esteem, social support reduces levels of life distress (Kawachi & Berkman, 2001).

The relationship between social support and mental health has been well documented by a number of studies (e.g., Berkman, Glass, Brissette, & Seeman, 2000; Caron, Latimer, & Tousignant, 2007; Kawachi & Berkman, 2001; Leung, Chen, Lue, & Hsu, 2007). For example, Kawachi and Berkman (2001) have found that individuals with low psychological well-being are more likely to be socially isolated compared to those who are less psychologically distressed. Caron and colleagues (2007) reported that social support is the strongest factors associated with psychological distress, and Durden, Hill, and Angel (2007) found that psychologically distressed individuals were lacking in friends or partners and felt alone. These studies confirm the arguments that social support is an effective way of coping against and decreasing risks for physical and mental effects of stress (Seeman, 1996; Thoits, 1995).

The above mentioned association between social support and mental health has been found in higher education studies. An extensive literature has examined the relationship between social support and well-being among college students (e.g., Chao, 2012; Hefner & Eisenberg, 2009; Solberg & Villareal, 1997; Jenkins et al., 2013; Swenson, Nordstrom, & Hiester, 2008; Wang & Castañeda-Sound, 2008). For example, Swenson, Nordstrom, and Hiester (2008) have reported that peer support and positive peer relationships are significant factors for students' successful adaptation to college. Thorsteinsson and Brown (2008) found that students with low social support were more likely to engage in unhealthy behaviors and habits including substance use, disordered sleep, and sedentary behavior. Allgower, Wardle, and Steptoe (2001) found a significant association between college students' lack of social support and dissatisfaction with life and suicidal ideation. Similarly, Arria and colleagues

(2009) reported a strong association between low social contact and suicidal behaviors. College students with lower quality social support are more likely to experience mental health issues such as risk of depression (Hefner & Eisenberg, 2009), and low social support deteriorates college students' stress and well-being (Chao, 2011).

Although there are a number of empirical studies on the link between social support and depression among college student populations, not many studies have focused on ethnic minority students' social support and depression. In addition, most studies on the relationship between social support and mental health among students of color have focused on the experiences of Hispanic (Solberg and Villareal, 1997) and African American (Ndoh and Scales, 2002; Prelow, Mosher & Bowman, 2006) college students. For example, Ndoh and Scales (2002) explored the role of social support on depression among African American college students; Prelow, Mosher, and Bowman (2006) examined a relationship between perceived racial discrimination, social support, and psychological adjustment among African American college students; and Solberg and Villareal (1997) studied on social support and psychological distress among Hispanic college students. Relatively little is known about the relationship between depression and social support of Asian American college students particularly.

Although several studies have examined the impact of social support on Asian American populations such as social support is less attempted by Asian Americans compared to other racial groups (Hashimoto, Imada, & Kitayama, 2007; Kim, Sherman, & Taylor, 2008; Taylor et al, 2004) and Asians perceive social support as less favorable compared to White counterparts (Hashimoto, Imada, & Kitayama, 2007), these studies do not specifically focus on college students nor the relationship between social support and depression. Yang, Haydon, and Miller (2013) studied on family cultural conflict and social

support among Asian American college students, but they focus on family intergenerational cultural conflict and social support among Asian American college student families not the link between social support and psychological well-being among college students.

Furthermore, Dao and colleagues (2007) found social support to be a significant predictor of depression among Asian college students, but the sample was collected from international students from Taiwan, not specifically from Asian American college students.

Given the dearth of empirical studies on this specific topic and population, systematic empirical studies on the relationship between depression and social among Asian Americans college students are necessary.

Self-concept

In the literature, there has been a significant association between students' self-concept and emotional health. For instance, students who have high self-esteem are more likely to experience positive emotional health (Pelham & Swann, 1989), and are at lower risk for depression (Crandall, 1973), and report lower rates of hopelessness (Abramson, Metalsky, & Alloy, 2009). According to Spring (1994), college students with high self-esteem are more likely to have meaningful friendships with their peers and high levels of student faculty interactions. In addition, studies have demonstrated that self-concept is a significant predictor of academic achievement and outcomes in school (Coleman, 1998) such as academic success and college retention (Astin, 1993). On the contrary, students who report a poor self-concept tend to have lower GPA (Lent, Brown, & Larkin, 1984), and are less likely to perform well in mathematics courses (House, 1994), and are less likely to be successful in technical and scientific fields of study (Blustein et al., 1986).

In general, self-concept is negatively associated with poor psychological well-being or mental health among college students. In other words, students with high self-concept

experience less mental health problems. For example, in Latha et al.'s (2006) study on body image, self-esteem, and depression among female college students, students who report high self-esteem show a tendency of having positive body image and are less likely to have feelings of depression compared to those who scored low in self-esteem. Crow (2002) found that self-esteem buffers the effects of perfectionism on depression, reporting that depression is exacerbated by low self-esteem and decreased by high self-esteem among college students with high level of maladaptive perfectionism. In Wang's (2013) study on moderator effects of self-esteem and suicide resilience on depression among college students, she found that students with high self-esteem are likely to experience less depression and lower rate of suicidal ideation.

In terms of self-concept of Asian American college students, although research is limited, Gloria and Ho (2003) demonstrated Asian American college students have the lowest self-concept, self-efficacy, and self-esteem compared to other racial groups on campus. According to Gloria and Ho (2003), the pattern of low self-efficacy and self-esteem among the Asian American college students is associated with anxiety related to academic performance, achievement stress, and pressures that college students generally encounter at school.

In regards to the studies on the link between self-concept and mental health among college students, there are only limited numbers of studies on Asian American college students specifically. For example, Lam (2007) found that higher self-esteem is associated with a stronger sense of coherence and with lower rate of depression and anxiety among Asian American college students. Park and Millora (2010) found that students' intellectual self-concept is a positive predictor of psychological well-being among Asian American college students. In addition, Gloria and Ho (2003) reported a significant association among

Asian American college students' self-efficacy, self-esteem, and emotional well-being.

Summary

This chapter includes a literature review presenting the summary of existing studies on depression and associated factors among Asian American college students. Although the above mentioned studies found a relationship between one factor and depression among Asian American college students, researchers have generally not examined multiple factors in explaining predictors of depression. Thus, this gap suggests exploring multiple contributing factors to depression on this population will be beneficial to understand the phenomena and to work with Asian American students' psychological well-being. Because there is limited research on the college environment factors and students' collegiate experiences that predict depression for Asian Americans college students, this study will help fill the gap in the literature. In addition, most of studies on predictors of depression do not use longitudinal data, thus exploring the relationship between multiple factors and depression among Asian American college students via a large longitudinal study will add to the body of literature on this population. In the next chapter, I will discuss the research methods of this study.

CHAPTER THREE: METHODOLOGY

Chapter Three provides an overview of the methodology that will be used to conduct this research. This chapter includes a restatement of the purpose of the study and the research questions, a brief overview of Input-Environments-Outcome model by Astin (1993) as the conceptual framework for the research design, a brief overview of the UCLA Higher Education Research Institute (HERI) dataset used for this study, and descriptions of instrumentation, data collection process, variables, and data analysis used for this study.

Purpose of the Study and Research Questions

This study explores the relationship between collegiate experiences and depression among Asian American college students, along with identifying how college environments and collegiate experiences affect feelings of depression among Asian American college students. Specifically, there are three research questions guiding this study:

1. How does the rate of feeling depressed among Asian American college students vary by gender, social class, and college experiences (e.g., substance use, religiosity, academic performance, and satisfaction with college) during the college?
2. After controlling for students' characteristics, what college environment factors and collegiate experiences predict feelings of depression among Asian American college students?
3. How does the rate of feeling depressed among Asian American college students differ from other racial groups (e.g., White, African American, and Latino students), and do predictors of feeling depressed among Asian American college students differ from other racial groups?

The Input–Environment–Outcome Model

The methodology of the study is guided by Alexander Astin's Input-Environment-

Output Model (Astin, 1993), which provides both the research and statistical framework to examine the factors impacting Asian American college students' perceived feelings of depression. The Input-Environment-Output (I-E-O) model is structured to explore the impact of college environments on students' experiences and development by pairing an inputs-environments-outcomes design with statistical techniques such as multiple regression (Astin, 1993). The I-E-O model explores two time points: pre-environment and post-environment to measure the effects of the college environment (environment) on selected outcomes (output) while controlling for students' background variables (input).

Applying Astin's (1993) I-E-O conceptual framework to this study, students' diverse collegiate experiences are the college environment of interest in predicting students' mental health outcome, perceived feelings of depression. The study explores the effect of social identities on depression, along with identifying how college environments and college experiences affect rates of perceived feelings of depression.

In the present study, students' gender, race, SES, and past experience of depression in high school will be examined as input variables. Asian American college students' experiences (e.g., substance use, religiosity, campus racial climate, academic life, social life, self-concept, and satisfaction with college) are conceptualized as environmental variables. Students' perceived feelings of depression will be explored conceptually as an outcome variable.

Astin's I-E-O Model provides a statistical model for data analysis (Astin, 1993): 1) single variable descriptive analyses; 2) cross-tabulation and correlation to describe relationships; 3) three-way tabulation to include input, environment, and output variables; 4) correlation and regression analyses to explore relationships and predictors. This statistical analytical framework has been used in previous studies on college students that have applied

the I-E-O Model to the research design (Cress, & Ikeda, 2003; Park, 2009; Park, & Millora, 2010; Sax, 1994).

Data Source and Sample

This study uses a longitudinal national data sample from the 2008 Freshmen Survey (TFS) and 2012 College Senior Survey (CSS) of the Cooperative Institutional Research Program (CIRP). The CIRP is a national longitudinal study of American higher education system, and the survey program has been administrated by the Higher Education Research Institute (HERI) at the University of California at Los Angeles (UCLA) since 1973.

The Cooperative Institutional Research Program (CIRP) survey collects input, environment, and outcome data through three student surveys: the long-running CIRP Freshman Survey, follow-up assessments of Your First College Year (YFCY), and the College Senior Survey (HERI, n.d.). The CIRP Freshman Survey covers a wide range of student input characteristics, such as gender, race/ethnicity and other demographic information including parental income and education, and financial aid information. It also includes information on high school achievement activities, educational and career aspirations, college expectations, student values, attitudes, goals, beliefs, and self-concept. Previously known as the College Student Survey, the redesigned College Senior Survey is considered as an exit survey instrument. It is primarily an outcome assessment survey that assesses students' academic and campus life experiences (HERI, n.d.). Some parts of the survey questions are as same as CIRP Freshman Survey to enable comparisons of results between two time periods. Utilizing the CIRP College Senior Survey, researchers can measure student involvement; student academic and extracurricular activities; student satisfaction; students' values, attitudes, and goals; student's academic performance and post-college plans/aspirations; retention; and specific campus environments and campus issues

(HERI, n.d.). Through the longitudinal data, researchers can examine students' changes during their college experience that are not offered by cross-sectional surveys on college students.

In regards to the data used in this study, the CIRP targets higher education institutions listed in the 2008 Opening Fall Enrollment files of the United States Department of Education's Integrated Postsecondary Education Data System. This population does not include most proprietary, vocational, special, or semi-professional institutions. In order to be included in the dataset, an institution has to have at least 25 first-time full time freshmen students. Of the approximately 2700 eligible institutions in 2008, 389 institutions agreed to participate. The 2008 TFS was collected from 240,580 first time, full-time students at 340 colleges and universities. The CIRP 2008 Freshmen Survey was administered at the beginning of the freshman year as a pretest for a longitudinal assessment of college impact on students. The 2008 Freshmen Survey (TFS) examined students' characteristics prior to exposure to substantial college experiences. The survey includes student demographic information such as gender, race, parental income, parental education level, and pre-college characteristics including high school GPA and experiences, SAT scores, emotional health and self-concept, academic and career plans, values and beliefs.

The College Senior Survey (CSS) has been administered to graduating college seniors by the CIRP every year since 1993. The 2012 CSS contains data from 20,747 seniors graduating from 98 colleges and universities across the United States. The 2012 College Senior Survey (CSS) was administered at the end of a student's fourth academic year. This exit or follow-up survey ask similar questions that were measured in the 2008 Freshmen Survey such as student demographic information, personal characteristics, values and beliefs, academic and vocational goals and aspirations, and self-concept as well as questions

regarding collegiate experiences (e.g., student academic performance, hours per week to study/ research, extracurricular activities, social interactions, social activities, student faculty interactions, and leadership activities).

The sample for this study was restricted to students who completed both the 2008 Freshmen Survey and the 2012 College Senior Survey. In addition, students from two-year institutions were excluded from the sample because they were severely underrepresented (1.87 % of the full sample). Furthermore, students who identified themselves as American Indian or “other” race were also excluded from the sample, because the present study uses four student racial groupings of White, African American, Asian American, and Latino. Consequently, the final sample used in this study was composed of 10,710 students who attended 98 universities. Of the 10,710 students in this study, 66.1% were female, 91.8 % were native English speakers, and about one in ten students (10.7%) were the first in their family to graduate from college. In terms of race, the majority of respondents (80%) identified as White, 8.1 % were Asian American/ Asian, 2.9% were African American/ Black, and 4.5% were Latino.

Variable Specification

This study is designed to examine student input and campus environmental variables that may predict the outcome of perceived feelings of depression. Employing Astin’s (1993) Input-Environments-Output model as a conceptual framework for the research design of the study, the following variables will be used as input, environments, and output variables.

Dependent Variable

Outcomes. The outcome or dependent variable examined in this study is perceived feelings of depression. More specifically, the dependent variable that I measure in this study is a student’s self-reported perceived feeling of depression, and not necessarily a clinical

diagnosis of depression. This variable was measured in the CSS by asking respondents to answer a question: "I felt depressed in the past year." Students were given the ordinal response choices of (1) Not at all, (2) Occasionally, (3) Frequently. In addition to this question, students were asked to self-rate their emotional health with ordinal scale (1) lowest 10%, (2) below average, (3) average, (4) above average, (5) highest 10%. I reverse coded this item as (1) highest 10% to (5) lowest 10% in order to be in alignment with the other depression variable that higher score stands for higher rate of feeling depressed. For this study, these two variables were combined, and the minimum score is recoded to "2" and the maximum score "8." The Cronbach's alpha for feeling depressed for the CSS 2012 was .64. According to George and Mallery (2003), a Cronbach's alpha between .6 and .7 is considered acceptable, although the value of .64 is relatively low.

Independent Variables

Inputs. Input variables include both students' background characteristics (e.g., gender, socio-economic status (SES), parental marital status, native English speaker,) and precollege characteristics (high school substance use, high school religiosity, high school academic life, high school social life, high school self-concept, and perceived feelings of depression in high school) Students' gender was recoded on a dichotomous variable with 0=male and 1=female. Students' SES was created by combining three variables: parental income, father's education, and mother's education. For parents' marital status, students were asked if one or both of their parents were deceased, if both were alive but divorced or separated, or if both were alive and living with each other. These three options were coded as 1=one or both deceased, 2=both alive, divorced or living apart, and 3=both alive and living with each other. Students were asked if English is their native language. This variable was recoded as 0=non native English speaker and 1=native English speaker.

For students' pre-college experiences, to measure substance use, students were asked in the TFS 2008 to report if they drank beer. Students were given the ordinal response choices of (1) Not at all, (2) Occasionally, (3) Frequently. For religiosity, students were asked to self-rate their spirituality using an ordinal scale, with response choices of (1) lowest 10%, (2) below average, (3) average, (4) above average, (5) highest 10%. Self-reported high school GPA was employed to measure high school GPA, and was rated on a eight-point scale ranging from 1=D to 8=A or A+. In order to measure students' high school social life, students were asked how much time per week they spent socializing with friends and partying. Students were given the continuous response choices of (1) None, (2) Less than one hour, (3) 1 to 2 hours, (4) 3 to 5 hours, (5) 6 to 10 hours, (6) 11 to 15 hours, (7) 16 to 20 hours, (8) over 20 hours. To measure students' high school self-concept, students were asked to self rate their self-confidence on intellectual ability and self-confidence on social ability using an ordinal scale, with response choices of (1) lowest 10%, (2) below average, (3) average, (4) above average, (5) highest 10%. Lastly, to measure students' perceived feelings of depression in high school, respondents were asked "I felt depressed in the past year" with choices of (1) Not at all, (2) Occasionally, (3) Frequently.

Table 3.1 provides the specific items from the TFS 2008 instrument used to measure each input variable and the coding for the study.

Table 3.1 Input Variables and Coding Scheme

Variable	Question	Coding	Recoding Scheme
Gender	Your sex	1=Male 2=Female	0=male 1=female
SES	What is your best estimate of your parents' total income last year? Consider income from all sources before taxes.	1=Less than \$15,000 2=\$15,000 to \$24,999 3=\$25,000 to \$39,999 4=\$40,000 to \$59,999 5=\$60,000 to \$99,999 6=\$100,000 to \$199,999	Continuous index from 1-7, high value indicates higher parental income

	What is the highest level of formal education obtained by your parents?	7=\$200,000 or more 1= Grammar school or less 2= Some high school 3= High school graduate 4= Some college 5= College degree 6= Some graduate school 7= Graduate degree	Continuous index from 1-7, high value indicates higher levels of parental education *New variable created, <i>SES</i> , combining parental income, father's education, and mother's education
Parental marital status	Are your parents alive? Divorced?	1=One or both deceased 2=Both alive, divorced or living apart 3=Both live together	
Native English speaker	Is English your native language?	1 = No 2 = Yes	
High School Substance Use	I drank beer.	1=Not at all 2=Occasionally 3=Frequently	
High School Religiosity & Spirituality	Self-rate on spirituality	1=Lowest 10% 2=Below average 3=Average 4=Above average 5=Highest 10%	
High School GPA	What was your average grade in high school?	1 = D 2 = C 3 = C+ 4 = B- 5 = B 6 = B+ 7 = A- 8 = A or A+	
High School Social Life	Hours per week spent on socializing.	1=None 2=Less than 1 hour 3=1 to 2 hrs 4=3 to 5 hrs 5=6 to 10 hrs 6=11 to 15 hrs 7=16 to 20 hrs	

		8=Over 20 hrs	
High School Self-concept	Self rate on intellectual self-confidence Self rate on social self-confidence	1=Lowest 10% 2=Below average 3=Average 4=Above average 5=Highest 10%	
Feelings of Depression in High School	I felt depressed in the past year	1=Not at all 2=Occasionally 3=Frequently	

Environments. To measure college environments and experiences in college as the environment of the Input-Environment-Output Model (Astin, 1993), I use variables measuring substance use, religiosity, campus climate, academic life, socializing on campus, self-concept, and satisfaction with college experiences from the CSS.

Environments-Substance Use. To measure substance use, students were asked in the CSS to report if they drank beer, if they drank wine or liquor, and if they smoke cigarettes. Students were given the ordinal response choices of (1) Not at all, (2) Occasionally, (3) Frequently. For this study, these two variables are entered in Regression Block 2.

Environments-Religiosity. For religiosity, one of the environment variables, students were asked if they attended a religious service in the past year (the third year in college). The response scales are ordinal and range from 1-3, Not at all (1) to Frequently (3). Students were asked how much time per week they spent on prayer being given the continuous response choices of (1) None, (2) Less than one hour, (3) 1 to 2 hours, (4) 3 to 5 hours, (5) 6 to 10 hours, (6) 11 to 15 hours, (7) 16 to 20 hours, (8) over 20 hours. In addition to these two questions, students were asked to self-rate their spirituality with ordinal scale

(1) lowest 10%, (2) below average, (3) average, (4) above average, (5) highest 10%. For this study, these three variables were entered in the Regression Block 3.

Environments–Campus Climate. Three campus climate survey items are selected to capture students’ perceptions of campus climate as one of the environmental variables. Students were asked to indicate their agreement with the following statements related to campus climate: “I have felt discriminated against at this institution because of my race/ethnicity, gender, sexual orientation, or religious affiliation,” “In class, I have heard faculty express stereotypes based on race/ethnicity, gender, sexual orientation, or religious affiliation,” and “There is a lot of racial tension on this campus.” Students were given the ordinal response choices of (1) Disagree strongly, (2) Disagree, (3) Agree, (4) Agree strongly. For this study, these three variables were combined, and minimum scores is recoded to “3” and maximum score “12.” Thus, higher score of campus climate variables reflects a discriminatory climate or negative campus climate. The Cronbach’s alpha for campus climate variable was .69.

Environments-Academic Life. In order to measure students’ academic performance, college grade point average (GPA) was selected. Many studies on college student development employed GPA as a traditional measure of academic performance (Astin, 1977, 1993; Pascarella & Terenzini, 1978). In this study, students were asked to report their undergraduate grade average on an eight-point scale ranging from 1=D to 8=A or A+.

