ABSTRACT

ASIAN AMERICAN COLLEGE STUDENTS’ SEXUAL PRACTICES: FINDINGS FROM ACHA-NCHA WEB-BASED DATA 2009

Studies suggest that although Asian American college students may be at lower risk of contracting sexually transmitted infections (STIs), they have been found to practice unsafe sexual activities such as failure to use condoms during sexual intercourse. The purpose of this study was to investigate Asian American college students’ sexual practices by conducting a secondary analysis of the data from the American College Health Association – National College Health Assessment (ACHA-NCHA) survey collected at California State University, Fresno, in the Spring 2009 semester. The vast majority of participants reported to be sexually active and have multiple sexual partners as 20% Asian American, 13% White, 30% Hispanic, and 42% African American reported having two or more sexual partners within the last 12 months. The study found that Asian American college students are just as likely as their counterparts to practice risky sexual behaviors. In addition, the data suggested that Asian American college students are less likely to engage in unprotected sexual activities as an effect of drinking when compared to their ethnic counterparts. However, results have shown that 60% of Asian American participants indicated having used alcohol within the last 30 days.

Chia Thao
August 2010
ASIAN AMERICAN COLLEGE STUDENTS’ SEXUAL PRACTICES: FINDINGS FROM ACHA-NCHA WEB-BASED DATA 2009

by

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A thesis
submitted in partial fulfillment of the requirements for the degree of
Master of Public Health
in the College of Health and Human Services
California State University, Fresno
August 2010
APPROVED

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ACKNOWLEDGMENTS

I dedicate this thesis to my loving husband for his support, sacrifice, and patience. We have endured so many hardships together to allow for the completion of this thesis, and I am moved beyond words by your encouragement to reach my educational goals. I thank my parents each and every day for believing in me. Your love and life lessons gave me the confidence to be greater than I am. I continue to admire you for your unconditional love, motivation, and undying support.

Many thanks to my wonderful mentor, Dr. Miguel A. Perez for his assistance and support. This thesis would not have been possible without his valuable opinion and sincere guidance. I am especially grateful for my committee members: Dr. Kara Zografos for all her assistance in the statistical analyses and guidance and Ms. Kathy Yarmo at the Student Health and Psychological Services Center for allowing me to use the NCHA-ACHA 2009 data and guiding me throughout this process. Also, I would like to thank the Ronald E. McNair staff for allowing me to use the McNair computer lab for my data analysis. I am forever indebted to all for your support and encouragement.

In addition, many individuals have sincerely assisted me in the process of completing my thesis. I am grateful for my two colleagues, Kue Vue and Karl for providing excellent feedback. I would especially like to thank GaoSang Xiong, a UC Berkeley graduate student for helping edit my thesis. Thank you for being so willing to guide, assist, and edit my thesis. This thesis would not have come to fruition without your honest support.
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Chapter 1

INTRODUCTION

The purpose of this study was to conduct a secondary data analysis of the American College Health Association – National College Health Assessment (ACHA-NCHA) survey collected in the Spring semester 2009 at a large public university in Central California. This study aimed to investigate Asian college students’ sexual behaviors in a cohort format. In addition, this study also intended to assess Asian students’ contraceptive use and risky sexual behaviors such as multiple partners and alcohol use. California State University, Fresno (Fresno State) is a diverse college campus located in Central California with estimated 14.9% Asian American college students attending the university (California State University, Fresno, Institutional Research, Assessment & Planning [IRAP], 2009).

College students between the ages 18 to 24 years were more likely to report engaging in risky sexual behaviors making this age group most vulnerable to sexually transmitted infections (STIs) including Human Immunodeficiency Virus (HIV) (Anderson, Chandra, & Mosher, 2005; Novilla et al., 2006). STIs are infections commonly transmitted through sexual contact such as vaginal, anal, and oral practices and some STIs, such as HIV and hepatitis B, can also be transmitted via contaminated blood and through needle sharing (Eng & Butler, 1997).