In order to capture students’ academic life, four additional academic related questions were selected. Students were asked how much time per week they spent on studying and homework, and on attending classes and labs being given the continuous response choices of (1) None, (2) Less than one hour, (3) 1 to 2 hours, (4) 3 to 5 hours, (5) 6

to 10 hours, (6) 11 to 15 hours, (7) 16 to 20 hours, (8) over 20 hours. In addition, students were asked if they failed to complete homework on time and if they missed class for other reason than work. Response options were (1) not at all, (2) occasionally, or (3) frequently. I reverse coded these two items as (1) frequently to (3) not at all in order to be in alignment with other academic life variables that higher score stands for positive academic behaviors/achievement. For this study, these four variables were entered in the Regression Block 4.

Environments–Social Life. In order to measure students’ social life on campus, students were asked how much time per week they spent on socializing with friends and on partying being given the continuous response choices of (1) None, (2) Less than one hour, (3) 1 to 2 hours, (4) 3 to 5 hours, (5) 6 to 10 hours, (6) 11 to 15 hours, (7) 16 to 20 hours, (8) over 20 hours. For this study, these two variables were entered in the Regression Block 5.

Environments-Self-concept. To measure students’ self-concept, students were asked to self rate their self-confidence on intellectual ability, self-confidence on social ability, and competitiveness with response scale (1) lowest 10%, (2) below average, (3) average, (4) above average, (5) highest 10%. For this study, these three variables were entered in the Regression Block 7.

Environments–Satisfaction with College Experiences. In order to measure students’ satisfaction with college experiences, students were asked to rate their satisfaction with the institution for overall college experience. The last environment variable is students’ satisfaction with college experiences. Response options were (1) can’t rate/ no experience, (2) very dissatisfied, (3) dissatisfied, (4) neutral, (5) satisfied, or (6) very satisfied. Table 3.2 shows the specific items of CIRP instruments from the CSS used to measure each environment variable and recoding scheme for this study.

Table 3.2 Environments Variables and Coding Schemes

Variable	Question	Coding	Recoding Scheme
Substance Use	<p>Please indicate how often you engaged in each during the past year.</p> <p>-Drank beer.</p> <p>-Drank wine or liquor.</p> <p>-Smoked cigarettes</p>	<p>1=Not at all 2=Occasionally 3=Frequently</p>	
Religiosity	<p>Please indicate how often you engaged in each during the past year:</p> <p>Attended a religious service</p> <p>During the past year, how much time did you spend during a typical week doing the following activities? -Prayer</p> <p>Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.</p> <p>Self-rate Spirituality</p>	<p>1=Not at all 2=Occasionally 3=Frequently</p> <p>1=None 2=Less than 1 3=1 to 2 hrs 4=3 to 5 hrs 5=6 to 10 hrs 6=11 to 15 hrs 7=16 to 20 hrs 8=Over 20 hrs</p> <p>1=Lowest 10% 2=Below average 3=Average 4=Above average 5=Highest 10%</p>	
Campus Climate	<p>Please indicate the extent to which you</p>	<p>1=Disagree strongly 2=Disagree</p>	<p>Recoded: 1=Agree strongly</p>

	<p>agree or disagree with the following statements:</p> <p>I have felt discriminated against at this institution because of my race/ethnicity, gender, sexual orientation, or religious affiliation</p> <p>In class, I have heard faculty express stereotypes based on race/ethnicity, gender, sexual orientation, or religious affiliation.</p> <p>There is a lot of racial tension on this campus.</p>	<p>3=Agree 4=Agree strongly</p>	<p>2=Agree 3=Disagree 4=Disagree strongly</p> <p>After combining three variables:</p> <p>3=minimum, 12=maximum</p> <p>Cronbach's alpha=.69</p>
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<p>Academic Life</p>	<p>During the past year, how much time did you spend during a typical week doing the following activities?:</p> <p>-Studying/homework</p> <p>-How often did you fail to complete assignments on time?</p> <p>-How often did you miss the class for other reason than work?</p> <p>What is the overall average grade you received during your college career?</p>	<p>1=None 2=Less than 1 3=1 to 2 hrs 4=3 to 5 hrs</p> <p>1=Not at all 2=Occasional 3=Frequently</p> <p>1=D 2=C 3=C+ 4=B- 5=B 6=B+ 7=A- 8=A or A+</p>	<p>Reversed Code: 1= Frequently 2= Occasional 3=Not at all</p>
<p>Social Life</p>	<p>During the past year, how much time did you spend during a typical week doing the following activities?:</p> <p>-Socializing with friends:</p> <p>-Partying:</p> <p>Rate your satisfaction with social life on campus</p>	<p>1=None 2=Less than 1 hour 3=1 to 2 hrs 4=3 to 5 hrs 5=6 to 10 hrs 6=11 to 15 hrs 7=16 to 20 hrs 8=Over 20 hrs</p> <p>1=Can't rate/No experience 2=Very dissatisfied 3=Dissatisfied 4=Neutral 5=Satisfied 6=Very satisfied</p>	
<p>Self-concept</p>	<p>Rate yourself on each of the following</p>		

	<p>traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.</p> <p>-Intellectual self-confidence</p> <p>-Social self-confidence</p> <p>-Competitiveness</p>	<p>1=Lowest 10%</p> <p>2=Below average</p> <p>3=Average</p> <p>4=Above average</p> <p>5=Highest 10%</p>	
Satisfaction with College Experiences	<p>Please rate your satisfaction with this institution</p> <p>Overall college experience</p>	<p>1=Lowest 10%</p> <p>2=Below average</p> <p>3=Average</p> <p>4=Above average</p> <p>5=Highest 10%</p>	

Data Analysis

Applying the I-E-O Model as a theoretical framework for data analysis, the analysis for this study consists of three parts based on three main research questions.

Research Question 1

To examine the first research question– how does the rate of feeling depressed among Asian American college students vary by gender, social class, and college experiences (e.g., academic performance, substance use, religiosity, and satisfaction with college)?– a descriptive analysis will be performed using cross-tabulations. Cross-tabulations will explore any relationships between Asian American college students’ rate of feelings of depression and students’ characteristics/ college experiences. In other words, cross-tabulation will examine how the rate of feeling depressed varies by each variable (e.g.,

gender, socio-economic status, academic performance, substance use, religiosity, and satisfaction with college).

To perform cross-tabulations, students' perceived feelings of depression are grouped in three categories. The rate of feelings of depression ranged from minimum of 2 to a maximum of 8. I use the low, medium, and high categories for the depression dependent variable. Students who scored 1 or 2 were categorized as low, students who scored 3 to 5 were marked as medium, and students who scored 6 to 8 were marked as high scores on feelings of depression. In addition, students' background characteristics (e.g., SES) and college experience (e.g., substance use, religiosity, academic performance, and satisfaction with college) variables are grouped in three categories such as high, middle, and low. For example, SES was redefined into a three-point scale. The new categories were:

low=household income less than \$40,000; middle=between \$40,000 and \$80,000; high=\$80,000 or more. Table 3.3 provides the grouped categories of items for cross-tabulation to answer research question 1.

Table 3.3 Items for Cross-Tabulation

Items	Question	Categories
Depression	I felt depressed. Self-rate on emotional health	Low=1 to 2 Middle=3 to 5 High=6 to 8
Gender	Your sex	Male Female
SES	What is your best estimate of your parents' total income last year? Consider income from all sources before taxes.	Low=Less than \$15,000 to \$39,999 Middle=\$40,000 to \$80,000 High=\$80,000 or more
Academic performance	What is your average grade in college.	Low= D to C+ Middle=B- to B+ High=A- to A+

Substance Use	Please indicate how often you engaged in each during the past year. Drank beer. Drank wine or liquor. Smoked cigarettes	Low=1 to 3 Middle=4 to 6 High=7 to 9
Religiosity	-Attended a religious service. -Hours per week spending on prayer. -Self-rate on spirituality	Low=1 to 4 Middle=5 to 9 High=10 to 16
Satisfaction with College Experiences	Please rate your satisfaction with this institution Overall college experience	Low=Lowest 10% to Below average Middle=Average High=Above average to highest 10% Highest= 10%

Research Question 2

In investigating the second research question—after controlling for students’ characteristics, what college environment factors and collegiate experiences predict feelings of depression among Asian American college students?— I will use the college impact I-E-O model by Astin (1993) to design a blocked hierarchical regression. I employed blocked hierarchical regression analysis because this technique provides the opportunity to follow changes in the standardized regression coefficients (Astin, 1993). By controlling for these entering variables in each block, the analysis will examine the associations between the dependent variable and multiple independent variables. With this regression analysis, I will explore the amount of additional variance environmental variables contribute to an outcome variable after controlling for input variables. The present study focuses on seven areas of college environments and collegiate experiences as predictors: substance use, religiosity, campus climate, academic life, social life, self-concept, and satisfaction with college

experiences. Variables entered into the regression model in the blocks for inputs, environments, and outcomes are selected based on I-E-O model framework and existing literature related Asian American students’ experiences on depression and college experiences. Table 3.4 outlines the regression model and variables entered in the analysis of research question 2.

Table 3.4 Variables by Regression Blocks

Inputs	Environment	Outcome
<p>Block 1 Students’ Characteristics:</p> <p>Gender SES Parental Marital Status Native English speaker</p> <p>Pre-college experience:</p> <p>Substance Use in HS Religiosity in HS High school GPA Social Life in HS Self-concept in HS Perceived Feelings of Depression in HS</p>	<p>Block 2 Substance Use</p> <p>Block 3 Religiosity</p> <p>Block 4 Campus Climate</p> <p>Block 5 Academic Life</p> <p>Block 6 Social Life</p> <p>Block 7 Self-concept</p> <p>Block 8 Satisfaction with Overall College Experience</p>	<p>Perceived Feelings of Depression</p>

Research Question 3

In order to investigate research question 3, how does the rate of feeling of depression among Asian American college students differ from other racial groups (e.g., White, African American, and Latino students), and how are predictors of feeling depressed among Asian American college students different compared to other racial groups?, the analysis consists

of two parts. First, for a comparison of the rate of depression among different racial groups, I will use an ANOVA to compare mean scores on students' perceived feelings of depression among Asian Americans and White, Black, and Latino comparison groups. Second, in order to compare predictors of perceived feelings of depression across the different racial group of students (e.g., Asian, White, Black, and Latino), hierarchical multiple regression will be performed on each racial group. Hierarchical multiple regression analysis design and variables entered in the regression model for different racial groups are the same as those for the research question 2.

Next, to examine differences between racial groups, the equality of the unstandardized beta coefficients from the regression analyses will be tested across racial groups using t-tests to determine if they are statistically different from one another. The equality of the unstandardized beta coefficients will be tested by transforming the unstandardized beta coefficients into t-scores (Clogg, Petkova, & Haritou, 1995; Paternoster et al., 1998). Only the beta coefficients of the college environment and collegiate experience variables that are statistically significant in at least one of the regression models will be compared for differences (Paternoster et al., 1998).

For between group comparisons for the research question three analysis, because this sample included only 951 Asian American students and 8,900 White students, between group comparisons in this sample would not be valid. To allow for meaningful between group comparisons in this study, the Asian American students in this sample will be compared with 1,000 White students randomly selected from the full study sample.

Summary

In this chapter, the research methodology utilized for this study was outlined including conceptual framework for research design, data, survey instruments, variables, and

statistical analysis. Employing Astin's (1993) I-E-O model, the study is quantitative in nature and utilizes the 2008 Cooperative Institutional Research Program (CIRP) Freshman Survey (TFS) and the follow up College Senior Survey (CSS) four years later in 2012. One dependent variable and fourteen independent variables will be analyzed to examine predictors of perceived depression among Asian American college students. For statistical analysis, cross-tabulation, hierarchical blocked regression, and ANOVA will be performed. The next chapter will present findings of the study.

CHAPTER FOUR: RESULTS

Descriptive Analysis

Table 4.1 displays the frequencies for the variables analyzed in this study by racial group: Asian American students, African American students, Latino students, and White students. The variables used in this analysis are included in the model as outlined in the research questions: gender, parents' education, family income, parental marital status, English as the first language, citizenship status, substance use, religiosity, campus climate, academic life, social life, self-concept, satisfaction with college, and feelings of depression.

For the background characteristics of the participants, the overall sample of Asian Americans reported in both the TFS 2008 and CSS 2012 dataset is 951 (8.1%) of the 10,710 total respondents while African Americans are 344 (2.9%), Hispanics are 524 (4.5%) and Whites are 8,900 (80%). Over 60% of the entire participants were female with 63.2% for Asian American students, 65.7% for African American students, 77.7% for Latino students, and 65.5% for Whites. In regards of family income, White students reported the highest family incomes, with 48.6% having annual incomes of \$100,000 and above, compared to 33.8% of Asian Americans, 18.9% of African Americans and 16% of Latinos. In terms of parents' education, the racial group reporting the highest level of education attainment was White students' parents holding graduate degrees (father 30.2%, mother 22.9%) and Asian American students' parents were the second highest group obtaining graduate degrees (father 30.4%, mother 19.1%) while 16.0 % of African American fathers and 14.1 % of African American mothers, and 9.0% (both father and mother) of Latino parents held graduate degrees. In terms of parents' marital status, 81.7% of Asian American parents are still married and live together while 43.0 % of African American, 66.2% of Latino, and 81.3% of White parents are still married and live together.

Fifty five percent of Asian American students speak English as the first language while 57.3% Latino, 92.7% African Americans, and 98% White students do. For the citizenship status, 82.5% of Asian Americans are the US Citizens while 90.4% African American, 90.5% Latino, and 99% White students are.

In addition to the above mentioned students' background characteristics, Table 4.1 shows the descriptive analysis of inputs, environments, and outcome variables analyzed in this study. In regards to substance use, White group shows the highest rate of drinking beer (76.4%) followed by Asian American group (69.7%), Latino students (67.8%) and African American group (49.3%). For smoking cigarettes, across all racial groups, approximately one in five participants reported smoking cigarettes. For Asian American students, 17.1% smoke cigarettes (either occasionally or frequently) while 15.0% of African American, 20.8% of Latino students, and 19.0 % of White students smoke cigarettes.

In terms of religiosity, Asian American students are the least religious group reporting the lowest religious service attendance, with 44.3% reporting that they attended (either occasionally or frequently) a religious service, compared to 71.8% of African Americans, 62.0% of Latinos, and 60.5% of Whites. African American students spent the most time in prayer and meditation, with 22.6% spending more than 3 hours each week in prayers and meditations, compared to 11.2% of Asian American students, 12.6% of Latino students, and 11.5% of White students. African American students rated themselves as highly spiritual more often than students in other racial groups (55.9% in African Americans and less than 40% in all other racial groups).

For the campus climate, African Americans reported the highest rate of experiencing discrimination because of race, gender, sexual orientation, or religion (37.1%), followed by Latinos (28.8%), Asian Americans (22%), and Whites (11.2%).

African Americans also were more likely to agree with the statement “There is a lot of racial tension on this campus” (34.9%) compared to other racial groups (e.g., 22.0% of Asian American students, 28.2% of Latino students, and 14.6% of White students). Nearly half of the African American students have heard faculty express stereotypes based on race/ethnicity, gender, sexual orientation, or religion, compared to a third of Asian Americans, over a quarter of Latinos, and less than a fifth of Whites.

In terms of academic life, White students show the highest GPA, with 48.6% having GPA above B+ compared to Asian Americans (33.4%), African Americans (24.3%), and Latinos (28.3%). White students also reported spending more time studying, with 28.9% of spending more than 15 hours per week to study, compared to 28% of Asian Americans, 25.1% of Latinos, and 21.6% of African Americans. Asian American students complete their assignments on time more frequently than students in other racial groups, with 48.4% responding that they failed to finish assignments on time (occasionally or frequently) compared to 68.6% of African American students, 51.8% of Latino students, and 50.8% of White students. All four racial groups showed similar rates of missing classes, with nearly 90% of students in all racial groups reporting that they had missed class occasionally or frequently.

For social life, Asian American students spent the less time partying and socializing with friends compared to students in other racial groups, with only 3.6% spending more than 10 hours per week for partying (compared to nearly 8% in other racial groups) and 19.9% spending more than 10 hours per week socializing with friends (compared to 26.4% of African Americans, 30.9% of Latinos, and 45.8% of Whites). In both socializing and partying, White student spent the most time compared to their counterparts.

In terms of self-concept, Asian American students showed the lowest self confidence in social and intellectual ability while African American students scored the highest self-confidence in both social and intellectual ability: 46.3% of Asian American students rated themselves as above average in social confidence and 48.9% rated themselves as above average in intellectual confidence, compared to 68.2% for social confidence and 69.9% for intellectual confidence in African Americans, 58.3% for social confidence and 60.4% for intellectual confidence in Latinos, and 52.9% for social confidence and 66.7% for intellectual confidence in Whites. Furthermore, 50.8% of Asian American students rate themselves as competitive while 55.1% of Whites, 47.8% of Latinos, and 62.3% of African Americans rate themselves as competitive.

In regards to satisfaction with college experiences, over 75% of the students were satisfied with their overall college experiences across all racial groups, with white students reporting being most satisfied with their overall college experiences (89.9%) and African American students reporting being the least satisfied (76.8%). Eighty eight percent of Asian American students reported being satisfied with their overall college experiences and 84.6% of Latino students reported being satisfied.

Lastly for feelings of depression, Asian American student showed the highest rate of feeling depressed, with 62.8% reportedly feeling depressed (occasionally or frequently) compared to 56.3% of Whites, 56.4% of Latinos, and 60.5% of African Americans. In addition, Asian American students showed the lowest self rating in emotional health, with 47.8% rating themselves as being above average in terms of emotional health compared to 58.1% of African Americans, 50.8% of Latinos, and 53.3% of Whites.

Table 4.1 Descriptive Data: Frequencies and Percentages

Variables	Asian American (N=951) %	African American (N=324) %	Latino (N=524) %	White (N=8911) %
Gender				
Female	63.2	65.7	77.7	65.5
Male	36.8	34.3	22.3	34.5
Family Income				
Less than \$20,000	18.4	20.6	16.6	5.2
\$20,000 – 40,000	15.3	18.2	26.4	9.5
\$40,000-60,000	14.5	17.9	20.8	13.7
\$60,000-100,000	18.6	24.3	20.1	26.7
\$100,000-150,000	16.6	11.0	8.2	19.1
\$150,000-200,000	6.8	5.3	2.7	9.9
\$200,000 more	9.8	2.7	5.1	15.9
Father's Education Level				
Less than high school	11.6	11.9	33.5	4.2
High school graduate	14.4	25	21.1	15.6
Some College	13.9	28.6	16.8	16.2
College degree	26.7	17	17.6	30.7
Some graduate school	2.9	1.6	1.8	3.1
Graduate degree	30.4	16	9.1	30.2
Mother's Education Level				
Less than high school	15.4	10.4	29.2	3.2
High school graduate	15.6	21.5	20.8	13.3
Some College	14.8	23.9	21.3	18.7
College degree	32.5	26.1	18.4	38.3
Some graduate school	2.6	3.7	1.2	3.7
Graduate degree	19.1	14.4	9.0	22.9
Parents' Marital Status				
One or both deceased	3.3	8.0	3.5	3.0
Divorced or Separated	14.5	48.4	29.8	17.8
Living Together	82.2	43.7	66.7	79.3
Native English Speaker				
Yes	56.1	92.7	57.8	95.8
No	43.9	7.3	42.2	4.2
Citizenship				
Neither	8.4	6.2	2.9	1.0
Green Card	9.1	2.4	6.1	.9
Citizen	81.5	91.5	91.0	98.2
Substance Use				
Drank Beer				
Never	31.3	50.7	32.2	26.4

Occasionally	52.9	34.9	46.0	43.7
Frequently	15.8	14.4	21.8	29.9
<hr/>				
Smoke Cigarettes				
<hr/>				
Never	82.9	85.0	79.2	81.0
Occasionally	13.5	10.9	18.1	14.5
Frequently	3.6	4.1	2.7	4.5
<hr/>				
Religiosity				
<hr/>				
Attended Services				
<hr/>				
Never	55.8	28.2	38.0	39.2
Occasionally	25.9	44.9	41.4	36.1
Frequently	18.4	27.0	20.6	24.7
<hr/>				
Hours/ week on prayers				
<hr/>				
None	53.8	22.8	45.0	45.6
Less than one hour	18.3	32.2	24.2	24.1
1 to 2 hours	16.6	22.5	18.3	18.6
3 to 5 hours	7.0	14.3	8.5	7.9
6 to 10 hours	3.0	4.4	2.9	2.6
11 to 15 hours	.4	1.2	.2	.6
16 to 20 hours	.3	1.2	1.0	.2
Over 20 hours	.5	1.5	45.0	.4
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Self-rate on spirituality				
<hr/>				
Lowest 10%	7.1	3.2	4.3	6.6
Below average	13.1	5.8	14.1	15.0
Average	43.0	35.1	40.6	38.4
Above average	25.5	38.6	25.5	28.8
Highest 10%	11.3	17.3	15.5	11.1
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Campus Climate				
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I felt discriminated				
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Strongly disagree	29.3	23.2	27.4	45.4
Disagree	48.7	39.7	43.8	40.5
Agree	19.3	26.8	22.5	11.5
Strongly Agree	2.6	10.3	6.3	2.6
<hr/>				
I experienced racial tensions				
<hr/>				
Strongly disagree	23.7	20.2	26.3	31.6
Disagree	54.3	44.9	45.4	51.7
Agree	19.0	27.0	21.9	14.2
Strongly Agree	3.0	7.9	6.3	2.4
<hr/>				
I heard faculty express stereotypes				
<hr/>				
Strongly disagree	20.7	15.2	20.9	28.1
Disagree	46.3	38.4	40.6	45.7

Agree	29.0	37.0	29.8	22.5
Strongly Agree	4.0	9.4	8.7	3.7
<hr/>				
Academic Life				
<hr/>				
GPA				
<hr/>				
D	.2		.2	
C	2.9	3.0	1.7	.9
C+	6.1	10.7	7.5	2.7
B-	9.1	16.6	11.2	5.8
B	24.7	23.7	21.8	17.0
B+	23.6	21.9	29.3	25.1
A-	20.7	16.9	18.5	27.6
A or A+	12.7	7.4	9.8	21.0
<hr/>				
Hours per week on studying				
<hr/>				
Less than one hour	2.6	1.8	.8	.1
1 to 2 hours	4.7	6.4	1.3	.6
3 to 5 hours	19.8	26.6	4.2	4.2
6 to 10 hours	27.7	28.4	22.6	17.9
11 to 15 hours	17.4	15.2	26.9	27.8
16 to 20 hours	14.4	11.4	19.0	20.4
Over 20 hours	13.6	10.2	14.2	14.8
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Failed to complete homework on time				
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Not at all	51.6	31.5	48.2	49.3
Occasionally	43.8	62.4	45.3	47.0
Frequently	4.6	6.2	6.5	3.8
<hr/>				
Missed the class				
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Not at all	16.1	11.3	16.7	14.7
Occasionally	73.8	76.7	76.1	79.1
Frequently	10.1	11.9	7.3	6.1
<hr/>				
Social Life				
<hr/>				
Hours per week socializing				
<hr/>				
None	.7		1.5	.1
Less than one hour	2.6	2.9	1.9	.8
1 to 2 hours	8.4	12.6	11.3	4.5
3 to 5 hours	27.9	28.4	25.0	17.9
6 to 10 hours	30.3	29.6	29.4	30.8
11 to 15 hours	15.9	11.1	13.8	21.0
16 to 20 hours	7.3	5.6	7.9	12.4
Over 20 hours	6.7	9.7	9.2	12.4
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Hours per week partying				
<hr/>				
None	24.5	20.3	22.3	19.3

Less than one hour	17.2	15.9	10.4	11.6
1 to 2 hours	23.0	19.1	20.0	17.0
3 to 5 hours	21.8	26.2	25.2	26.4
6 to 10 hours	9.8	10.6	14.6	16.5
11 to 15 hours	2.5	4.4	3.8	5.5
16 to 20 hours	.6	.9	1.3	2.0
Over 20 hours	.5	2.6	2.3	1.8
Self-concept				
Self confidence: intellectual				
Lowest 10%	.4	.3	.2	.3
Below average	4.9	3.5	4.2	4.4
Average	35.7	26.3	35.1	28.7
Above average	43.2	44.2	41.3	47.4
Highest 10%	15.8	25.7	19.1	19.3
Self-confidence: social				
Lowest 10%	1.5	.9	.4	.9
Below average	12.3	5.8	6.4	10.6
Average	39.9	25.1	34.9	34.6
Above average	33.1	40.4	38.6	38.0
Highest 10%	13.2	27.8	19.7	15.9
Competitiveness:				
Lowest 10%	.8			.8
Below average	7.9	5.7	7.1	8.7
Average	40.6	32.1	45.1	36.1
Above average	39.4	34.0	37.2	37.5
Highest 10%	11.4	28.3	10.6	16.9
Satisfaction with college				
Very dissatisfied	.4	1.2	1.0	.7
Dissatisfied	1.9	5.6	1.5	2.3
Neutral	16.9	16.6	12.9	8.3
Satisfied	55.1	46.4	44.4	43.2
Very satisfied	25.7	30.2	40.2	45.5
Felt depressed in college				
Not at all	39.2	37.5	43.6	42.9
Occasionally	50.1	49.6	47.0	48.7
Frequently	10.7	12.9	9.4	8.3
Self-rate on emotional health				
Lowest 10%	1.9	1.2	1.0	.8
Below average	10.3	9.1	9.2	9.1
Average	40.0	31.7	38.9	37.1
Above average	35.1	39.9	33.5	36.9

Highest 10% 12.7 18.2 17.3 16.0

Table 4.2 presents the means and standard deviations of the variables analyzed in this study for each racial group in the study sample.

Table 4.2. Means and Standard Deviations

Variables	Min. Max.		Asian American (N=951)		African American (N=324)		Latino (N=524)		White (N=8911)	
			M	SD	M	SD	M	SD	M	SD
Gender (1-Male, 2-Female)	1	2	1.63	.48	1.66	.47	1.78	.42	1.67	.47
Family Income	1	14	7.95	3.82	7.09	3.53	7.09	3.33	9.65	3.04
Father's Education	1	8	5.52	2.21	4.74	1.99	3.82	2.26	5.78	1.93
Mother's Education	1	8	5.08	2.16	4.94	1.95	3.95	2.20	5.73	1.74
Parents' Marital Status	1	3	2.79	.48	2.36	.62	2.63	.55	2.76	.49
Native English Speaker	1	2	1.56	.49	1.93	.26	1.58	.49	1.96	.20
Citizenship	1	3	2.74	.60	2.85	.50	2.88	.40	2.97	.21
Substance Use										
Drank Beer	1	3	1.85	.67	1.64	.72	1.90	.73	2.04	.75
Smoke Cigarettes	1	3	1.21	.49	1.19	.49	1.23	.48	1.24	.52
Religiosity										
Attended Services	1	3	1.63	.78	1.99	.744	1.83	.746	1.86	.79
Hours/ week on prayers	1	8	1.92	1.26	2.61	1.44	2.06	1.27	2.02	1.22
Self-rate on spirituality	1	5	3.21	1.04	3.61	.95	3.34	1.04	3.23	1.05
Campus Climate										
Felt discriminated	1	4	1.95	.77	2.24	.92	2.08	.86	1.71	.77
Racial tensions	1	4	2.01	.740	2.23	.86	2.08	.85	1.87	.73
Heard faculty express stereotypes	1	4	2.16	.79	2.40	.86	2.26	.89	2.02	.81
Academic Life										
GPA	1	8	5.72	1.52	5.31	1.53	5.64	1.45	6.30	1.35
Hours spent on studying			5.49	1.56	5.24	1.48	5.42	1.49	5.6	1.45
Failed to complete homework on time	1	3	1.53	.59	1.75	.56	1.58	.61	1.55	.57
Missed the class			1.94	.51	2.01	.48	1.91	.48	1.91	.45
Social Life										
Hours per week socializing	1	8	4.95	1.42	4.89	1.50	4.98	1.55	5.53	1.41
Hours per week partying	1	8	2.88	1.49	3.21	1.68	3.28	1.70	3.43	1.70
Self-concept										
Self confidence: intellectual	1	5	3.69	.81	3.92	.83	3.75	.817	3.81	.81
Self-confidence: social	1	5	3.44	.92	3.88	.91	3.71	.867	3.58	.91
Competitiveness	1	5	3.53	.83	3.85	.91	3.51	.781	3.61	.89

Satisfaction with college	1	5	4.04	.734	3.99	.89	4.21	.80	4.31	.77
Felt depressed in college	1	3	1.72	.647	1.75	.67	1.66	.64	1.65	.63
Self-rate on emotional health	1	5	3.46	.908	3.65	.92	3.57	.91	3.58	.89

Research Question 1

Rate of Feeling Depressed among Asian American College Students by Gender, Social Class, and College Experiences

To examine the first research question— how does the rate of feeling depressed among Asian American college students vary by gender, social class, and college experiences (e.g., academic performance, substance use, religiosity, and satisfaction with college)?— cross-tabulations were performed by grouping students’ perceived feelings of depression into three categories. The rate of feelings of depression ranged from 2 to 8. Thus, students who scored 1 or 2 were categorized as low, students who scored 3 to 5 were marked as medium, and students who scored 6 to 8 were marked as high scores on feelings of depression. In addition, variables relating to students’ background characteristics (e.g., SES) and college experience (e.g., substance use, religiosity, academic performance, and satisfaction with college) were grouped into three categories such as high, middle, and low as previously illustrated in Table 3.3. Table 4.3 displays the distribution of percentages of Asian American college students’ feelings of depression by gender, SES, and GPA.

In further analysis of the distribution of feelings of depression among Asian American college students, the percentage breakdown of students’ perceived feelings of depression illustrates the association with the various related variables.

Female Asian American students experience higher feelings of depression than male Asian American students, with only 6% of Asian American females reporting that they never felt depressed and 15.9% of female Asian American students reporting high feelings of depression, while 15.4% of male counterparts never felt depressed and 9.9%

show high level of feelings of depression.

For socio-economic status (SES), Asian American students with low SES showed higher levels of depression, 14.9% of them reported high feelings of depression while among students with high SES, 13.5% Asian American students reported high feelings of depression. Consistently, 7.9% of low SES students had low feelings of depression compared to that 10.8% of high SES students had low feelings of depression.

Turning to students' GPA, students with high GPA showed lower level of feelings of depression as 11.2% of students with high GPA reported low feelings of depression whereas only 4.6% of students in low GPA group showed low feelings of depression. Similarly, only 10.5% of Asian student in high GPA group had high feelings of depression while nearly 20% of students with low GPA showed high level of feelings of depression.

Table 4.3 Distribution of Feelings of Depression for Asian American College Students by Gender, SES, and GPA

		Gender			SES			GPA	
		M	F	L	M	H	L	M	H
Feelings of Depression	Low (%)	15.4	6.0	7.9	9.7	10.8	4.6	9.1	11.2
	Middle (%)	74.7	78.1	77.2	78.3	75.7	75.9	76.1	78.3
	High (%)	9.9	15.9	14.9	12.1	13.5	19.5	14.8	10.5

N=951

Table 4.4 presents the distribution of percentages of Asian American college students' feelings of depression by substance use, religiosity, and satisfaction with college. Asian American students with high substance use reported higher levels of feelings of depression (18.2%) compared to students with low substance use (16.0%).

The more involved in religion a student was, the less depressed the student felt as 23.6% of low religious students show high level of feelings of depression while the rate of high feelings of depression was decreased to 5.1% in highly religious group. Similarly,

20.4% of Asian American students with high religiosity showed low feelings of depression compared to low religiosity group that only 6.2% of them reported low feelings of depression.

Focusing on rate of feeling depressed by overall satisfaction with college experiences, the more students were satisfied with their college experiences, the less they felt depressed: ten percent of Asian American students who were satisfied with overall college experiences showed high level of feelings of depression, compared to 45.5% among students who were not satisfied with their college experiences.

In sum, the rate of feeling depressed among Asian American college students varied by gender, social class, and college experiences. Asian American students who are female, from low SES backgrounds, academically less achieved, frequent substance users, less religiously involved, and less satisfied with overall college experiences showed higher levels of feelings of depression.

Table 4.4 Distribution of Feelings of Depression for Asian American College Students by Substance Use, Religiosity, and College Satisfaction

		Substance			Religiosity			Satisfaction		
		L	M	H	L	M	H	L	M	H
Feelings of Depression	Low (%)	11.3	7.9	12.3	6.2	7.5	20.4	4.5	5.6	10.4
	Middle (%)	72.6	80.3	69.5	70.2	79.1	74.5	50.0	69.4	79.2
	High (%)	16.0	11.7	18.2	23.6	13.4	5.1	45.5	25.0	10.5

N=951

Research Question 2

Research question 2 sought to determine which college environments and collegiate experiences variables predict feelings of depression for Asian American college students after controlling for background characteristics and input variables. The sample of Asian American college students consisted of 951 students. A hierarchical multiple regressions were employed to conduct the analysis. Variables were entered into the regression model in 8 blocks according to Astin's (1993) I-E-O model. Input (e.g., pre-college experiences and background characteristic) variables were entered first, followed by substance use in block 2, religiosity in block 3, campus climate in block 4, academic experiences in block 5, social life in block 6, self-concept in block 7, and satisfaction with overall college experiences in block 8. The dependent variable was feelings of depression, as measured by students' self reported perceived feelings of depression and self-rate on emotional health. Prior to performing the regression analysis, statistics for multicollinearity were conducted. For all variables in the model the variance inflation factor (VIF) was between 1.15 and 2.76 and the collinearity tolerance above .9 indicating that the variables are not multicollinear. Therefore, the variables are suitable for the regression analysis.

Regression Model Summary

As displayed in Table 4.5 the summary of the regression model findings, the entire model accounted for 41.5% of the variance in all Asian American students' feelings of depression ($R^2 = .415$, $F(33, 179) = 5.37$, $p < .001$). R^2 is the amount of variance in feelings of depression explained by the independent variables entered in the regression model. In this study, $R^2 = .415$ and adjusted $R^2 = .406$.

Table 4.5 Predictive Model Summary for Feelings of Depression among Asian American Students (N=951)

Block/Descriptions	R^2	Adj. R^2	Change Statistics		
			ΔF	ΔR^2	Sig
1. Input	.077	.078	2.101	.077	**
2. Substance Use	.093	.090	1.258	.016	
3. Religiosity	.208	.204	10.054	.115	***
4. Campus Climate	.210	.209	.419	.002	
5. Academic Life	.255	.250	4.151	.045	**
6. Social Life	.307	.305	6.153	.052	**
7. Self-concept	.392	.391	10.093	.088	***
8. Satisfaction with College Experience	.415	.406	8.125	.023	***

* $p < .05$, ** $p < .01$, *** $p < .00$

The first block of the regression model included students' characteristics (e.g., gender, SES, parents' marital status, English as the first language, citizenship status) and pre-college experiences (e.g., substance use in higher school, religiosity in high school, academic life in high school, social life in high school, self-concept in high school, and feelings of depression in high school) and explained an initial 7.7% of the variance ($R^2 = .077$, $\Delta F = 2.101$, $p < .01$) in scores on feelings of depression for all Asian American college students. Substance use variables were entered next and did not account for a significant amount of additional variance in feelings of depression ($R^2 = .093$, $\Delta F = 1.258$, $p > .05$). In block 3, religiosity variables were entered into the model explaining an additional 11.5 % variance ($R^2 = .208$, $\Delta F = 10.054$, $p < .001$). Campus climate was entered in block 4 accounting for only 0.2% of variance in feelings of depression ($R^2 = .210$, $\Delta F = .419$, $p > .05$). In block 5, academic life variables were entered into the model and explained an additional 4.5% variance ($R^2 = .255$, $\Delta F = 4.151$, $p < .01$). Social life variables were entered next in block 6 accounting for an additional 5.2% of variance in feelings of depression ($R^2 = .307$, $\Delta F = 6.153$, $p < .001$). The block 7 included self-concept variables that significantly

added 8.8% to the variance in feelings of depression ($R^2 = .392$, $\Delta F = 10.093$, $p < .001$).

Lastly, the final block included students' overall satisfaction with college experiences that added 2.5% to the overall variance explained in the dependent variable ($R^2 = .415$, $\Delta F = 8.125$, $p < .01$).

Predictors of Feelings of Depression: Regression Coefficients

Table 4.6 illustrates predictors of feelings of depression in the regression model for Asian American college students.

Table 4.6 Predictors of Asian College Students' Feelings of Depression

Block	Regression Coefficients			
	R^2	r	β at Entry	Final β
1.Characteristics	.077			
Gender		.162**	.105	.022
Income		-.037	-.067	.043
Father Ed		-.025	.047	-.078
Mother Ed		-.004	.092	.064
Parent Marital Status		.018	.001	-.029
Native English Speaker		-.016	-.092	-.018
Citizenship		-.005	.119	-.013
Pre-college				
HS Drank Beer		-.024	-.017	-.020
HS Attended a Service		.020	.024	-.053
HS Self-rate on spirituality		.052	-.001	.037
HS GPA		-.025	-.050	-.030
HS Self-confidence: intellectual		.046	-.039	-.106
HS Self-confidence: social		.048	-.044	-.082
HS Depression		.345***	.333***	.275***
2 Substance Use	.093			
Drank Beer		-.026	-.197	-.232*
Drank Liquor		.000	.096	.248*
Smoke Cigarette		.115**	-.013	.006
3 Religiosity	.208			
Attended a service		-.098**	.015	.024
Hours: praying		-.144**	.033	-.016
Self rate: spirituality		-.251**	-.349***	-.163*
4 Campus climate	.210	.058	.043	.024
5Academic Life	.255			

College GPA		-.125**	-.070	-.002
Hours: study and homework		.062	.134*	.165***
Fail to complete assignments on time		-.071*	-.206**	-.161**
Missed the class		.085**	.049	.066
6 Social Life	.307			
Hours: socializing		-.144**	-.171**	-.128*
Hours: Partying		-.067*	-.176*	-.071
Satisfaction with Campus social		-.162**	-.087	.040
7 Self-concept	.392			
Self-confidence: intellectual		-.334***	-.204**	-.208**
Self-confidence: Social		-.438***	-.242***	-.252***
Self-confidence: competitiveness		-.163**	-.006	.008
8 Satisfaction with overall college experiences	.415	-.29***	-.189**	-.189**

N=951 * $p < .05$, ** $p < .01$, *** $p < .001$

Significance level was determined for $p < .05$, $.01$, and $.001$. Overall, among 33 independent variables in the regression model, three variables were statistically significant at the $p < .001$ level as predictors of feelings of depression among Asian American college students when all variables were entered into the model: feeling depressed in high school ($\beta = .33$, $p < .001$), hours spent per week on study and homework ($\beta = .165$, $p < .001$), and self-rating on self-confidence in social ability ($\beta = -.252$, $p < .001$). In addition, three variables were significant predictors of feelings of depression at the $p < .01$ level, and these included failing to complete homework on time ($\beta = -.161$, $p < .01$), self-rating on self-confidence in intellectual ability ($\beta = -.208$, $p < .01$), and satisfaction with overall college experience ($\beta = -.189$, $p < .01$). Lastly, there were four statistically significant variables at the $p < .05$ level as predictors of feelings of depression: drinking beer ($\beta = -.232$, $p < .05$), drinking liquor ($\beta = .248$, $p < .05$), self-rating on spirituality ($\beta = -.163$, $p < .05$), and hours

spent per week on socializing with friends ($\beta = -.128, p < .05$). In further analysis of the regression coefficients for predictors of feelings of depression among Asian American college students, with the exception of feelings of depression in high school, none of the input variables (including student's characteristics and pre-college experiences) were significant predictors of feelings of depression. In block 2 substance use, although two variables on drinking were significant predictors of feelings of depression, their directions were opposite: drank beer is a negative predictor ($\beta = -.232, p < .05$) while drink liquor or wine predicts depression negatively ($\beta = .248, p < .05$). Asian American students who drink beer were less likely to feel depressed, whereas wine/liquor drinkers were more likely to experience feelings of depression.

For block 3 religiosity, although all three variables-attended a religious service ($r = -.098, p < .01$), hour spent per week on prayers ($r = -.144, p < .01$), and self-rating on spirituality ($r = -.251, p < .01$)-were significantly correlated with feelings of depression, only self-rating on spirituality was a significant predictor of feelings of depression ($\beta = -.163, p < .05$) after all variables were controlled for. Asian American college students who rated themselves as spiritual were less likely to feel depressed.

In block 5 academic life, Asian American students who spent more time on studying and homework were more likely to feel depressed ($\beta = .165, p < .001$), and students who failed to complete their homework on time were less likely to feel depressed ($\beta = -.161, p < .01$). These two variables are aligned considering students who spend more time on homework may not fail to complete their homework on time. However, they had differing relationships with feelings of depression.

Focusing on block 6 social life, although all three variables, hours spent per week on socializing with friends ($r = -.144, p < .01$), hours spent per week on partying ($r = -.067,$

$p < .05$), and satisfaction with social life on campus ($r = -.162$, $p < .01$) were significantly correlated with feelings of depression, only hours spent per week on socializing with friends was a significant predictor of feelings of depression. Asian American college students who spent more time socializing with their friends are less likely to feel depressed.

Several variables in block 7 self-concept were significant predictors of feelings of depression for Asian American college students. Self-rating on self-confidence in intellectual ability ($r = -.334$, $p < .001$), in social ability ($r = -.438$, $p < .001$), and in competitiveness ($r = -.163$, $p < .01$) are significantly correlated with feelings of depression. Self-rating on self-confidence in intellectual ability ($\beta = -.208$, $p < .01$) and in social ability ($\beta = -.252$, $p < .001$) are significant predictors of feelings of depression indicating that Asian American college students who have higher self confidence in intellectual self-concept and social ability are less likely to feel depressed.