Research indicates that college students who engage in unprotected sexual behaviors are more likely to have unplanned and unwanted pregnancies, abortions, and the complications of early childbearing (Finer & Henshaw, 2006; Flannery, Ellingson, Votaw & Schaefer, 2003; Novilla et al., 2006; Rani & Lule, 2004). Even though the effectiveness of oral contraceptives has allowed men and women
to freely engage in sexual activities without jeopardizing pregnancy, birth-control pills do not protect against STIs (Weinberg, Lottes, & Gordon, 1997). Every time students engage in a risky sexual behavior, there are still many serious consequences such as high-risk for sexually transmitted infections (STIs) and unplanned pregnancies (Cubbin, Santelli, Brindis, & Braveman, 2005). Research shows that industrialized nations such as the United States annually have over 13 million cases of sexually transmitted diseases/infections (STDs/STIs) (Cates, 1999; Phillips, Dudgeon, Becker, & Bopp, 2004). Despite national goals to decrease STI rates in the United States, public health agencies continue to face insurmountable challenges to prevent the prevalence of STIs (Opt, Loffredo, Knowles, & Fletcher, 2007).

The Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) both agree that Human Immunodeficiency Virus (HIV) is among the world’s most serious health threat (Centers for Disease Control and Prevention [CDC], 2008 and World Health Organization [WHO], 2006). Since the introduction of HIV and AIDS in the United States, the CDC has reported more than 1 million cases of Americans infected with HIV (Anderson et al., 2005). The numbers of infected Americans continue to increase each year. In 2008, the CDC reported that 56,300 new HIV infections occurred in 2006, higher than the 40,000 infections in 2005 (Anderson et al., 2005; Gavin et al., 2009).

Since 1991, the number of Asian American and Pacific Islanders (AAPIs) infected with AIDS in the United States has increased (Liao et al., 2004; Lin, Simoni, & Zemon, 2005). Due to the fatal consequences and rampant spread of HIV and AIDS in the United States (Hollar & Snizek, 1996), preventing sexually transmitted infections (STI) should be one of our nation’s top priorities (Garwick, Nerdahl, Banken, Muenzeberger-Breitl, & Sieving, 2004).
Problem Statement

Most studies on college students’ sexual behaviors has predominately focused on White, African American, and Hispanic students but research material focusing on sexual behaviors and practices among Asian college students have been limited (Schuster, Bell, Nakajima, & Kanouse, 1998; So, Wong, & DeLeon, 2005). In addition, research indicates that while there is a preponderance of data on the association of Hispanic and African American race/ethnicity and contraceptive use, historically there has been a lack of research on sexual behaviors, contraceptive practices and unintended pregnancy rates among Asians in the United States (Leiblum, Wiegel, & Brickle, 2003; Raine, Minnis, & Padian, 2003).

Although studies show that college students are more likely to engage in risky sexual behaviors, limited research focuses on systematic sexual behavior patterns among Asian college students. Therefore, the purpose of this study was to investigate Asian college students’ sexual practices in a cohort format from the data collected in Spring 2009 from Fresno State.

Purpose

The purpose of this study investigated Asian college students’ sexual practices using the Spring 2009 American College Health Association – National College Health Assessment (ACHA-NCHA) data collected at California State University, Fresno (Fresno State). In addition, this study also assessed Asian college students’ contraceptive use and risky sexual behaviors that were led on by alcohol and drug use when compared to different ethnic cohorts such as White, Hispanic, and African-American college students who attended Fresno State.
Hypotheses

Hypothesis 1: Asian college students’ sexual behaviors are different than their White, Hispanic, and African American counterparts.

Hypothesis 2: Asian college students use fewer contraceptive methods when compared to White, Hispanic, and African American.

Hypothesis 3: Asian college students are less likely to engage in unprotected sexual activities as a consequence of drinking when compared to White, Hispanic, and African American college students.

Study Population

While there is a preponderance of research on the sexual behavior, practices, and contraceptive use as well as substance use among White, African-American, and Hispanic students, research supports that there has been a paucity of research on Asian students’ sexual behaviors, contraceptive practices and unintended pregnancy rates (Raine et al., 2003; Schuster et al., 1998). Therefore, the study populations were chosen to look specifically at Asian American college students’ sexual practices and compare Asian American students to each predominant ethnic group of college students (White, Hispanic and African-American) who attended California State University, Fresno (Fresno State) in the Spring semester of 2009.