Lastly, the final block satisfaction of satisfaction with overall college experiences was entered in the equation, and it predicted feelings of depression among Asian American college students significantly ($\beta = -.189$, $p < .01$) indicating that students who are satisfied with their college experiences are less likely to experience feelings of depression.

Research Question 3

Comparing the Rate of Feelings of Depression across Racial Groups

To determine if there are differences in rate of feelings of depression among different racial groups, a one-way ANOVA was performed. Because this sample included only 951 Asian American students compared to 8,900 White students, between group comparisons in this sample would not be valid. To allow for meaningful between group comparisons in this study, the Asian American students in this sample were compared to 1,000 White students randomly selected from the full study sample.

Overall, as shown in Table 4.7, the rate of feelings of depression differed significantly across racial groups ($F=6.843$, $p < .001$).

Table 4.7 One-way Analysis of Variance Summary for Feelings of Depression

Source	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Between Groups	3	35.121	11.707	6.843***
Within Group	10626	18177.958	1.711	
Total	10629	18213.079		

*** $p < .001$

Table 4.8 exhibits multiple comparisons of feelings of depression across the four racial groups. Overall, Asian American college students had the highest mean ($M=4.25$, $SD=1.35$) and White students had the lowest mean ($M=4.05$, $SD=1.30$) when comparing all four groups. Scheffe post hoc tests were utilized to examine significant differences among the racial groups under study. Asian American college students ($M=4.25$, $SD=1.35$) reported higher rate of feelings of depression compared to African American ($M=4.10$, $SD=1.33$), Latino ($M=4.08$, $SD=1.31$), and White students ($M=4.05$, $SD=1.30$). Among these groups, the difference between Asian American and White students was statistically significant at the .001 level.

African American ($M=4.10$, $SD=1.33$) students reported higher feelings of depression compared to Latino students ($M=4.08$, $SD=1.31$) and White students ($M=4.05$, $SD=1.30$), but statistically significantly lower feelings of depression compared to Asian American students ($M=4.25$, $SD=1.35$, $p < .05$).

Latino students' feelings of depression ($M=4.08$, $SD=1.31$) was significantly lower than Asian American students ($M=4.25$, $SD=1.35$) and lower than African American students ($M=4.10$, $SD=1.33$), but higher than White students ($M=4.05$, $SD=1.30$).

Lastly, White college students' feelings of depression ($M=4.05$, $SD=1.30$) was

statistically significantly lower compared to Asian American students (M=4.25, SD=1.35), and White students had lower feelings of depression compared to African American (M=4.10, SD=1.33) and Latino students (M=4.08, SD=1.31).

Table 4.8 Feelings of Depression Multiple Comparison across Racial Groups

	Race	Racial Groups to Compare	Mean Difference
<i>Scheffe post hoc tests</i>	Asian American (M=4.25, SD=1.35)	African American (M=4.10, SD=1.33)	.15*
		Latino (M=4.08, SD=1.31)	.17*
		White (M=4.05, SD=1.30)	.20***
	African American (M=4.10, SD=1.33)	Asian (M=4.25, SD=1.35)	-.15*
		Latino (M=4.08, SD=1.31)	.02
		White (M=4.05, SD=1.30)	.05
	Latino (M=4.08, SD=1.31)	Asian (M=4.25, SD=1.35)	-.17*
		African American (M=4.10, SD=1.33)	-.02
		White (M=4.05, SD=1.30)	.03
	White (M=4.05, SD=1.30)	Asian (M=4.25, SD=1.35)	-.20***
		African American (M=4.10, SD=1.33)	-.05
		Latino (M=4.08, SD=1.31)	-.03

* $p < .05$, *** $p < .001$ (Asian American N=951, African American N=344, Latino N=524, and White N=1000)

Predictors of Feelings of Depression across Racial Groups

In order to compare predictors of perceived feelings of depression across different racial group of students, hierarchical multiple regression was performed on each racial group. The multiple regression blocks and variables entered into the model were as same as those in regression model for Asian American students. The sample consisted of 344 African American students, 524 Latino students, and 1,000 randomly

selected White students. Prior to performing the regression analysis for all racial groups, statistics for multicollinearity were conducted. For all variables in the model the variance inflation factor (VIF) was between 1.28 and 3.88 and the collinearity tolerance above .6 indicating that the variables are not multicollinear. Therefore, the variables are suitable for the regression analysis.

Regression Model Summary for Each Racial Group

African American College Students. Table 4.9 summarizes the regression model findings across different racial groups. For African American college students, the entire model accounted for 20% of the variance in feelings of depression ($R^2 = .20$, $F(33, 147) = 5.20$, $p < .05$) which is much lower than other racial groups. The small difference (.04) between R^2 and adjusted R^2 explains that there is little to no presence of extraneous independent variables in the regression model.

The first block of the regression model included students' characteristics (e.g., gender, SES, parents' marital status, English as the first language, citizenship status) and pre-college experiences (e.g., substance use in higher school, religiosity in high school, academic life in high school, social life in high school, self-concept in high school, and feelings of depression in high school) and explained an initial 7% of the variance ($R^2 = .07$, $\Delta F = 7.36$, $p > .05$) in scores on feelings of depression for African American college students. Substance use variables were entered next and accounted for 1% of additional variance in feelings of depression ($R^2 = .08$, $\Delta F = .37$, $p > .05$). Religiosity variables were entered into the model in block 3 and explained an additional 3 % variance ($R^2 = .11$, $\Delta F = 8.70$, $p < .05$). Campus climate variable was entered in block 4 and accounted for an additional 3% variance in feelings of depression ($R^2 = .14$, $\Delta F = 7.46$, $p < .05$). Academic

Table 4.9 Predictive Model Summary for Feelings of Depression across Racial Groups

Block	Asian American (N=951)				African American (N=344)				Latino (N=524)				White (N=1,000)			
	R^2	Adj. R^2	ΔF	ΔR^2	R^2	Adj. R^2	ΔF	ΔR^2	R^2	Adj. R^2	ΔF	ΔR^2	R^2	Adj. R^2	ΔF	ΔR^2
1. Input	.08	.08	2.10	.08**	.07	.06	7.36	.07	.11	.11	1.20	.11*	.17	.16	17.36	.17**
2. Substance Use	.09	.09	1.26	.01	.08	.07	.37	.01	.11	.11	.84	.00	.19	.18	10.37	.02
3. Religiosity	.21	.20	10.05	.12***	.11	.10	8.70	.03*	.13	.12	1.32	.02*	.21	.19	8.70	.02*
4. Campus Climate	.21	.20	.42	.00	.14	.12	7.46	.02*	.14	.13	.81	.01	.21	.20	4.46	.00
5. Academic Life	.26	.25	4.15	.05**	.14	.13	0.54	.00	.15	.14	1.05	.01	.23	.21	9.54	.02
6. Social Life	.31	.30	6.15	.05***	.15	.14	1.93	.01	.18	.16	1.48	.03	.25	.23	8.93	.02
7. Self-concept	.39	.38	10.09	.08***	.18	.14	4.44	.03*	.24	.19	4.19	.06**	.34	.32	12.44	.90***
8. Satisfaction College Experience	.41	.40	8.13	.02**	.20	.16	5.07	.02	.25	.19	.77	.01**	.35	.33	13.07	.10***

* $p < .05$, ** $p < .01$, *** $p < .001$

life variables were entered into the model in block 5 and did not account for a significant amount of additional variance in feelings of depression ($R^2 = .14$, $\Delta F = 0.54$, $p > .05$). Social life variables were entered next in block 6 and accounted for an additional 1% of variance in feelings of depression ($R^2 = .15$, $\Delta F = 1.54$, $p > .05$). Block 7 included self-concept variables, which significantly added 3% to the variance in feelings of depression ($R^2 = .18$, $\Delta F = 4.44$, $p < .05$). Lastly, the final block included students' overall satisfaction with college experiences, which added 2% to the overall variance explained in the dependent variable ($R^2 = .20$, $\Delta F = 5.07$, $p > .05$).

Latino College Students. As exhibited in Table 4.9, the entire model accounted for 25% of the variance in feelings of depression ($R^2 = .25$, $F(33, 144) = 4.92$, $p < .05$) for Latino college students. Adjusted R^2 and R^2 held small differences ($R^2 = .25$ and $\Delta R^2 = .19$) that is indicating a parsimonious model. The first block of the regression model included students' characteristics and pre-college experiences and the variables explained an initial 11% of the variance ($R^2 = .11$, $\Delta F = 1.20$, $p < .05$) in scores on feelings of depression for Latino group. Substance use variables were entered next and did not account for a significant amount of additional variance in feelings of depression ($R^2 = .11$, $\Delta F = .84$, $p > .05$). In block 3, religiosity variables were entered into the model explaining an additional 2% variance ($R^2 = .13$, $\Delta F = 1.32$, $p < .01$). Campus climate was entered in block 4 accounting for only 1% of variance in feelings of depression ($R^2 = .14$, $\Delta F = .81$, $p > .05$). In block 5, academic life variables were entered into the model and explained an additional 1% variance ($R^2 = .15$, $\Delta F = 1.05$, $p > .05$). Social life variables were entered next in block 6 accounting for an additional 3% of variance in feelings of depression ($R^2 = .18$, $\Delta F = 1.48$, $p > .05$). The block 7 included self-concept variables that significantly

added 6% to the variance in feelings of depression ($R^2 = .24$, $\Delta F = 4.19$, $p < .01$). Lastly, the final block included students' overall satisfaction with college experiences that added 1% to the overall variance explained in the dependent variable ($R^2 = .25$, $\Delta F = .77$, $p < .01$).

White College Students. For White college students, the entire model accounted for 35% of the variance in rate of feelings of depression ($R^2 = .35$, $F(33, 1,311) = 13.80$, $p < .001$). Small differences between adjusted R^2 and R^2 ($R^2 = .35$ and $\Delta R^2 = .33$) indicates that it is a parsimonious model. The first block of the regression model included students' characteristics and pre-college experiences, and explained an initial 17% of the variance ($R^2 = .17$, $\Delta F = 17.36$, $p < .01$) in scores on feelings of depression for White college students. Substance use variables were entered next and added 2% more variance in feelings of depression ($R^2 = .19$, $\Delta F = 2.37$, $p > .05$). In block 3, religiosity variables were entered into the model explaining an additional 2% variance ($R^2 = .21$, $\Delta F = 4.70$, $p < .05$). Campus climate was entered in block 4 accounting for an additional 0.4% of variance in feelings of depression ($R^2 = .21$, $\Delta F = 11.46$, $p > .05$). In block 5, academic life variables were entered into the model and explained an additional 2% variance ($R^2 = .23$, $\Delta F = 9.54$, $p > .05$). Social life variables were entered next in block 6 accounting for an additional 2% of variance in feelings of depression ($R^2 = .25$, $\Delta F = 8.93$, $p > .05$). The block 7 included self-concept variables that significantly added 9% to the variance in feelings of depression ($R^2 = .343$, $\Delta F = 12.44$, $p < .001$). Lastly, the final block included students' overall satisfaction with college experiences that added 1% to the overall variance explained in the dependent variable ($R^2 = .35$, $\Delta F = 13.07$, $p < .001$).

Predictors of Feelings of Depression across Racial Groups

All of the independent variables entered into the regression models for different

racial groups are displayed in Table 4.10. Beta coefficients significant at the $p < .001$, $.01$, and $.05$ levels will be identified as significant in the regression analysis.

African American College Students. Overall, after all variables were controlled for, among 33 independent variables in the regression model, four variables were significant predictors of feelings of depression for African American college students at the $p < .05$ level: felt depressed in high school ($\beta = .47, p < .05$), attended a religious service ($\beta = -.35, p < .05$), campus climate ($\beta = .11, p < .05$), and self-rating on self-confidence in intellectual ability ($\beta = -.11, p < .05$). Thus, African American college students who felt depressed in high school, did not attend to a religious service, experienced negative campus climate, and had low self-concept on intellectual ability were more likely to feel depressed.

There were two variables that the beta coefficients were dropped between when the variable was first entered and after all variables were entered into the regression model. The beta coefficient for feelings of depression in high school was $.47$ at the entry and decreased to $.31$ ($p < .05$) after all other variables were entered. Similarly, the beta coefficient for attending to a religious service changed from $-.35$ at the entry to $-.13$ ($p < .05$) when the final block was entered the equation.

Latino College Students. Five variables were significant predictors of feelings of depression for Latino college students at the $p < .05$ level after all variables were controlled for: felt depressed in high school ($\beta = .30, p < .05$), self-rate on spirituality ($\beta = -.15, p < .05$), campus climate ($\beta = .26, p < .05$), hours spent on studying and homework ($\beta = .08, p < .05$), and self-rate on intellectual self-confidence ($\beta = -.11, p < .05$). Latino college students who felt depressed in high school, had low self-rate on spirituality, experienced negative campus climate, spent more time on studying or homework, and had low self-confidence on intellectual ability were more likely to have high feelings of depression.

Interestingly, campus climate variable did not significantly predict Latino students' feelings of depression when it was first entered in to the model, but the variable became a significant predictor of feelings of depression after all other variables were entered into the model. Also the beta coefficients for the variable rose from .07 (at the entry) to .26 (the final beta).

White College Students. For White college students, the following six predictors of feelings of depression scores were significant at the $p < .001$ level after all variables were controlled for: gender ($\beta = .15, p < .001$), feelings of depression in high school ($\beta = .36, p < .001$), smoke cigarettes ($\beta = .14, p < .001$), failed to complete homework on time ($\beta = .10, p < .001$), self-rated self confidence in social ($\beta = -.29, p < .001$), and satisfaction with overall college students ($\beta = -.14, p < .001$). Thus, White students who were female, felt depressed in high school, smoked cigarettes, failed to complete homework on time, had low self confidence in social, and were not satisfied with their college experiences were more likely to feel depressed in college. Whites were the only racial group studied for which gender was a significant predictor of feelings of depression.

In addition to the above mentioned variables, missing class ($\beta = .06, p < .01$) and self-rated self-confidence in intellectual ability ($\beta = -.08, p < .01$) significantly predict White students' feelings of depression at the $p < .01$ level after all variables were entered into the equation.

The significance level and beta coefficients for several variables changed between when the variable was first entered into the model and when all variables were entered into the equation. For example, mother's education became a significant predictor of White students' feelings of depression after was all variables were entered ($\beta = -.05, p < .05$), but it was not a significant predictor when it was entered into the equation in the first block (β

= -.03, $p > .05$). Similarly, drank wine or liquor predicted feelings of depression after all variables were entered ($\beta = .09, p < .01$) into the regression model, although it was not a significant predictor when it was first entered into the model ($\beta = .04, p > .05$). College GPA predicted feelings of depression significantly when it was controlled ($\beta = -.07, p < .01$) in block 5, but not as after the final block was entered into the model ($\beta = -.01, p > .05$) and the beta coefficient decreased from -.07 to -.01. In addition, although White students' satisfaction with their social life on campus was a significant predictor of feelings of depression ($\beta = -.10, p < .001$) when it was first entered into the regression model, it did not predict feelings of depression after all other variable were entered into the model ($\beta = -.01, p > .05$) and the beta coefficient was decreased from -.10 to 0.01. Satisfaction with social life on campus scores was significant only for the White group.

Table 4.10 Predictors of Feelings of Depression across Racial Groups

Block	Asian American (N=951)			African American (N=524)			Latino (N=344)			White (N=1,000)		
	r	β at Entry	Final β	r	β at Entry	Final β	r	β at Entry	Final β	r	β at Entry	Final β
1.Characteristics												
Gender	.16**	.11	.02	.18**	.20	.19	.10*	-.01	-.13	.15*	.15***	.10***
Income	-.03	-.07	.04	.03	-.32	.09	.04	.12	-.15	-.06*	-.05	-.01
Father Education	-.03	.05	-.08	.09	.19	.31	.10*	-.02	.13	.01	.02	.01
Mother Education	-.01	.09	.06	.05	-.19	.32	.06	-.01	-.07	-.02	-.03	-.05*
Parent Marital	.02	.01	-.03	-.01	.00	.00	-.10*	.14	.09	-.07**	.04	.04
Native English	-.02	-.09	-.02	.09*	-.01	-.10	.02	.04	.10	-.01	.01	.01
Citizenship	-.01	.12	-.01	.19*	1.21	.06	-.02	-.09	-.07	-.02	.01	-.01
Pre-college												
HS Drank Beer	-.02	-.02	-.02	-.02	-.03	-.02	-.05	-.04	-.02	.01	-.05	-.07
HS Attended Service	.02	.02	-.05	-.03	-.16	-.03	-.03	-.07	-.05	-.01	-.01	-.02
HS Spirituality	.05	-.01	.04	.02	.10	.08	-.02	-.06	-.05	-.01	.03	.03
HS GPA	-.03	-.05	-.03	-.02	-.01	-.01	-.04	-.04	-.01	-.02	-.08**	-.01
HS Confidence Intellectual	.05	-.04	-.11	.01	-.01	-.04	-.04	-.01	-.02	-.01	-.01	.01
HS Confidence Social	.05	-.04	-.08	-.05	-.07	-.05	.01	-.01	-.01	-.01	.01	-.02
HS Depression	.35***	.33***	.28***	.34***	.47**	.31*	.34**	.30**	.12*	.37***	.36***	.27***
2 Substance Use												
Drank Beer	-.03	-.20	-.23*	.03	-.13	-.05	.06	-.18	-.01	-.02*	-.05	-.04
Drank Liquor	.00	.10	.25*	.08	.19	.25	.07	.20	.31	.03	.04	.09**
Smoke Cigarette	.15**	-.01	.01	.17**	.19	-.01	.22**	.05	-.07	.16**	.14***	.12***
3 Religiosity												
Attended a service	-.10**	.02	.02	-.11	-.35**	-.13*	-.08	-.22	-.04	-.08**	-.03	-.04
Hours: praying	-.14**	.03	-.02	-.04	-.04	-.04	-.06	-.13	-.12	-.06**	-.01	-.02
Self rate: spirituality	-.25**	-.35***	-.16*	-.25***	-.06	-.26	-.25**	-.15*	-.07	-.19**	-.11***	-.01
4 Campus climate												
5Academic Life	.06	.04	.02	.05	.11*	.21*	.23**	.07	.24*	.12**	.08**	.04

College GPA	-.12**	-.07	-.01	-.03	-.10	-.06	-.01	-.11	-.06	-.03*	-.07**	-.01
Hours: study	.06	.13*	.16***	.05	-.14	-.16	.11*	.11	.08*	.06**	.06**	.05*
Fail to complete homework on time	-.07*	-.21**	-.16**	.13**	.15	.21	.17**	.25	.10	.15**	.10***	.09**
Missed the class	.08**	.05	.07	.17**	.09	.16	.12**	.30	.17	.09*	.06**	.06*
6 Social Life												
Hours: socializing	-.14**	-.17**	-.13*	-.03	-.15	-.12	-.05	-.11	-.08	-.10**	-.03	.01
Hours: Partying	-.07*	-.17*	-.07	-.01	-.02	-.02	-.03	-.12*	-.05	-.06**	-.08**	-.05
Satisfaction with Campus social	-.16**	-.09	.04	-.19	.04	.04	-.17	.13	.01	-.17**	-.10***	-.02
7 Self-concept												
Self-confidence: intellectual	-.33***	-.20**	-.21**	-.37***	-.10*	-.12*	-.41**	-.27*	-.39*	-.31***	-.08**	-.08**
Self-confidence: Social	-.44***	-.24***	-.25***	-.47***	-.08	-.02	-.44**	.26	.03	-.44***	-.29***	-.28***
Self-confidence: competitiveness	-.13**	-.01	.01	-.24*	-.07	-.4.0	-.16	.16	.01	-.15**	-.03	-.03
8 Satisfaction with overall college experiences												
	-.29***	-.19**	-.19**	-.23**	-.10	-.11	-.21**	-.20	-.06	-.24**	-.14***	-.14***

* $p < .05$, ** $p < .01$, *** $p < .001$

Comparing the Predictors of Feelings of Depression: Equality of Beta Coefficients

In order to determine if the variables that significantly predict feelings of depression for Asian American students differed from the variables that predict feelings of depression for other racial groups, the equality of the beta coefficients was tested by using t-tests between unstandardized betas of each racial group. Table 4.11 presents the predictive power of all independent variables after all eight regression blocks were entered into the model: both standardized and unstandardized beta coefficients for all racial groups are shown. Results of t-tests between unstandardized beta coefficients across each racial group are shown by letters in parenthesis: for example, hours spent on studying/homework (W) under the Asian American column indicates that difference of unstandardized beta coefficients on hours spent on studying/homework is significant between Asian American group and White group.

Final betas indicated that feeling depressed in high school, drinking beer, drinking liquor, self-rated spirituality, hours spent on studying/homework, failing to complete homework on time, hours spent on socializing, self-rating on self-confidence on intellectual ability, self-rating on self-confidence on social, and satisfaction with overall college experiences were statistically significant predictors for Asian American students in the regression analysis. Among these variables, t-tests of unstandardized beta coefficients show that attending a religious service, drinking liquor, hours spent on studying/homework, and failing to complete homework on time were significantly different from one another

across racial groups. For Asian American students, drinking wine or liquor was a stronger predictor of feelings of depression than for White students. For African American college students, attending a religious service had a strong relationship with feelings of depression compared to their Asian American and White counterparts. Hours spent on studying/homework had stronger relationship with feelings of depression for Asian American college students compared to African American students and White students. Interestingly, failing to complete homework on time was a negative predictor of feelings of depression for Asian American college students while it was a positive predictor of feelings of depression for Latino students and White students. Asian American students who fail to complete their homework on time feel less depressed whereas Latino students and White students who do not finish homework on time are more likely to feel depressed. This variable also was a stronger predictor for Asian American students compared to Latino and Whites students.

Table 4.11 Equality of Unstandardized Beta Coefficient Testing

Block	Asian American (A) (N=951)		African American (B) (N=524)		Latino (L) (N=344)		White (W) (N=1,000)	
	Standardized β	Un- standardized β	Standardized β	Un- standardized β	Standardized β	Un- standardized β	Standardized β	Un- standardized β
I.Characteristics								
Gender	.02	.06	.19	-.14	-.13	-.42	.10***	.27
Income	.04	.02	.09	.05	-.15	-.02	-.01	-.01
Father's Education	-.08	-.05	.31	.20	.13	.08	.01	.01
Mother's Education	.06	.04	.32	.21	-.07	-.03	-.05*	-.04
Parents' Marital Status	-.03	-.86	.00	-.01	.09	.23	.04	.11
Native English Citizenship	-.02	-.05	-.10	-.10	.10	.27	.01	.10
	-.01	-.03	.06	.07	-.07	-.19	-.01	-.06
Pre-college								
HS Drank Beer	-.02	-.05	-.02	-.03	-.02	-.04	-.07	-.14
HS Attended a service	-.05	-.09	-.03	-.05	-.05	-.04	-.02	-.02

HS Spirituality	.04	.05	.08	.09	-.05	-.05	.03	.04
HS GPA	-.03	-.01	-.01	-.02	-.01	-.02	-.01	-.01
HS Confidence: Intellectual	-.11	-.17	-.04	-.03	-.02	-.02	.01	.01
HS Confidence: Social	-.08	-.12	-.05	-.04	-.01	-.03	-.02	-.02
HS Depression	.28***	.60	.31*	.21	.12*	.25	.27***	.57
2 Substance Use								
Drank Beer	-.23*	-.47	-.05	-.07	-.01	-.02	-.04	-.07
Drank Liquor	.25*	.53(W)	.25	.22	.31	.54	.09**	.19(A)
Smoke Cigarette	.01	.02	-.01	-.02	-.07	-.18	.12***	.31
3 Religiosity								
Attended a service	.02	.04 (B)	-.13*	-.14(A,W)	-.04	.05	-.04	-.07(B)
Hours: praying	-.02	-.02	-.04	-.05	-.12	-.12	-.02	-.02
Self rate: spirituality	-.16*	-.21	-.26	.29	-.07	-.22	-.01	-.01
4 Campus climate								
	.02	.02	.21*	.24	.24*	.16	.04	.03
5 Academic Life								
College GPA	-.01	-.01	-.06	-.7	-.06	-.05	-.01	-.01
Hours: study	.16***	.15(L,W)	-.16	-.21	.08*	.06(A)	.05*	.05(A)
Fail to complete homework on time	-.16**	-.40 (L,W)	.21	.23	.10	.21(A)	.09**	.19(A)
Missed the class	.07	.18	.16	.15	.17	.41	.06*	.17
6 Social Life								
Hours: socializing	-.13*	-.13	-.12	-.09	-.08	-.04	.01	.01
Hours: Partying	-.07	-.07	-.02	.02	-.05	-.16	-.05	-.04
Satisfaction with campus social	.04	.05	.04	.04	.01	-.03	-.02	-.03
7 Self-concept								
Self-confidence: intellectual	-.21**	-.35	-.12*	-.10	-.39*	-.59	-.08**	-.13
Self-confidence: Social	-.25***	-.36	-.02	-.03	.03	.04	-.28***	-.40
Competitiveness	.01	.01	-.40	-.32	.01	-.05	-.03	-.04
8 Satisfaction with overall college experiences								
	-.19**	-.34	-1.1	-1.03	-.06	-.05	-.14***	-.23

* $p < .05$, ** $p < .01$, *** $p < .001$ (A=Asian American, B=African American, L=Latino, W=White)

Summary

The chapter four exhibited a summary of detailed statistical findings of Asian American college students' feelings of depression compared to other racial groups that are analyzed in this study. Findings resulted from the descriptive statistics, cross-tabulations, one-way ANOVA, and multiple regression analysis.

Based on descriptive analysis, the rate of feeling depressed among Asian American college students varied by gender, social class, and college experiences. Asian American students who are female, from low SES backgrounds, academically less achieved, frequent substance users, less religiously involved, and less satisfied with overall college experiences show higher levels of feeling depressed. For the rate of feeling depressed across racial groups, Asian American college students showed the highest rate of feeling depressed while White students reported the lowest rate of feeling depressed.

Each racial group's regression models accounted for a different amount of variance in the scores of feeling depressed (e.g., 41% for Asian Americans, 20% for African Americans, 25% for Latinos, and 35% for Whites).

For Asian American college students, feeling depressed in high school, drinking beer, drinking liquor, spirituality, hours spent per week on studying and homework, failing to complete homework on time, hours spent per week on socializing, self rated self-confidence in intellectual ability and social ability, and satisfaction with overall college experiences were significant predictors of feelings of depression. Feeling depressed in high school, attending a religious service, campus climate, and self rated self-confidence in intellectual ability predicted

African American college students' feelings of depression. Feeling depressed in high school, campus climate, hours spent on studying and homework, and self-rated self-confidence in intellectual ability were significant predictors for Latino college students' feelings of depression. Lastly, for White students, gender, mother's education, feeling depressed in high school, drinking liquor, drinking cigarettes, hours spent on studying and homework, failing to complete homework on time, missing a class, self-rated self-confidence in intellectual and social ability, and satisfaction with college experiences were factors associated with feelings of depression. Feeling depressed in high school and self-rated self-confidence in intellectual ability were significant predictors of feelings of depression for all four racial groups. Among significant predictors, the impact of drinking liquor, attending a religious service, hours spent on studying and homework, and failing to complete homework on time were significantly different across racial groups.

In the next chapter, I will discuss the major findings presented in this chapter and provide future implications and recommendations for research and practices.

CHAPTER FIVE: DISCUSSION

This chapter will discuss the results from Chapter four in greater detail, providing interpretations and context for findings followed by limitations of the study, directions for future research, implications for practice, and conclusion.

The purpose of this study is to explore the relationship between various collegiate experiences and perceived feelings of depression among Asian American college students and other racial groups. The following research questions guided the study:

- 1) How does the rate of feeling depressed among Asian American college students vary by gender, social class, and college experiences (e.g., substance use, religiosity, academic performance, and satisfaction with college) during college?
- 2) After controlling for students' characteristics, what college environment factors and collegiate experiences predict feelings of depression among Asian American college students?
- 3) How does the rate of feeling depressed among Asian American college students differ from other racial groups (e.g., White, African American, and Latino students), and do predictors of feeling depressed among Asian American college students differ from other racial groups?

Summary of Findings

Descriptive Analysis

In order to develop the descriptive portrait of Asian American college

students and other racial group of students, data was analyzed using frequencies, means, and standard deviations. Asian American student represented 8.1% (951) of the 10,710 total respondents from the both TFS 2008 and CSS 2012 of the Higher Education Research Institute (HERI) Data. Other racial groups being examined consisted of 2.9% (344) African American students, 4.5% (524) Latino students, and 80% (8,900) White students. Over 60% of the entire participants were female with 63.2% for Asian Americans, 65.7% for African Americans, 77.7% for Latinos, and 65.5% for Whites.

In this study, over two-thirds of White, Asian American and Latino students and nearly half of African American students reported drinking beer. In regards of smoking cigarettes, across all racial groups, approximately 20% of all participants reported smoking cigarettes with 17.1%, 15.0%, 20.8%, and 19.0% of Asian American, African American, Latino, and White students smoke cigarettes respectively. In terms of religiosity, Asian American students were the least religious group reporting the lowest religious service attendance, the least hours spent per week on prayers and meditation, and the lowest self-rating on spirituality while African American students were the most religious group: over two-thirds attended a religious service; one-fourth spent more than three hours per week on prayers and meditations; and over half of students rated themselves as spiritual more than average. For the campus climate, African American students reported the highest rate of experiencing discrimination because of race, gender, sexual orientation, or religion, and were more likely to experience the racial tension on campus while White students reported the lowest rate on experiencing discriminations and racial tension on campus. Turning to academic life, White students showed the highest GPA followed by Asian Americans,

Latinos, and African Americans. Similarly, White and Asian American students also reported spending more time on studying and homework than Latino and African American students. In addition, Asian American students completed their assignments on time more frequently than students in other racial groups. In terms of self-concept, Asian American students showed the lowest self confidence in social and intellectual ability while African American students scored the highest self-confidence in both social and intellectual ability. Lastly, for satisfaction with college experiences, over one-fourth of entire students were satisfied with their overall college experiences across all racial groups: White students reported the most satisfied with their overall college experiences followed by Asian American, Latino, and African American students.

Turning to feelings of depression, Asian American student showed the highest rate of feeling depressed followed by African American, Latino, and White students. Similarly, Asian American students showed the lowest self rating in emotional health while White students reported the highest score on emotional health.

Research Question 1: Rate of Feeling Depressed among Asian American Students

In terms of the distribution of feelings of depression within the group of Asian American college students, females felt more depressed than males. Furthermore, Asian American students who reported coming from low SES backgrounds and having low GPAs, high substance use rates, low religiosity, and low satisfaction with college experiences also reported feeling more depressed than their counterparts. The distributions of feelings of depression within the group of Asian American college students observed in this study are consistent with previous

studies on the link between students' college experiences and mental health. These earlier studies have found that female college students are more depressed than their male counterparts (Kessler et al, 2005; ACHA, 2009); that college students who are heavy substance users are more likely to have mental health problems (Cranford, Eisenberg, & Serras, 2009; Weitzman, 2004); that college students' high GPA is associated with depression negatively (Hysenbegasi, Hass, & Rowland, 2005; Turner et al., 2012); and that college student who are more religious are less likely to have mental health issues (Bowen-Reid & Smalls, 2004; Zullig, Ward, & Horn, 2006). However, the finding in this study that Asian American college students with high SES show lower levels of feelings of depression is not consistent with Salami and Walker's (2014) study reporting that high SES is associated with high risk of depression and anxiety among African American college students. This inconsistency between two different studies on different racial groups suggests that SES plays different roles on feelings of depression depending on different racial groups. Because college students' SES is directly related to their family background and parents' education, other associated factors on SES should be considered when interpreting the link between SES and feelings of depression. Therefore, further investigation is necessary to examine how SES plays different roles on feelings of depression across different racial groups of college students.

Research Question 2: Predictors of Feelings of Depression among Asian American College Students

Modeled after Astin's (1993) I-E-O model, a hierarchical multiple regression analysis was performed to identify what college environments and collegiate experiences predict feelings of depression for Asian American college

students.

After controlling for the demographic characteristics and pre-college experiences, among Asian American college students, drinking liquor/ wine and hours spent per week on studying and homework were significant positive predictors of feelings of depression, whereas drinking beer, self-rating on spirituality, failing to complete homework on time, hours spent per week on socializing with friends, self-rating on self-confidence in social ability, self-rating on self-confidence in intellectual ability, and satisfaction with overall college experience were significant negative predictors of feelings of depression. I will discuss the results on each significant variable in the following section.

Substance Use. Although two variables on drinking were significant predictors of feelings of depression, their directions were opposite: Asian American students who drink beer were less likely to feel depressed, whereas wine/liquor drinkers were more likely to experience feelings of depression. Little is currently known about the association between different types of alcohol (e.g., beer, wine, liquor...etc) and depression. One possible explanation for this difference observed between beer drinking students and wine and liquor drinking students is that beer is associated with socializing and leisure activities in college while drinking liquor is linked to serious alcohol consumption. Given the fact that there is no research that looked into the into the association between different types of alcohol and depression, this inconsistency in the direction of association between feelings of depression and drinking alcohol and drinking wine/liquor shows that further investigation is needed to explain this association.

In addition, the positive association observed in this study between drinking

wine/liquor and feelings of depression was consistent with previous research (Iwamoto et al., 2015; and Iwamoto et al., 2011) that Asian American young adults with psychological or depressive symptoms are more likely to consume alcohol than Asian American students who are not distressed. However, it is not clear whether alcohol use affects students' depressive mood or whether feelings of depression makes students drink more alcohol. Thus, further experimental studies on the relationship between drinking alcohol and depression are needed to better understand their predictive power on each other as well as clarification on the type of alcohol.

Religiosity. The finding of self-rated spirituality being a negative predictor of feelings of depression confirms previous studies reporting this association between spirituality and depression among college students (Bowen-Reid & Smalls, 2004; Briggs and Shoffner, 2006; & Zullig, Ward, & Horn, 2006). However, except for Park and Millano's (2010) study on spiritual well-being as a predictor of psychological well-being among Asian American college students, little is known about the link between spirituality and depression in Asian American college students specifically. Thus, further investigation is needed on spirituality as a predictor of depression for Asian American college students. In addition, specific examination on spirituality and religiosity across Asian American sub-groups may provide more insight into understanding Asian Americans college students' spirituality because diverse religious and spiritual backgrounds as well as diverse roots of faith and religious practice are found in different ethnic groups within Asian Americans (Ai et al., 2013). Additionally, the direction of the relationship between religiosity and depressive symptomology is not clear. Specifically, it is unclear whether spirituality

affects students' depressive mood, or whether a student's feelings of depression makes them engage with religiosity. Therefore further studies employing experimental data and research design are needed to understand the directionality of variables.

Academic Life. The finding that college GPA was not a significant predictor of feelings of depression for Asian American college students in this study is inconsistent with those from previous studies on academic performance and depression among college students indicating a negative relationship between GPA and depression (e.g., Andrews & Wilding, 2004; Crocker et al., 2002; DeRoma, Leach, & Leverett, 2009 and; Turner et al., 2012). However, this study aligns with Svanum and Zody's (2001) study that found a weak relationship between academic performance and depressive symptoms. None of these earlier studies investigated Asian American college students specifically. Therefore, further systematic empirical studies on the relationship between depression and academic performance among Asian Americans college students are necessary.

It is interesting that Asian American college students' GPA was not a significant predictor of feelings of depression while hours per week spent on studying and homework was a positive predictor of feelings of depression in this study, considering the value Asian Americans place on education and academic performance (Ying et al., 2004). This finding suggests that Asian American students may be more distressed by the process of studying (e.g. hours spent on studying and homework) than by the result of studying (e.g., academic performance and GPA). This yields further questions: why are Asian American students who spend more time on studying/homework more likely to feel depressed? What happens while they study

and work on assignments? It can be inferred that many Asian American students may experience stress and negative emotions while they study or work on school related work. These negative emotions may derive from emotional exhaustion and pressure to succeed academically to meet their goals as well as their parents' expectations, both of which are influenced by the extreme emphasis on educational attainment among Asian Americans and their families (Haboush, 1991). Furthermore, culturally, many Asian immigrant parents expect high educational attainment, academic achievement, and perfectionism from their children (Wang, 2012) because seeking high educational quality for their children is one of their motivations for immigrating to the U.S (Leong, 2007). Parents' high expectations on academic achievement may affect Asian American students' process of studying and schoolwork, thus making it stressful and negative. In addition, due to the high expectation of some Asian parents that their children will attend highly selective elite universities (e.g., Ivy League schools), Asian American students work extremely hard on their school work and SAT prep before going to college (Byun & Park, 2012). Studying and working hard during K-12 education may affect Asian American students' perception of studying and schoolwork negatively: Asian American adolescents may experience negative emotions and distress while they study in middle and high school, which will directly impact their continued negative emotions during studying in college. For example, Lee and Larson (2000) found that Korean high school seniors experience more negative emotions during schoolwork and studying compared to their White counterparts. Also, in Diener et al.'s (1995) study comparing subjective well-being across various countries, Korean students presented the most negative emotions regarding studying. By contrast, White students reported positive rather than negative

emotions while studying or working on assignments. (Larson & Richards, 1991).

Asian American adolescents' negative experiences and emotions while studying may affect their negative perception and experiences while studying in college.

In addition, Asian American college students' more time spent on studying and homework may impact the time and the quality of their leisure activities or stress coping activities because more time on studying may limit their time to be involved with other fun activities. Limited time for leisure activities due to more time spent on studying might add more stress to students, which may consequently lead to more negative perceptions about studying because students may perceive studying as the main factor of limited time for fun. This ongoing cycle will inevitably increase Asian American students' feelings of depression eventually. In Lee and Larson's (2000) study, Korean students who spent less time in leisure activities reported more negative emotions during studying and schoolwork when compared to their White counterparts who spent more time in leisure activities. Although this study analyzed Asian high school seniors, Asian students' study habits, such as spending more time to study and do homework, led to experiencing more negative emotions while having less time to enjoy leisure activities. This may predict similar patterns among Asian American college students. In addition, given the results of this study, that Asian American students spent fewer hours on socializing and partying than any other racial groups, limited time on leisure activities may have relationship with more time spending on studying. The limited time socializing may yield another interpretation that Asian American spend less time on leisure activities and spend more time on studying which may cause another distress in college as discussed above.

Given that Asian American college students spent more time on studying and

homework compared to other racial groups in this study and that spending more hours on studying is a positive predictor of feelings of depression, further investigation is needed to evaluate more specifics of this particular predictor, including what happens to students while they are studying, why studying may make students feel depressed, and what factors are associated with studying for Asian American college students.

An intriguing finding from this study was that failing to complete homework on time was a significantly negative predictor of feelings of depression for Asian American college students. Although a number of studies have examined the impact of academic achievement on students' mental health for Asian Americans (Bahrassa et al., 2011; Saw, Berenbaum, & Okazaki, 2013; Ying et al., 2001; Cokley & Patel, 2007), these studies have not specifically indicated that homework completion impacts students' mental health. Thus, further investigation on the link between homework and college students' depression or psychological well-being will provide more insight to understand the academic life and mental health for this population. Considering that Asian American students are more stressed with their academic achievement (Ying, Lee, & Tsai, 2004), perhaps completing homework can be a stress inducing activity. However, the link between failing to complete homework on time and feelings of depression needs to be studied further.

Social Life. Although this study found that Asian American students spent less time partying and socializing with friends compared to other racial groups, hours spent per week on socializing with friends was still a significantly negative predictor of feelings of depression in this study: the more students spent time with their friends the less they felt depressed. This directly aligns with studies (e.g., Chao, 2011;

Hefner & Eisenberg, 2009; Solberg & Villareal, 1997; Jenkins et al., 2013; Swenson, Nordstrom, & Hiester, 2008; Wang & Castañeda-Sound, 2008) which have found that positive and frequent social support is associated with positive emotional well-being among college students. Given that most of the current literature on social support and mental health in ethnic minority college students focuses on African American and Latino students, further investigation on the impact of social life on psychological well-being among Asian American students is needed.

The finding from this study that Asian American students are less likely to spend time on socializing is consistent with that of previous studies which found that social support is less attempted by Asian Americans compared to other racial groups (Hashimoto, Imada, & Kitayama, 2007; Kim, Sherman, & Taylor, 2008; Taylor et al, 2004) and that Asians perceive social support as less favorable compared to Whites (Hashimoto, Imada, & Kitayama, 2007). Further investigation on background rational and cultural background related to social life among Asian Americans in general and Asian American college students in particular will provide more in-depth understanding and insight on this population.

Self-concept. Extensive research has demonstrated a strong positive relationship between self-confidence and mental health and that positive self-esteem/ self-concept is associated with less psychological distress (Abramson, Metalsky, & Alloy, 1989; Crandall, 1973; Pelham & Swann, 1989). This study's findings on a negative relationship between self-confidence on intellectual ability/ social ability and feelings of depression is also consistent with previous studies suggesting that college students with higher level of self-confidence are less likely to feel depressed. However, except for Lam (2007) and Park and Millora's (2010) studies, research on

the impact of self-concept or self-confidence on depression and mental health issues among Asian American college students is still under-developed. This suggests more investigations on the association between self-concept and depression among Asian American college students are necessary.