The Institutional Research, Assessment, and Planning (IRAP) Department showed the demographics of students who attended Fresno State in 2009 as follows: In 2009, 18,215 were undergraduate students and 3,285 were graduate students which totaled 21,500 students; 40% were male and 59% were female; the average age for 2009 students was 22.0 years old. Class level and headcount among undergraduate and graduate students as organized by ethnicities is shown in Appendix A.
Potential Contributions

To understand and prevent the spread of sexually transmitted infections (STIs) and unplanned pregnancies among Asian college students, reliable reporting of sexual practices, contraceptive protection and risky behaviors are required to effectively develop health education and disease prevention programs that will be culturally appropriate to meet their health needs. Published literature reveals limited data regarding health concerns of the Asian American and Pacific Islanders (AAPIs) living in the United States (Ghosh, 2003), and even less among Asian American college students. In an effort to reduce unintended pregnancy and STI rates in the United States, Healthy People 2010 has developed goals and objectives to guide healthcare professionals and organizations in their attempt to reduce unintended pregnancies and STIs. The findings of this study will contribute greatly to the understanding of Asian college students’ sexual behaviors, practices, and contraceptive use. Additionally, the findings will clarify the distinguishing factors that influence Asian American students’ sexual behaviors while attending college.

The few available research studies that are focused on Asian American college students suggest that even though they experience a relatively smaller number of fatal STIs (as compared to their cohorts), they are still at significant risk of contracting STIs and unplanned pregnancies due to the failure to use condoms and other birth control methods (Bhattacharya, 2004; Pachauri & Santhya, 2002; Schuster et al., 1998; So et al., 2005). Also, studies have found that Asian parents often shy away from sex education; therefore, putting their children at a disadvantage when it comes to sexual health (Kim & Ward, 2007; Leiblum et al., 2003). For these reasons, it is crucial for health professionals on college campuses to educate Asian American students about the risk factors involved with
unprotected sexual behaviors. Health professionals can provide positive contraceptive information so that students can make informed family planning decisions before engaging in sexual activity.

Limitations

Currently, there are many limitations that must be taken into consideration before analyzing and interpreting the results of this study. For example, even though this survey was distributed anonymously through email, the topic is sensitive and because of the seriousness of these issues, we are limited in the number of active participants, and the diversity of the participants varies. Individuals who are prone to risky sexual behaviors may not have participated; likewise, others who live a discreet lifestyle may have participated. Therefore, the data results of this special cohort may not be used to generalize the behaviors of the entire Asian American student population. Also, since participants were asked to recall sexual behaviors ranging from weeks to months ago, their responses may not be entirely accurate.

Understandably, many people are hesitant to reveal detailed information about their sex life, which is a very sensitive and stigmatizing topic for many individuals and communities, particularly the Asian American communities (Kim & Ward, 2007). Due to the sensitivity of the topic, even participating and collecting anonymous questionnaires via the Internet was a challenge for the participants and the researcher respectively. Other limitations included small sample size. The university is a large college campus with more than twenty-two thousand students and over three thousand were identified as Asians, but less than one fourth of the students participated in the study and less than 20% of the
samples were from Asian participations. Regardless of these limitations, the consequences are dire enough to initiate programs to prevent STIs.

**Delimitations**

The following delimitations should be taken into consideration for this study:

1. The geographic area of the participants in this study was located in Fresno, California.
2. The selected study population was Fresno State students aged 18 or older.
3. The study only analyzed ACHA-NCHA data collected in the Spring semester 2009.
4. A limited number of questions from the ACHA-NCHA survey were selected for this study.