While Asian American students' self-confidence on intellectual ability and social ability are significant predictors of feelings of depression, Asian American students reported the lowest scores on all three variables of self-concept: intellectual ability, self-rated self-confidence on social ability, and self-rated competitiveness among all other racial groups in this study. It is also worth noting that Asian Americans reported the lowest scores in all self-concept variables compared to all other racial groups in this study because this finding is contrary to the concept of the "model minority" myth which argues that Asian Americans are high achievers with great success in many areas. In addition, there is an interesting discrepancy between Asian American college students' lowest scores on self-confidence on intellectual ability and their higher GPA compared to other racial groups in this study: Asian American students reported the lowest self-confidence on their intellectual ability in spite of having relatively higher GPAs. An interesting question is whether Asian American students view their high GPA as positive "high" or not: a high GPA may make students distressed due to the pressure to maintain either on the same level or higher level of accomplishment. Considering that Asian Americans are more self-critical than any other racial groups and they have higher standards and expectations on self (Kim et al., 1999), low self-esteem on academic ability may be related to their personal expectations: it is hard to be satisfied with oneself due to high expectations. Another explanation can be that in the Asian culture it is more acceptable and valued

to view oneself as not being good enough, which is in line with the highly valued virtue of modesty in Asian culture (Kim et al., 1999). This cultural value of modesty may play a significant role on their humble self-concept resulting in low self-esteem. Similarly, it is inferred that Asian Americans may view their families as being less satisfied with their performances despite their high accomplishments due to cultural value of modesty: Asian parents may be more reluctant to recognize or praise their children's accomplishment in order to be humble. Lack of recognition and validation from their family may contribute to Asian American students' low self-esteem. Another explanation on some Asian American students' low self-esteem is their minority status as an ethnic minority. It is inferred that as being ethnic minorities in the U.S., Asian American students' internalized and externalized racism (Crawley, Ahn, & Winkleby, 2008; Hwang & Goto, 2008) and experiences of negative campus climate may be a significant impact on their low self-esteem. This interpretation also suggests another investigation on a relationship between Asian American college students' self esteem and campus climate.

In conclusion, further studies on factors, background, or characteristics associated with lower scores on self-concept among Asian American college students are necessary to understand this population better. The findings of lowest self-concept and the high GPA among Asian American students suggests the need for more extensive research on the link between low self-concept on intellectual ability and academic performance among Asian American college students. More in depth studies on particular cultural background and rationale on the relationship between low self-concept on intellectual ability and high academic performance will shed more light and details on this population.

Satisfaction with College. The finding that satisfaction with overall college experience was a negative predictor of feelings of depression in this study confirms previous studies reporting this relationship between depression and life satisfaction among college students (Jenkins et al., 2013 and; Mahmoud et al., 2012). However, these previous studies used general life satisfaction, not specifically satisfaction with college experiences. Given that there are only limited number of studies on relationship between satisfaction with college life/ experiences and students' mental health (Brackette, 2006 & Abdullatif, 1992), further investigation on the association between college satisfaction and depression/ psychological well-being among Asian American college students is necessary. In addition, due to other related factors impacting students' satisfaction with college experiences/ life, examining factors associated with college satisfaction for Asian American students will provide insight to better understand Asian American students' college life.

Lastly, the research design and data analysis were guided by the Input-Environment-Output Model (Astin, 1993), which provides a framework to examine the factors impacting Asian American college students' perceived feelings of depression. The I-E-O model explored two time points of this study: pre-environment input variables (students' characteristics), and post-environment outcome variable (feelings of depression) to measure the effects of the college environment (multiple factors of college experiences) on selected outcomes (feelings of depression) while controlling for students' background variables (input). The I-E-O Model structured and explained how diverse college environments and collegiate experiences were associated with feelings of

depression among Asian American college students compared to other racial groups. In addition, this study employed Chandler et al's (1992) Holistic Wellness Model to explore how different dimensions (e.g., intellectual, physical, spiritual, occupational, emotional, and social of wellness are interrelated and affect one another). Findings of this study are consistent with the Holistic Wellness Model as each dimension of this study such as substance use, spirituality, academic life, social life, and emotional wellness were interrelated and affected one another. Furthermore, multiple factors of this study were associated with emotional wellness and feelings of depression. Therefore, the Holistic Wellness Model was useful for explaining the association among multiple college experiences and feelings of depression of this study.

Research Question 3

Rate of Feelings of Depression across Racial Groups. Performing a one-way ANOVA found that the rate of feelings of depression differed significantly across racial groups. Post hoc tests showed that Asian American college students reported higher rate of feelings of depression than African American, Latino, and White students. The highest rate of feelings of depression among Asian American college students in this study confirms previous studies reporting Asian Americans' higher level of depression compared to other racial groups (Aldwin & Greenberger, 1987; Kinzie, Ryals, Cottington, & McDermott, 1973; Marsella, Kinzie, & Gordon, 1973; Okazaki, 1997; Louie, 2003; Zhou, Siu, & Xin, 2009). Although many researchers have explored factors related to Asian Americans' high rate of depression (e.g., race related stress, cultural background, and immigration status), further investigation into specific types of stressors or

characteristics related to Asian American college students' depression is necessary to get a deeper understanding of particular factors or backgrounds that can predict why Asian American college students appear to be the most depressed racial group.

Predictors of Feelings of Depression across Racial Groups. A similar hierarchical multiple regression model was conducted for each of racial groups under study to identify significant predictors of feelings of depression African American, Latino, and White students.

For African American college students, feeling depressed in high school and campus climate were significant positive predictors of feelings of depression in college, while attending religious services and self-rated self-confidence on intellectual ability were significant negative predictors of feelings of depression. Attending to a religious service was a significant predictor of feelings of depression only for African American students, and African American students attended religious services more frequently than other racial groups in this study. These findings align with previous studies indicating that religiosity is strongly associated with mental health among African Americans (Lesniak et al., 2006; Jang et al., 2006), and that African Americans are the most actively religious and spiritual racial group (Fisher et al., 2014). However, further investigation on African American college students' spirituality and their religious activities during college related to their depression and mental health issues should be performed for in-depth understanding of unique cultural factors related their religiosity and spirituality. Spirituality and active involvement with religious group have a positive impact on African American students' experiences on

campus climate (Brown, Morning & Watkins, 2005). Therefore, exploring the role of spirituality and religious activities on campus climate among ethnic minority group will provide useful information or insight to understand students.

For Latino college students, feeling depressed in high school, campus climate, and hours spent per week on studying and homework were significant positive predictors of feelings of depression, while self-rated self-confidence on intellectual ability was a significant negative predictor of feelings of depression. Campus climate was a significant positive predictor of feelings of depression for Latino and African American students, but not for Asian American or White students. This finding reflects the result of this study that African American and Latino students experienced race related discriminations and negative campus climate more frequently than Asian American and White students, which is somewhat surprising due to Cress and Ikeda's (2003) finding on campus climate as a significant predictor of depression for Asian American college students. A number of studies on campus climate have confirmed African American and Latino students' experiences of campus climate and the impact of campus climate on their academic outcomes, involvement, and adjustment (e.g., Brown, Morning, & Watkins, 2004; Brown, Morning, & Watkins, 2005; Cabrera, et al., 1999; Hurtado, 1994; Smedley, Myers, and Harrell, 1993; Solórzano, Ceja, & Yosso, 2000). However, there has been little research examining the relationship between campus climate and depression among African American or Latino college students. This suggests that further investigation on the link between depression and campus climate among this population is necessary.

Furthermore, gender, feeling depressed in high school, smoking cigarettes,

hours spent per week on studying and homework, failing to complete assignments on time, and missing class all were significant positive predictors of feelings of depression. Mother's education, self-rated self-confidence in intellectual ability, self-rated self-confidence in social ability, and satisfaction with overall college experiences were significant negative predictors of depression for White college students. For the mother's education level variable, Whites were the only group reporting a significant negative association between mother's education and feelings of depression. This finding is consistent with previous research (Park, Fuhrer, & Quesnel-Vallée, 2013) indicating that young adults of mothers with less than secondary school education had higher levels of major depressive episodes while paternal education was not associated with depression. It is interesting that only mother's education level was associated with White students' feelings of depression whereas father's education did not predict feelings of depression. It is inferred that mothers are more likely to play a larger role in educating their children, so that highly educated mothers' learned parenting skills or coping skills may influence their young adult children ability to cope with psychological distress better. In other words, mother's education level may play an indirect role in impacting their college aged children's coping skills and stress management, which will ultimately affect their children's feelings of depression. In addition, mother's education level is directly related to the family's socio-economic status, which is associated with mental health (Salami & Walker, 2014). This finding suggests the need for further studies on the impact of mother's education level on college students' feelings of depression across racial groups. In addition, further investigation is needed on the role of mothers on their young adult children's mental health considering the significance of mother's

education as a predictor of feelings of depression in this study.

Overall, for all four racial groups, among significant predictors, the impact of drinking liquor, attending a religious service, hours spent on studying and homework, and failing to complete homework on time were significantly different across racial groups. This finding further supports the need to research the predictive power of variables as predictors of feelings of depression for each racial group considering that the impact of collegiate experiences and college environments on students' feelings of depression is different across different racial groups.

Limitations

Although this study provides exploratory data regarding the multiple college environmental factors and collegiate experiences associated with feelings of depression among Asian American students and other racial groups on campus, the study also has several limitations.

First, the representativeness of the study sample has some limitations. Although this study used a large national longitudinal dataset, the data is not fully representative of all Asian American college students as well as students from other racial groups. The final sample used in this study consisted of 10,710 students who completed both the 2008 TFS and the 2012 CSS. However, the sample of this study is skewed towards White students (80.0%) and includes only a very small percentage of students of color: 8.1% of Asian American, 2.9% of African American, and 4.5% of Latino students. Thus, of the 10,710 students in the study, only 951 Asian American, 524 African American, 344 Latino, and a randomly selected sub-sample of 1,000 White students were analyzed to make between group comparisons meaningful. Although the number of Asian American students and White students can be

considered equal (e.g., 951 and 1,000) for between group comparisons, the number of African American (N=524) and Latino (N=344) students are too low to be considered representative of these racial groups compared to their Asian American and White counterparts. Thus, there is a limitation on the sample size of each racial group and the validity of between group comparisons due to the sample size.

Second, the findings of the study may not be widely applicable to students at different institutions from different institution types and regions. The 98 institutions used in this study do not capture all types of institutions of higher education in the U.S. Furthermore, this study did not control for institutional variables such as type, size, or the racial diversity of the institution. This limitation should be considered when interpreting the data.

Third, this study did not capture differences in subpopulations of Asian American students because the study does not disaggregate Asian American students by ethnic group, of which there are approximately 50 with their own cultures, languages, and backgrounds (Das, 2010). In addition, in terms of subpopulations of Asian American students, no distinctions were made between Asian-Americans born in the U.S. and Asian-Americans born outside of the U.S., as well as Asian international students in this study. Considering the different cultural background and perception of mental health between second generation Asian American and recent immigrants/ international students (Gu, 2007; Tang, 2002), this study does not capture these differences. Therefore, this limitation should be considered when interpreting the data.

Fourth, the present study used secondary data analysis with CIRP data, which was originally planned and collected for a purpose that is different from the purpose

and research questions of this study. The variables that I included for this study are based on the available variables within the CIRP dataset. Thus, questions included for this study may not have sufficiently reflected the unique college environments and collegiate experiences among Asian American students and students from other racial groups. Therefore, variable constrictions should be considered as a limitation.

Fifth, depression is a subjective scale that cannot be fully measured objectively. Thus the interpretation of students' reported depression is limited. In addition to the limitation of self-reported feelings of depression, the instruments used within this study were also limiting. To measure feelings of depression, I included self-reported perceived feelings of depression by asking "Did you feel depressed?" with the choices of "not at all, occasionally, and frequently" and self-rated emotional health. Although these two variables present students' perceived feelings of depression, whether these two items are sufficient enough to capture student's self-reported perceived feelings of depression is questionable. In addition, the Cronbach's alpha for this combined variable was .64. Although some researchers argue that a Cronbach's alpha between .6 and .7 is considered acceptable (George and Mallery, 2003), the value of .64 is still considered low. Given the fact that the reliability of feelings of depression variable is relatively low, the accurate measurement of feelings of depression is limited and this measurement limitation should be considered when interpreting the findings of this study.

Sixth, although there are unique depression symptoms found among the Asian American population such as somatic symptoms and chronic pains (Arnault & Kim, 2008; Yang & WonPat-Borja, 2007), this study did not capture these unique symptoms because the study only explored perceived feelings of depression due to

the limitation of the dataset.

Seventh, CIRP surveys are based on students self-reports, which may impact the accuracy of the data collected depending on students' various conditions of intellectual abilities and emotional state when completing the surveys. Nevertheless, self-report measures have advantages such as getting respondents' views directly and obtaining participants' perceptions of the items that a researcher is using.

Lastly, although multiple regression analysis provides a snapshot of predictors of a dependent variable and the predictive value of independent variables, it does not prove cause and effect relationships or directional relationships between dependent and independent variables. Thus, the methodology is limited in its ability to show causal relationships.

Contributions of the Study

Despite its limitations, this study's findings inform current practice and inspire further research. The current study adds to the body of research on Asian American college students and other racial groups in college, and is significant as the study contributes to the literature in student affairs and higher education as well as in counseling and psychology. Given the fact that Asian American students have their own unique cultural background related to diverse college experiences and associated factors of feelings of depression, findings of this study provides insights on the multiple factors related to feelings of depression such as role of religiosity, impact of substance use, and Asian American students' unique academic experiences (e.g., They spent longest hours on studying and homework. Although they reported higher GPAs, Asian American students who spent more time on studying were more likely

to feel depressed, and showed the lowest self-confidence on intellectual ability). Particularly, findings on Asian American college students' unique academic experiences related to feelings of depression provide useful information and insight to individuals who work with this population.

In addition, this study contributes to the limited body of literature on between group comparisons on multiple college environments and collegiate experiences associated with feelings of depression by comparing four different racial groups on campus by elucidating predictors of feelings of depression.

This study will help inform the current practices of student affairs professionals, scholar practitioners, and researchers in their work with Asian American college students, which are a growing and complex constituency. It is important to pay attention to the factors that affect Asian American college students' depression and mental health compared to other racial groups in order to better understand this population and to make corrective changes to programs to better serve the academic, social, and psychological needs of these students. Findings from this study will help faculty members, student affairs professionals, and higher education institutions better understand the unique background and needs among different racial group of students.

Implications for Future Research

Despite its limitations, this study's findings inspire further research. First, it is important to continue exploring various college environments and collegiate experiences as predictors of feelings of depression for Asian American college students and other racial groups, so that in-depth understanding and well-developed knowledge about depression and associated factors will be informed and

educated among researchers. When measuring feelings of depression in future studies, including both students' perceived feelings of depression and instruments inquiring clinical symptoms that capture emotion, mood, physical symptoms, and psychosocial symptoms, and occupational wellness is necessary to measure depression accurately. Research using a broad range of items addressing feelings and behaviors related to depression can more accurately measure depression.

Second, an experimental data analysis set will be useful for providing a more thorough picture of the causal relationships between college experience variables and depression. Analysis of experimental data will allow for investigations into what collegiate experiences factors cause depression, thereby providing insightful knowledge to prevent further development of feelings of depression. In addition, advanced statistical analysis to understand the impact of variables better is recommended. Examining independent variables of this study as mediator or moderator and using latent variable modeling will provide better understanding of the impact of each variable on the dependent variable.

Third, examining a two wave or multi-wave longitudinal data set can be used to explore how college students' rate of feelings of depression change over time and how predictors of feelings of depression change over time. Such a longitudinal analysis will provide understanding about how students' feelings of depression will change while they are exposed in various collegiate experiences and college environments as well as how the impact of various factors on feelings of depression change during each year of college. This will provide better understanding on college students' lives of each year.

Fourth, continued studies on the impact of college environments and

collegiate experiences on feelings of depression among Asian American students by using disaggregated data by ethnic subpopulations are recommended. Asian Americans are culturally and experientially very diverse in terms of degrees of acculturation, cultural values and beliefs, skills and knowledge, spirituality, language spoken at home, SES, and educational background. Therefore, it is vital to understand how each ethnic subgroup of Asian American college students experience feelings of depression, college environments, and campus life differently. In addition, disaggregating data by ethnic group should be applied to further studies on collegiate experiences and feelings of depression among African American and Latino students to capture the unique differences and cultural backgrounds of these groups. It will be another challenge to secure reliable sample size of subpopulations of each racial group for smaller ethnic groups (e.g., American Indian). Thus, constant studies using robust sample sizes of ethnic minority students are necessary.

Fifth, further investigations on between group differences for different racial groups regarding college environments, collegiate experiences, and feelings of depression are recommended. Although a number of studies have examined between group comparisons, most of them have focused on comparisons between two groups (e.g., Asian Americans and non-Asian Americans, African Americans and Whites). The findings of this study illustrate that the rate of feelings of depression, students' college experiences, and predictors of feelings of depression differ across all four racial groups. This suggests that multiple group comparison on feelings of depression, students' experiences on college environments, students' collegiate experiences, and predictors of feelings of depression will provide valuable insights into understanding the college experiences and mental health of different racial groups.

Sixth, future studies on comparison of feelings of depression between different institution types are recommended. Although this study did not capture students' feelings of depression and their collegiate experiences in different types of institutions, the findings of this study indicating that substance use, religiosity, campus climate, academic life, and social life are significant predictors of feelings of depression among Asian American college students suggest that future research comparing religiously affiliated institutions and non-religiously affiliated institutions, two year institutions and four year institutions, women's only colleges and coeducational colleges, private institutions and public institutions, academically elite institutions and non-elite institutions, Asian American serving institutions and predominantly White institutions, and urban institutions and rural institutions. Comparisons between different institution types will help researchers and policy makers better understand the impact of different institution types on minority students' feelings of depression and collegiate experiences.

Lastly, since two variables in academic life (e.g., hours spent per week on studying and homework, failing to complete homework on time) were significant predictors of Asian American college students' feelings of depression, future research needs to examine the impact of study patterns and academic activities on Asian American college students' mental health. As previously discussed, academic performance is strongly related to self-confidence, emotional distress, and suicidal ideation among Asian American college students. Considering that Asian American students in this study reported the highest level of feelings of depression, achieved the highest GPAs, spent the longest hours on studying and homework, and showed the lowest self-confidence on intellectual ability, and considering that two academic life

variables were significant predictors of feelings of depression, further investigations on Asian American students' study patterns and academic activities, links between low self-confidence on intellectual ability and high GPA, links between study hours and low self-confidence on intellectual ability, and the impact of academic activities on depression are recommended. These suggested studies will provide in-depth understanding on insightful interpretations and new perspectives on the model minority myth that Asian Americans are smart, confident, highly achieving, and less problematic.

Implications for Practice

This study identified college environments and collegiate experiences associated with feelings of depression among Asian American college students and other racial groups (e.g., African American, Latino, and White students). Findings of this study suggest several meaningful implications for practice for professionals working with college students.

First, educating faculty and staff in having a better understanding of Asian American college students' feelings of depression and associated factors is important. Although the "model minority myth" perpetuates the belief that Asian Americans do not need mental health services, this study found that Asian American college students reported the highest level of feelings of depression among all racial groups. In addition, Asian Americans are a less frequently examined racial group compared to other racial groups on college campuses, especially in the area of depression (Lam, Pepper, & Ryabchenko, 2004), and they are less likely to seek help for mental or emotional struggles than other racial groups despite having higher levels of mental distress (Zhou, Siu, & Xin, 2009). All these findings suggest that the seriousness of

Asian American college students' depression and needs for help are easy to be ignored by professors, advisors, and university staff members. Therefore, professors, advisors, and student affairs professionals who work with Asian American students need to be well aware of the higher rate of feelings of depression among Asian American students and the fact that Asian American students tend to hesitate to reveal their distress, so that they can notice when their Asian American students are in distress and need help. Being aware of associated factors with feelings of depression among Asian American students is needed for faculty and staff so that they can refer their students to appropriate helping professionals. For example, if Asian American student's feelings of depression is associated with academic performance, they should be referred to their academic advisor, professors, or an academic support/assistance division, while a student with social isolation issues is recommended to be referred to student organizations or residence life. Knowing about issues and factors related to depression is helpful for faculty and staff to direct students to the appropriate campus services.

Second, educating faculty and staff in having in-depth understanding about the cultural background of Asian American students is recommended to understand Asian American students' emotions and behaviours related to feelings of depression. Asian American students are often reluctant to seek out help in general due to cultural inhibitions about seeking mental health services (Atkinson & Gim, 1989), and they tend to keep their feelings or distress inside and not share them with others (Uba, 1994). Due to the tendency to value social harmony and hide uncomfortable feelings (Henkin, 1985), Asian American students who are stressed or depressed may be internalizing their feelings rather than expressing them to others. In addition, given

the fact that Asian Americans are more likely to seek psychological support from family and friends over professional mental health services (Yeh & Wang, 2000), it is recommended for college counselors who work with Asian American students to collaborate with student organization leaders and student affairs administrator to discover and notice the symptoms or signs of depression. Understanding Asian American students' unique cultural background is necessary to interpret their behaviors and to capture their emotional distress.

Third, mental health professionals, faculty, and staffs on campus need to know that the approach to and interpretation of depression of students should be differentiated according to students' ethnic/racial background. This study indicated that each racial group reported different predictors of feelings of depression, although there were also common predictors of feelings of depression (e.g., feeling depressed in high school and self-rated self-confidence on intellectual ability). Because associated factors of feelings of depression are different across racial groups, faculty, staff, and college counselors need to consider specific factors related to feelings of depression according to their ethnic/racial background.

Fourth, for mental health service professionals on campus, providing outreach services and health education/prevention on campus will be helpful for students in distress. Schwartz (2006) reported that fewer than 20% of college students who were suicidal received counseling and over 80% of college students who committed suicide never sought counseling. Thus, it is vital to help students get connected to campus counseling services and make mental health resources available for students on campus. To make mental health resources more accessible, it is recommended that self assessments of depression or depression resilience be made available online so

that students can easily access to those resources. Having 24/7 on-call services or hot line phone services available will be helpful for students who need immediate assistance. The phone services would be helpful especially for Asian American students who hesitate to visit counseling services physically.

Fifth, students from all racial groups in this study reported a strong association between substance use and feelings of depression in this study. In addition, the trends show that current college students are creative in inventing new forms of substances (White & Rabiner, 2012). Therefore, there should be educational sessions or training resources to educate students on the negative impact of substance use on physical health and mental health in college and in life. Setting strict rules of alcohol consumption at campus events, residence halls, and fraternity/ sorority houses can be a strategy to prevent heavy drinking habits. Setting smoking area restrictions or smoke detectors can be strategy to prevent heavy smoking which is related to students' depression.

Sixth, this study reported a strong association between feelings of depression and academic life specially among Asian American students. Thus, close observation of students' academic performance by academic advisors and professors to learn about students' academic standing is important to predict and prevent depression. Because hours spent per week on studying was a significant predictor of feelings of depression among Asian American students, Latino students, and White students, providing academic skills workshops such as "Study smart, not harder" or "Effective study skills" and time management skills workshop by academic support division of student affairs will be beneficial to students to reduce their study time, which will be associated with less stress and less depression eventually. In addition, appropriate

referrals should be made when necessary to help depressed students help students to prevent or overcome feelings of depression.

Seventh, as this study reported that African American and Latino students in particular frequently experienced negative campus climate and that campus climate was a significant predictor of feelings of depression for African American and Latino students, it is important for faculty, staff, and higher education institutions to make efforts to reduce any factors associated with negative campus climate. Considering current trends of changing demographics of higher education, it is important to create and apply programs promoting positive campus climates. Eliminating prejudicial actions or attitudes, providing educational seminars or workshops on diversity and inclusion on campus, more investments on campus organizations that promote cultural diversity and inclusion are examples of creating a positive campus climate for students.

Eighth, given the fact that self-confidence was a significant negative predictor of feelings of depression for all racial groups in this study, helping students to develop positive self-image, self-esteem, and self-confidence will prevent depression. As Wang (2013) demonstrated, self-confidence is key to developing psychological resilience, and well developed self-confidence will help depressed students to overcome distress by developing their resilience. Thus, it is vital for counseling services, academic support centers, residence life, or new student transition teams to develop and provide educational workshops, special retreats, or team work opportunities to build students' self-confidence and self-esteem to students.

Last but not least, this study found that satisfaction with overall college experience negatively predicted Asian American and White students' feelings of

depression. Satisfaction with college does not account for only one factor, but various experiences during college which make students' general impression about their college experiences either negative or positive. Therefore, every individual working for college students, from the cook at the dining hall to the president of the university, is responsible for students' satisfaction with their overall college experience. In conclusion, higher education professionals need to make efforts to improve college environments and students' collegiate experiences so that students are more satisfied with their college experiences, which will be associated eventually with less feelings of depression.

Conclusion

The present study examined the relationship between various college environments, collegiate experiences, and feelings of depression among Asian American college students in comparison to other racial groups. Findings suggest that further investigations on collegiate experiences and mental health issues among subpopulations of Asian American college students and other racial groups are necessary to understand college students' diverse experiences and well-being on campus.

As mental health continues to be one of the major issues on college campuses, and psychological well-being is one of the most important factors affecting the quality of life of college students, institutions play a key role in supporting students' psychological well-being and holistic wellness. Furthermore, along with growing racial/ethnic diversity in higher education, college campuses have become important in light of understanding and addressing unique characteristics and experiences of diverse students. Therefore, higher education institutions have a responsibility to

address the needs and concerns of all students, from different racial backgrounds and students with mental health issues. I hope that the findings of this study will assist professors, advisors, and student affairs professional better meet the needs of Asian American college students and students of other racial groups who feel depressed and who need help.

APPENDICES

Appendix 1. Variables and Coding Schema

Variable	Question	Coding	Recoding Scheme
Gender	Your sex	1=Male 2=Female	0=male 1=female
SES	<p>What is your best estimate of your parents' total income last year? Consider income from all sources before taxes.</p> <p>What is the highest level of formal education obtained by your parents?</p>	<p>1=Less than \$15,000 2=\$15,000 to \$24,999 3=\$25,000 to \$39,999 4=\$40,000 to \$59,999 5=\$60,000 to \$99,999 6=\$100,000 to \$199,999 7=\$200,000 or more</p> <p>1= Grammar school or less 2= Some high school 3= High school graduate 4= Some college 5= College degree 6= Some graduate school 7= Graduate degree</p>	<p>Continuous index from 1-7, high value indicates higher parental income</p> <p>Continuous index from 1-7, high value indicates higher levels of parental education</p> <p>*New variable created, SES, combining parental income, father's education, and mother's education</p>
Parental marital status	Are your parents alive? Divorced?	<p>1=One or both deceased 2=Both alive, divorced or living apart 3=Both live together</p>	
Native English speaker	Is English your native language?	<p>1 = No 2 = Yes</p>	
High School Substance Use	I drank beer.	<p>1=Not at all 2=Occasionally 3=Frequently</p>	

High School Religiosity & Spirituality	Self-rate on spirituality	1=Lowest 10% 2=Below average 3=Average 4=Above average 5=Highest 10%	
High School GPA	What was your average grade in high school?	1 = D 2 = C 3 = C+ 4 = B- 5 = B 6 = B+ 7 = A- 8 = A or A+	
High School Social Life	Hours per week spent on socializing.	1=None 2=Less than 1 hour 3=1 to 2 hrs 4=3 to 5 hrs 5=6 to 10 hrs 6=11 to 15 hrs 7=16 to 20 hrs 8=Over 20 hrs	
High School Self-concept	Self rate on intellectual self-confidence Self rate on social self-confidence	1=Lowest 10% 2=Below average 3=Average 4=Above average 5=Highest 10%	
Feelings of Depression in High School	I felt depressed in the past year	1=Not at all 2=Occasionally 3=Frequently	
Variable	Question	Coding	Recoding Scheme
Substance Use	Please indicate how often you engaged in each during the past year. -Drank beer. -Drank wine or liquor. -Smoked cigarettes	1=Not at all 2=Occasionally 3=Frequently	
Religiosity	Please indicate how often you engaged in each during the past	1=Not at all 2=Occasionally 3=Frequently	

	<p>year:</p> <p>Attended a religious service</p> <p>During the past year, how much time did you spend during a typical week doing the following activities? -Prayer</p> <p>Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.</p> <p>Self-rate Spirituality</p>	<p>1=None 2=Less than 1 3=1 to 2 hrs 4=3 to 5 hrs 5=6 to 10 hrs 6=11 to 15 hrs 7=16 to 20 hrs 8=Over 20 hrs</p> <p>1=Lowest 10% 2=Below average 3=Average 4=Above average 5=Highest 10%</p>	
<p>Campus Climate</p>	<p>Please indicate the extent to which you agree or disagree with the following statements:</p> <p>I have felt discriminated against at this institution because of my race/ethnicity, gender, sexual orientation, or religious affiliation</p> <p>In class, I have heard faculty express stereotypes based on race/ethnicity, gender, sexual orientation, or religious affiliation.</p>	<p>1=Disagree strongly 2=Disagree 3=Agree 4=Agree strongly</p>	<p>Recoded: 1=Agree strongly 2=Agree 3=Disagree 4=Disagree strongly After combining three variables: 3=minimum, 12=maximum Cronbach's alpha=.69</p>

	There is a lot of racial tension on this campus.		
Academic Life	<p>During the past year, how much time did you spend during a typical week doing the following activities?:</p> <p>-Studying/homework</p> <p>-How often did you fail to complete assignments on time?</p> <p>-How often did you miss the class for other reason than work?</p> <p>What is the overall average grade you received during your college career?</p>	<p>1=None 2=Less than 1 3=1 to 2 hrs 4=3 to 5 hrs</p> <p>1=Not at all 2=Occasional 3=Frequently</p> <p>1=D 2=C 3=C+ 4=B- 5=B 6=B+ 7=A- 8=A or A+</p>	<p>Reversed Code: 1= Frequently 2= Occasional 3=Not at all</p>
Social Life	<p>During the past year, how much time did you spend during a typical week doing the following activities?:</p> <p>-Socializing with friends:</p> <p>-Partying:</p> <p>Rate your satisfaction with social life on campus</p>	<p>1=None 2=Less than 1 hour 3=1 to 2 hrs 4=3 to 5 hrs 5=6 to 10 hrs 6=11 to 15 hrs 7=16 to 20 hrs 8=Over 20 hrs</p> <p>1=Can't rate/No experience 2=Very dissatisfied 3=Dissatisfied</p>	

		4=Neutral 5=Satisfied 6=Very satisfied	
Self-concept	Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. -Intellectual self-confidence -Social self-confidence -Competitiveness	1=Lowest 10% 2=Below average 3=Average 4=Above average 5=Highest 10%	
Satisfaction with College Experiences	Please rate your satisfaction with this institution Overall college experience	1=Lowest 10% 2=Below average 3=Average 4=Above average 5=Highest 10%	

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2008 CIRP FRESHMAN SURVEY

PLEASE PRINT NAME AND PERMANENT/HOME ADDRESS (one letter or number per box).

NAME: FIRST MI LAST

When were you born?
 Month (01-12) Day (01-31) Year

ADDRESS:

CITY: STATE: ZIP: PHONE: - -

STUDENT ID# (as instructed): EMAIL (print letters carefully):

SERIAL #

MARKING DIRECTIONS

- Use a #2 pencil or black or blue pen.
- Erase cleanly any answer you wish to change or "X" out mark if in pen.

CORRECT MARK **INCORRECT MARKS**

Group Code **A** **B**

- Your sex: Male Female
- How old will you be on December 31 of this year? (Mark one)

16 or younger	<input type="radio"/>	21-24	<input type="radio"/>
17	<input type="radio"/>	25-29	<input type="radio"/>
18	<input type="radio"/>	30-39	<input type="radio"/>
19	<input type="radio"/>	40-54	<input type="radio"/>
20	<input type="radio"/>	55 or older	<input type="radio"/>
- Is English your native language?
 Yes No
- In what year did you graduate from high school? (Mark one)

2008	<input type="radio"/>	Did not graduate but passed G.E.D. test.	<input type="radio"/>
2007	<input type="radio"/>	Never completed	<input type="radio"/>
2006	<input type="radio"/>	high school	<input type="radio"/>
2005 or earlier	<input type="radio"/>		
- Are you enrolled (or enrolling) as a: (Mark one)

Full-time student?	<input type="radio"/>
Part-time student?	<input type="radio"/>
- How many miles is this college from your permanent home? (Mark one)

5 or less	<input type="radio"/>	11-50	<input type="radio"/>	101-500	<input type="radio"/>
6-10	<input type="radio"/>	51-100	<input type="radio"/>	Over 500	<input type="radio"/>
- What was your average grade in high school? (Mark one)

A or A+	<input type="radio"/>	B	<input type="radio"/>	C	<input type="radio"/>
A-	<input type="radio"/>	B-	<input type="radio"/>	D	<input type="radio"/>
B+	<input type="radio"/>	C+	<input type="radio"/>		
- What were your scores on the SAT I and/or ACT?

SAT VERBAL	<input type="text"/>	<input type="text"/>	<input type="text"/>
SAT MATH	<input type="text"/>	<input type="text"/>	<input type="text"/>
SAT WRITING	<input type="text"/>	<input type="text"/>	<input type="text"/>
ACT Composite	<input type="text"/>	<input type="text"/>	<input type="text"/>

- From what kind of high school did you graduate? (Mark one)
 - Public school (not charter or magnet)
 - Public charter school
 - Public magnet school
 - Private religious/parochial school
 - Private independent college-prep school
 - Home school
- Prior to this term, have you ever taken courses for credit at this institution?
 - Yes No
- Since leaving high school, have you ever taken courses, whether for credit or not for credit, at any other institution (university, 4- or 2-year college, technical, vocational, or business school)?
 - Yes No
- Where do you plan to live during the fall term? (Mark one)
 - With my family or other relatives
 - Other private home, apartment, or room.
 - College residence hall
 - Fraternity or sorority house
 - Other campus student housing
 - Other
- To how many colleges other than this one did you apply for admission this year?

None	<input type="radio"/>	1	<input type="radio"/>	4	<input type="radio"/>	7-10	<input type="radio"/>
	<input type="radio"/>	2	<input type="radio"/>	5	<input type="radio"/>	11 or more	<input type="radio"/>
	<input type="radio"/>	3	<input type="radio"/>	6	<input type="radio"/>		<input type="radio"/>
- Were you accepted by your first choice college?
 - Yes No
- Is this college your: (Mark one)

First choice?	<input type="radio"/>	Less than third choice?	<input type="radio"/>
Second choice?	<input type="radio"/>	choice?	<input type="radio"/>
Third choice?	<input type="radio"/>		
- Citizenship status:
 - U.S. citizen
 - Permanent resident (green card)
 - Neither
- Are your parents: (Mark one)
 - Both alive and living with each other?
 - Both alive, divorced or living apart?
 - One or both deceased?

- During high school (grades 9-12) how many years did you study each of the following subjects? (Mark one for each item)

	None	1/2	1	2	3	4	5 or more
English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foreign Language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biological Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
History/Am. Gov't	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer Science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arts and/or Music	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- What is the highest academic degree that you intend to obtain? (Mark one in each column)

	None	Highest Planned	Highest Planned at This College
Vocational certificate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Associate (A.A. or equivalent)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bachelor's degree (B.A., B.S., etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Master's degree (M.A., M.S., etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ph.D. or Ed.D.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
M.D., D.O., D.D.S., or D.V.M.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J.D. (Law)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B.D. or M.DIV. (Divinity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- How would you describe the racial composition of the high school you last attended and the neighborhood where you grew up? (Mark one in each row)

	Completely non-White	Mostly non-White	roughly half non-White	Mostly White	Completely White
High school I last attended	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neighborhood where I grew up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Do you have a disability? (Mark all that apply)
 - None Learning disability
 - Hearing Partially sighted or blind
 - Speech Health-related
 - Orthopedic Other

22. How much of your first year's educational expenses (room, board, tuition, and fees) do you expect to cover from each of the sources listed below?
(Mark one answer for each possible source)

	None	Less than \$1,000	\$1,000 to 2,999	\$3,000 to 5,999	\$6,000 to 9,999	\$10,000+
Family resources (parents, relatives, spouse, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My own resources (savings from work, work-study, other income)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aid which need <u>not</u> be repaid (grants, scholarships, military funding, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aid which <u>must</u> be repaid (loans, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other than above	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23. What is your best estimate of your parents' total income last year? Consider income from all sources before taxes. (Mark one)

<input type="radio"/> Less than \$10,000	<input type="radio"/> \$50,000-59,999
<input type="radio"/> \$10,000-14,999	<input type="radio"/> \$60,000-74,999
<input type="radio"/> \$15,000-19,999	<input type="radio"/> \$75,000-99,999
<input type="radio"/> \$20,000-24,999	<input type="radio"/> \$100,000-149,999
<input type="radio"/> \$25,000-29,999	<input type="radio"/> \$150,000-199,999
<input type="radio"/> \$30,000-39,999	<input type="radio"/> \$200,000-249,999
<input type="radio"/> \$40,000-49,999	<input type="radio"/> \$250,000 or more

24. Do you have any concern about your ability to finance your college education? (Mark one)

None (I am confident that I will have sufficient funds)

Some (but I probably will have enough funds)

Major (not sure I will have enough funds to complete college)

25. Current religious preference:
(Mark one in each column)

	Yours	Father's	Mother's
Baptist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buddhist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Church of Christ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eastern Orthodox	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Episcopalian	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hindu	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jewish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LDS (Mormon)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lutheran	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methodist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muslim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presbyterian	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quaker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Roman Catholic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seventh Day Adventist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
United Church of Christ/Congregational	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Christian	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Religion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
None	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark **F**. If you engaged in an activity one or more times, but not frequently, mark **O** (Occasionally). Mark **N** (Not at all) if you have not performed the activity during the past year. (Mark one for each item)

	Frequently	Occasionally	Not at All
Attended a religious service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Was bored in class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participated in political demonstrations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tutored another student	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Studied with other students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Was a guest in a teacher's home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smoked cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drank beer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drank wine or liquor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt overwhelmed by all I had to do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt depressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performed volunteer work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Played a musical instrument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asked a teacher for advice after class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Voted in a student election	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Socialized with someone of another racial/ethnic group	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Came late to class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Used the Internet:			
For research or homework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To read news sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To read blogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To blog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performed community service as a part of a class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed religion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed politics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worked on a local, state, or national political campaign	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. (Mark one in each row)

	Highest 10%	Above Average	Average	Below Average	Lowest 10%
Academic ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artistic ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cooperativeness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creativity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drive to achieve	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mathematical ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Popularity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public speaking ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (intellectual)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (social)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-understanding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spirituality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding of others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. (Mark one for each item)

	Highest 10%	Above Average	Average	Below Average	Lowest 10%
Ability to see the world from someone else's perspective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tolerance of others with different beliefs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Openness to having my own views challenged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to discuss and negotiate controversial issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to work cooperatively with diverse people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

29. What is the highest level of formal education obtained by your parents? (Mark one in each column)

	Father	Mother
Grammar school or less	<input type="radio"/>	<input type="radio"/>
Some high school	<input type="radio"/>	<input type="radio"/>
High school graduate	<input type="radio"/>	<input type="radio"/>
Postsecondary school other than college	<input type="radio"/>	<input type="radio"/>
Some college	<input type="radio"/>	<input type="radio"/>
College degree	<input type="radio"/>	<input type="radio"/>
Some graduate school	<input type="radio"/>	<input type="radio"/>
Graduate degree	<input type="radio"/>	<input type="radio"/>

30. How often in the past year did you? (Mark one for each item)

	Frequently	Occasionally	Not at All
Ask questions in class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support your opinions with a logical argument	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek solutions to problems and explain them to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Revise your papers to improve your writing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluate the quality or reliability of information you received	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take a risk because you feel you have more to gain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek alternative solutions to a problem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Look up scientific research articles and resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Explore topics on your own, even though it was not required for a class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accept mistakes as part of the learning process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek feedback on your academic work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take notes during class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31. Mark only three responses, one in each column.

M Your mother's occupation
 F Your father's occupation
 Y Your probable career occupation

Accountant or actuary.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Actor or entertainer.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Architect or urban planner.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Artist.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Business (clerical).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Business executive (management, administrator)....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Business owner or proprietor.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Business salesperson or buyer....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Clergy (minister, priest).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Clergy (other religious).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Clinical psychologist.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
College administrator/staff.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
College teacher.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Computer programmer or analyst..	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Conservationist or forester.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Dentist (including orthodontist)....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Dietitian or nutritionist.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Engineer.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Farmer or rancher.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Foreign service worker (including diplomat).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Homemaker (full-time).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Interior decorator (including designer).	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Lab technician or hygienist.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Law enforcement officer.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Lawyer (attorney) or judge.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Military service (career).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Musician (performer, composer)....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Nurse.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Optometrist.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Pharmacist.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Physician.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Policymaker/Government.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
School counselor.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
School principal or superintendent..	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Scientific researcher.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Social, welfare, or recreation worker.	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Therapist (physical, occupational, speech).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Teacher or administrator (elementary).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Teacher or administrator (secondary).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Veterinarian.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Writer or journalist.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Skilled trades.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Laborer (unskilled).....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Semi-skilled worker.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Unemployed.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Other.....	<input type="radio"/> Y	<input type="radio"/> F	<input type="radio"/> M
Undecided.....	<input type="radio"/> Y		

32. How would you characterize your political views? (Mark one)

Far left
 Liberal
 Middle-of-the-road
 Conservative
 Far right

33. Mark one in each row:

		1 Disagree Strongly	2 Disagree Somewhat	3 Agree Somewhat	4 Agree Strongly
There is too much concern in the courts for the rights of criminals.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Abortion should be legal.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
The death penalty should be abolished.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Marijuana should be legalized.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
It is important to have laws prohibiting homosexual relationships.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Racial discrimination is no longer a major problem in America.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Realistically, an individual can do little to bring about changes in our society.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Wealthy people should pay a larger share of taxes than they do now.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Same-sex couples should have the right to legal marital status.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Affirmative action in college admissions should be abolished.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Federal military spending should be increased.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
The federal government should do more to control the sale of handguns.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Only volunteers should serve in the armed forces.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
The federal government is not doing enough to control environmental pollution....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
A national health care plan is needed to cover everybody's medical costs.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Undocumented immigrants should be denied access to public education.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Through hard work, everybody can succeed in American society.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Dissent is a critical component of the political process.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Colleges have the right to ban extreme speakers from campus.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Students from disadvantaged social backgrounds should be given preferential treatment in college admissions.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
The federal government should raise taxes to reduce the deficit.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	
Addressing global warming should be a federal priority.....	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	

34. During your last year in high school, how much time did you spend during a typical week doing the following activities?

Hours per week:	None	Less than 1 hour	1-2	3-5	6-10	11-15	16-20	Over 20
Studying/homework.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Socializing with friends.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Talking with teachers outside of class....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exercise or sports.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Partying.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working (for pay).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volunteer work.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student clubs/groups.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watching TV.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Household/childcare duties.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading for pleasure.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Playing video/computer games....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online social networks (MySpace, Facebook, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35. Are you: (Mark all that apply)

White/Caucasian
 African American/Black
 American Indian/Alaska Native
 Asian American/Asian
 Native Hawaiian/Pacific Islander
 Mexican American/Chicano
 Puerto Rican
 Other Latino
 Other

36. Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here? (Mark one answer for each possible reason)

		Very Important	Somewhat Important	Not Important
My parents wanted me to come here.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
My relatives wanted me to come here.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
My teacher advised me.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
This college has a very good academic reputation.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
This college has a good reputation for its social activities.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
I was offered financial assistance.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
The cost of attending this college.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
High school counselor advised me.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
Private college counselor advised me.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
I wanted to live near home.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
Not offered aid by first choice.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
Could not afford first choice.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
This college's graduates gain admission to top graduate/professional schools.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
This college's graduates get good jobs.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
I was attracted by the religious affiliation/orientation of the college.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
I wanted to go to a school about the size of this college.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
Rankings in national magazines.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
Information from a website.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
I was admitted through an Early Action or Early Decision program.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
The athletic department recruited me.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	
A visit to the campus.....	<input type="radio"/> V	<input type="radio"/> S	<input type="radio"/> N	

37. Below is a list of different undergraduate major fields grouped into general categories. Mark only one oval to indicate your probable field of study.

- | | |
|--------------------------------------------------|-------------------------------------------------------------|
| ARTS AND HUMANITIES | PHYSICAL SCIENCE |
| Art, fine and applied 1 | Astronomy 43 |
| English (language and literature) 2 | Atmospheric Science (incl. Meteorology) 44 |
| History 3 | Chemistry 45 |
| Journalism 4 | Earth Science 46 |
| Language and Literature (except English) 5 | Marine Science (incl. Oceanography) 47 |
| Music 6 | Mathematics 48 |
| Philosophy 7 | Physics 49 |
| Speech 8 | Other Physical Science 50 |
| Theater or Drama 9 | PROFESSIONAL |
| Theology or Religion 10 | Architecture or Urban Planning 51 |
| Other Arts and Humanities 11 | Family & Consumer Sciences 52 |
| BIOLOGICAL SCIENCE | Health Technology (medical, dental, laboratory) 53 |
| Biology (general) 12 | Library or Archival Science 54 |
| Biochemistry or Biophysics 13 | Medicine, Dentistry, Veterinary Medicine 55 |
| Botany 14 | Nursing 56 |
| Environmental Science 15 | Pharmacy 57 |
| Marine (Life) Science 16 | Therapy (occupational, physical, speech) 58 |
| Microbiology or Bacteriology 17 | Other Professional 59 |
| Zoology 18 | SOCIAL SCIENCE |
| Other Biological Science 19 | Anthropology 60 |
| BUSINESS | Economics 61 |
| Accounting 20 | Ethnic Studies 62 |
| Business Admin. (general) 21 | Geography 63 |
| Finance 22 | Political Science (gov't, international relations) 64 |
| International Business 23 | Psychology 65 |
| Marketing 24 | Public Policy 66 |
| Management 25 | Social Work 67 |
| Secretarial Studies 26 | Sociology 68 |
| Other Business 27 | Women's Studies 69 |
| EDUCATION | Other Social Science 70 |
| Business Education 28 | TECHNICAL |
| Elementary Education 29 | Building Trades 71 |
| Music or Art Education 30 | Data Processing or Computer Programming 72 |
| Physical Education or Recreation 31 | Drafting or Design 73 |
| Secondary Education 32 | Electronics 74 |
| Special Education 33 | Mechanics 75 |
| Other Education 34 | Other Technical 76 |
| ENGINEERING | OTHER FIELDS |
| Aeronautical or Astronautical Eng 35 | Agriculture 77 |
| Civil Engineering 36 | Communications 78 |
| Chemical Engineering 37 | Computer Science 79 |
| Computer Engineering 38 | Forestry 80 |
| Electrical or Electronic Engineering 39 | Kinesiology 81 |
| Industrial Engineering 40 | Law Enforcement 82 |
| Mechanical Engineering 41 | Military Science 83 |
| Other Engineering 42 | Other Field 84 |
| | Undecided 85 |

38. Please indicate the importance to you personally of each of the following: (Mark one for each item)
- Legend:** **N** Not Important, **S** Somewhat Important, **V** Very Important, **E** Essential
- | | | | | |
|-------------------------------------------------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Becoming accomplished in one of the performing arts (acting, dancing, etc.)..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Becoming an authority in my field..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Obtaining recognition from my colleagues for contributions to my special field..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Influencing the political structure..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Influencing social values..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Raising a family..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Being very well off financially..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Helping others who are in difficulty..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Making a theoretical contribution to science..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Writing original works (poems, novels, short stories, etc.)..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Creating artistic works (painting, sculpture, decorating, etc.)..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Becoming successful in a business of my own..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Becoming involved in programs to clean up the environment..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Developing a meaningful philosophy of life..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Participating in a community action program..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Helping to promote racial understanding..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Keeping up to date with political affairs..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Becoming a community leader..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Improving my understanding of other countries and cultures..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |
| Adopting "green" practices to protect the environment..... | <input type="radio"/> E | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> N |

39. What is your best guess as to the chances that you will: (Mark one for each item)
- Legend:** **N** No Chance, **L** Very Little Chance, **S** Some Chance, **V** Very Good Chance
- | | | | | |
|-------------------------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Change major field?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Change career choice?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Participate in student government?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Get a job to help pay for college expenses?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Work full-time while attending college?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Join a social fraternity or sorority?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Play varsity/intercollegiate athletics?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Make at least a "B" average?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Need extra time to complete your degree requirements?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Participate in student protests or demonstrations?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Transfer to another college before graduating?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Be satisfied with your college?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Participate in volunteer or community service work?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Seek personal counseling?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Communicate regularly with your professors?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Socialize with someone of another racial/ethnic group?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Participate in student clubs/groups?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Participate in a study abroad program?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Have a roommate of a different race/ethnicity?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Discuss course content with students outside of class?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Work on a professor's research project?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |
| Get tutoring help in specific courses?..... | <input type="radio"/> V | <input type="radio"/> S | <input type="radio"/> L | <input type="radio"/> N |

40. Do you give the Higher Education Research Institute (HERI) permission to include your ID number should your college request the data for additional research analyses? HERI maintains strict standards of confidentiality and would require your college to sign a pledge of confidentiality.
- Yes No

The remaining ovals are provided for questions specifically designed by your college rather than the Higher Education Research Institute. If your college has chosen to use the ovals, please observe carefully the supplemental directions given to you.

- | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 41. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 45. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 49. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 53. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 57. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E |
| 42. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 46. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 50. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 54. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 58. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E |
| 43. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 47. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 51. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 55. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 59. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E |
| 44. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 48. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 52. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 56. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E | 60. <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E |

THANK YOU!

T

2012 COLLEGE SENIOR SURVEY



Please print in ALL CAPS.

NAME: FIRST MI LAST

When were you born?

EMAIL (print letters carefully):

Month (01-12) Day (01-31) Year

STUDENT ID# (as instructed): PHONE: - -

Congratulations on your impending graduation! We are very interested in your experiences as a college student. This form has been designed to provide feedback that can help improve the college experience. Thank you very much for your help with this important project.

SERIAL #

MARKING DIRECTIONS

- Use a black or blue pen.
- "X" out any answer you wish to change.

CORRECT MARK INCORRECT MARKS

Group Code

1. Your sex: Female Male

2. Compared with when you first entered this college, how would you now describe your: (Mark one in each row)

	Much Stronger	Stronger	No Change	Weaker	Much Weaker
General knowledge	5	4	3	2	1
Knowledge of a particular field or discipline	5	4	3	2	1
Knowledge of people from different races/cultures	5	4	3	2	1
Understanding of the problems facing your community	5	4	3	2	1
Understanding of national issues	5	4	3	2	1
Understanding of global issues	5	4	3	2	1
Critical thinking skills	5	4	3	2	1
Problem-solving skills	5	4	3	2	1
Leadership abilities	5	4	3	2	1
Ability to get along with people of different races/cultures	5	4	3	2	1
Ability to manage your time effectively	5	4	3	2	1
Foreign language ability	5	4	3	2	1
Interpersonal skills	5	4	3	2	1
Preparedness for employment after college	5	4	3	2	1
Preparedness for graduate or advanced education	5	4	3	2	1

3. What year did you first enter: (Mark one in each column)

2011 or 2012	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2010	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2009	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2008	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2007 or earlier	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Please indicate your enrollment status below: (Mark one)

Full-time undergraduate

Part-time undergraduate

Not enrolled

5. Expected Graduation Date: 2011 Other 2012 Not sure

6. Are you currently registered to vote? Ineligible Yes No

7. Since entering college, indicate how often you: (Mark one in each row)

	Frequently	Occasionally	Not At All
Worked on independent study projects	F	O	N
Discussed course content with students outside of class	F	O	N
Have been a guest in a professor's home	F	O	N
Failed to complete homework on time	F	O	N
Have been bored in class	F	O	N
Came late to class	F	O	N
Studied with other students	F	O	N
Performed community service as part of a class	F	O	N
Voted in a student election	F	O	N
Used the Internet for research or homework	F	O	N
Used the library for research or homework	F	O	N
Accessed your campus' library resources electronically	F	O	N
Missed class due to employment	F	O	N
Missed class for other reasons	F	O	N
Tutored another college student	F	O	N
Met with an advisor/counselor about your career plans	F	O	N
Fell asleep in class	F	O	N
Had difficulty getting the courses you needed	F	O	N
Asked a professor for advice after class	F	O	N
Demonstrated for a cause (e.g., boycott, rally, protest)	F	O	N
Challenged a professor's ideas in class	F	O	N
Worked on a professor's research project	F	O	N
Communicated regularly with your professors	F	O	N
Worked with classmates on group projects:			
During class	F	O	N
Outside of class	F	O	N
Took a class that required:			
One or more 10+ page papers	F	O	N
Multiple short papers	F	O	N
Made a presentation in class	F	O	N
Contributed to class discussions	F	O	N
Helped raise money for a cause or campaign	F	O	N
Publicly communicated your opinion about a cause (e.g., blog, email, petition)	F	O	N

8. Since entering college have you: (Mark yes or no for each item)

- Joined a social fraternity or sorority
 - Failed one or more courses
 - Held a full-time job (approx. 40 hours) while taking classes
 - Taken a remedial course
 - Taken an ethnic studies course
 - Taken a women's studies course
 - Attended a racial/cultural awareness workshop
 - Had a roommate of different race/ethnicity
 - Played club, intramural, or recreational sports
 - Played intercollegiate athletics (e.g., NCAA or NIAA-sponsored)
 - Withdrawn from school temporarily
 - Taken an honors course
 - Transferred from a 2-year college
 - Transferred from a 4-year college
 - Taken a reduced course load
 - Taken courses for credit at another institution
 - Participated in an undergraduate research program (e.g., MARC, MBRS, REU)
 - Completed a culminating experience for your degree (e.g., capstone course/project, thesis, comp ex)
 - Been a leader in an organization
- Participated in:
- An internship program
 - Study-abroad
 - Leadership training
 - Student government
 - Student clubs/groups
 - An ethnic/racial student organization

9. Mark your undergraduate and graduate major. (Use codes provided on the attached fold-out)

Undergraduate primary major

Undergraduate secondary major (omit if you do not have a secondary major)

Graduate major (omit if you do not plan to go to graduate school)

10. Please mark your probable career/occupation. (Use codes provided on the attached fold-out)

T 11. During the past year, how much time did you spend during a typical week doing the following activities? (Mark one in each row)

	None	Less than 1 hour	1-2	3-5	6-10	11-15	16-20	Over 20
Studying/homework.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attending classes/labs.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Socializing with friends.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exercising/sports.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Partying.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working (for pay) <u>on</u> campus.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working (for pay) <u>off</u> campus.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student clubs/groups.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watching TV.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Housework/childcare.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commuting.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prayer/meditation.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Career planning (job searches, internships, etc.).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online social networks (Myspace, Facebook, etc.).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Think back over the past two weeks. How many times in the past two weeks, if any, have you had five or more alcoholic drinks in a row? (A drink can be a 12-ounce beer or wine cooler, a 4-ounce glass of wine, or a shot of liquor either straight or in a mixed drink.)

- None Twice 6-9 times
 Once 3-5 times 10 or more times

13. How often in the past year did you: (Mark one in each row)

	Frequently	Occasionally	Not At All
Ask questions in class.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support your opinions with a logical argument.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek solutions to problems and explain them to others..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Revise your papers to improve your writing.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluate the quality or reliability of information you received..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take a risk because you felt you had more to gain.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek alternative solutions to a problem.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Look up scientific research articles and resources.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Explore topics on your own, even though it was not required for a class.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accept mistakes as part of the learning process.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek feedback on your academic work.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrate skills and knowledge from different sources and experiences.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Please rate your satisfaction with your college in each area: (Mark one in each row)

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Can't Rate	Don't Know
General education or core curriculum courses.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Science and mathematics courses.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humanities courses.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social science courses.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Laboratory facilities and equipment.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Library facilities.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computing assistance.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tutoring or other academic assistance.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Academic advising.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Career counseling and advising.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student housing (e.g., res. halls).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial aid package.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job placement services for students.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student health services.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Student psychological services.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Please rate your satisfaction with your college in each area: (Mark one in each row)

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Courses in your major field.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amount of contact with faculty.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Class size.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relevance of coursework to everyday life.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relevance of coursework to future career plans.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall quality of instruction.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall sense of community among students.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of campus social activities.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respect for the expression of diverse beliefs.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to find a faculty or staff mentor.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Racial/ethnic diversity of the student body.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall college experience.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. For the activities listed below, please indicate how often you engaged in each during the past year. (Mark one in each row)

	Frequently	Occasionally	Not At All
Smoked cigarettes.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt depressed.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt overwhelmed by all I had to do.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attended a religious service.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drank beer.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drank wine or liquor.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performed volunteer or community service work.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed politics.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sought personal counseling.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discussed religion.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worked on a local, state, or national political campaign.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contributed money to help support my family.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contributed money to a political campaign.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applied concepts from courses to everyday life.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that faculty provided me with feedback that helped me assess my progress in class.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that my contributions were valued in class.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt that faculty encouraged me to ask questions and participate in discussions.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. (Mark one in each row)

	Highest 10%	Above Average	Average	Below Average	Lowest 10%
Academic ability.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artistic ability.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Computer skills.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cooperativeness.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creativity.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drive to achieve.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional health.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership ability.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mathematical ability.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical health.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public speaking ability.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk-taking.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (intellectual).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (social).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-understanding.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spirituality.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding of others.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing ability.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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18. Please indicate the extent to which you agree or disagree with the following statements: (Mark one in each row)

	Strongly Agree	Agree	Disagree	Strongly Disagree
I have felt discriminated against at this institution because of my race/ethnicity, gender, sexual orientation, or religious affiliation	4	3	2	1
I see myself as part of the campus community.....	4	3	2	1
Faculty showed concern about my progress	4	3	2	1
There is a lot of racial tension on this campus	4	3	2	1
Faculty empower me to learn here	4	3	2	1
If asked, I would recommend this college to others..	4	3	2	1
At least one staff member has taken an interest in my development.....	4	3	2	1
I feel valued at this institution.....	4	3	2	1
Faculty believe in my potential to succeed academically	4	3	2	1
Staff encouraged me to get involved in campus activities	4	3	2	1
In class, I have heard faculty express stereotypes based on race/ethnicity, gender, sexual orientation, or religious affiliation	4	3	2	1
Staff recognize my achievements	4	3	2	1
Faculty encouraged me to meet with them outside of class	4	3	2	1
I am interested in seeking information about current social and political issues	4	3	2	1
I feel a sense of belonging to this campus.....	4	3	2	1
At least one faculty member has taken an interest in my development.....	4	3	2	1
I feel I am a member of this college.....	4	3	2	1
I have effectively led a group to a common purpose	4	3	2	1

19. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. (Mark one in each row)

	Highest 10%	Above Average	Average	Below Average	Lowest 10%
Ability to see the world from someone else's perspective.....	5	4	3	2	1
Tolerance of others with different beliefs	5	4	3	2	1
Openness to having my own views challenged.	5	4	3	2	1
Ability to discuss and negotiate controversial issues	5	4	3	2	1
Ability to work cooperatively with diverse people.	5	4	3	2	1

20. To what extent have you experienced the following with students from a racial/ethnic group other than your own? (Mark one in each row)

	Very Often	Often	Sometimes	Seldom	Never
Dined or shared a meal.....	5	4	3	2	1
Had meaningful and honest discussions about race/ethnic relations outside of class.....	5	4	3	2	1
Had guarded, cautious interactions.....	5	4	3	2	1
Shared personal feelings and problems.....	5	4	3	2	1
Had tense, somewhat hostile interactions.....	5	4	3	2	1
Had intellectual discussions outside of class..	5	4	3	2	1
Felt insulted or threatened because of your race/ethnicity	5	4	3	2	1
Studied or prepared for class	5	4	3	2	1
Socialized or partied.....	5	4	3	2	1

21. How would you characterize your political views? (Mark one)

- Far left Middle-of-the-road Conservative
 Liberal Far right

22. Are you a veteran? Yes No

23. Indicate the importance to you personally of each of the following: (Mark one in each row)

	Essential	Very Important	Somewhat Important	Not Important
Becoming accomplished in one of the performing arts (acting, dancing, etc.).....	E	V	S	N
Becoming an authority in my field.....	E	V	S	N
Obtaining recognition from my colleagues for contributions to my special field.....	E	V	S	N
Influencing the political structure.....	E	V	S	N
Influencing social values	E	V	S	N
Raising a family	E	V	S	N
Being very well off financially	E	V	S	N
Helping others who are in difficulty	E	V	S	N
Making a theoretical contribution to science	E	V	S	N
Writing original works (poems, novels, etc.)	E	V	S	N
Creating artistic work (paintings, sculpture, etc.)	E	V	S	N
Becoming successful in a business of my own.....	E	V	S	N
Becoming involved in programs to clean up the environment	E	V	S	N
Developing a meaningful philosophy of life.....	E	V	S	N
Participating in a community action program.....	E	V	S	N
Helping to promote racial understanding	E	V	S	N
Keeping up to date with political affairs.....	E	V	S	N
Becoming a community leader	E	V	S	N
Integrating spirituality into my life	E	V	S	N
Improving my understanding of other countries and cultures.....	E	V	S	N
Adopting "green" practices to protect the environment .	E	V	S	N

24. How often have professors at your college provided you with: (Mark one in each row)

	Frequently	Occasionally	Not At All
Encouragement to pursue graduate/professional study.....	F	O	N
An opportunity to work on a research project	F	O	N
Advice and guidance about your educational program.....	F	O	N
Emotional support and encouragement	F	O	N
A letter of recommendation	F	O	N
Honest feedback about your skills and abilities	F	O	N
Help to improve your study skills	F	O	N
Feedback on your academic work (outside of grades)	F	O	N
Intellectual challenge and stimulation	F	O	N
An opportunity to discuss coursework outside of class	F	O	N
Help in achieving your professional goals.....	F	O	N
An opportunity to apply classroom learning to "real-life" issues .	F	O	N
An opportunity to publish.....	F	O	N

25. Please indicate your agreement with each of the following statements. (Mark one in each row)

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly
Wealthy people should pay a larger share of taxes than they do now..	4	3	2	1
Same-sex couples should have the right to legal marital status....	4	3	2	1
Undocumented immigrants should be denied access to public education	4	3	2	1
Addressing global warming should be a federal priority	4	3	2	1
The death penalty should be abolished	4	3	2	1
Racial discrimination is no longer a major problem in America.....	4	3	2	1
Federal military spending should be increased.....	4	3	2	1
Through hard work everybody can succeed in American society...	4	3	2	1
The chief benefit of a college education is that it increases one's earning power.....	4	3	2	1

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