**Definition of Terms**

For the purpose of this study, selected technical terms and their definitions are listed below:

1. **AIDS**: Acquired Immune Deficiency Syndrome. AIDS is subsequently shown to be the late clinical stage of infections with the human immunodeficiency virus (HIV) and defined as a disease of the body's immune system caused by the human immunodeficiency virus (HIV). AIDS is characterized by the death of CD4 cells (an important part of the body's immune system), which leaves the body vulnerable to life-threatening conditions, such as infections and cancers (National Institute of Health [NIH], 2009)
2. Asian: A native or inhabitant of Asia; a person of Asian descent or from Asia. Strictly from East, Southeast, and South of Asia (U.S. Census Bureau, 2003)

3. Contraception: Contraception (birth control) prevents pregnancy by interfering with the normal process of ovulation, fertilization, and implantation. There are different kinds of birth control that act at different points in the process to prevent pregnancy (California Family Planning Council, 2009)

4. HIV: The presence of antibodies, which are produced as a result of virus infections. HIV transmission is from person to person through unprotected (heterosexual or homosexual) intercourse; contact of abraded skin or mucosa with body secretions such as blood, CSF or semen; the use of HIV-contaminated needles and syringes, including sharing by intravenous drug users; transfusion of infected blood or its components; and the transplantation of HIV-infected tissues or organs (NIH, 2009)

5. Risky Sexual Behavior: Any behavior that increases the probability of negative consequences associated with sexual contact, including AIDS or other sexually transmitted infections and unplanned pregnancies (NIH, 2009)

6. Reproductive Health: Reproductive health includes a variety of topics, such as menstruation/menopause, pregnancy/preconception care, fertility/infertility, contraception, sexually transmitted infections/HIV & AIDS, and the health and function of the male and female reproductive systems (NIH, 2008)
7. Safer Sex: Responsible people who care about their own and their partners’ pleasure and health to reduce the risk of getting a STD, using Condoms (barriers) to make sexual activities safer, and having sex play without intercourse (Planned Parenthood, 2009).

8. Sexual Behaviors: Of, relating to, involving, or characteristic of sex, sexuality, the sexes, or the sex organs and their functions (California Family Planning Council, 2009)

9. STIs: Sexually transmitted infections (STIs), also called sexually transmitted diseases (STDs) is a term used to describe more than 20 different infections that are transmitted through exchange of semen, blood, and other bodily fluids; or by direct contact with the affected body areas of people with STIs. Sexually transmitted infections are also called venereal diseases (NIH, 2009).

10. Unplanned Pregnancies: Pregnancies that, at the time of conception, was either mistimed or unwanted (The National Campaign to Prevent Teen and Unplanned Pregnancy, 2008)

Summary

Unintended pregnancy and STI rates among college students cause serious threats to public health and have taken a drastic economic toll in our health care system. College students between the ages of 18 to 24 years old have been found to have the most STIs and unplanned pregnancy cases reported in the United States (Gavin et al., 2009). Unfortunately, many sexually active men and women with high risks of contracting STIs are not being screened (Broutet & Edouard, 2007). STIs such as chlamydia and herpes have been identified to increase the risk of acquiring the human immunodeficiency virus (HIV) infection (Downs,
Bruine de Bruin, Murray, & Fischhoff, 2006; McEvoy & Coupey, 2002). Coinfection with STIs and HIV often accelerates the spread of HIV and other STIs, resulting in worsened clinical outcomes (Wu, Rou & Cui, 2004), and increased expenditures on health care in the United States (Howell et al., 1997). Therefore, it is of utmost importance to emphasize STI prevention and unplanned pregnancy intervention programs at the college/university campuses where students have been found to have the highest chances of infection with STIs and unplanned pregnancies in the United States.

Although Asian American college students were shown to be at lower risk of contracting STIs as compared to their cohorts, little is known about their risky sexual behaviors. Studies found that a large group of Asian American students were engaged in risky sexual activities that transmitted diseases and led to unwanted pregnancies (Schuster et al., 1998). Also, other research shows that the highest unplanned pregnancies were among minority women including Hispanic, African Americans, and Asians (Bon, Hittner, & Lawandales, 2001; Finer & Henshaw, 2006; Sieving et al, 1997).
Chapter 2

LITERATURE REVIEW

The purpose of this study was to investigate Asian American college students’ sexual practices in a cohort format from previous data collected in the Spring of 2009. This study also assessed Fresno State’s Asian American college students’ contraceptive use and risky behaviors such as alcohol and drug use. This chapter summarizes the research on college students’ sexual behaviors, practices, contraceptive use, and substance use. The following sections will discuss Asian American demographics, their frequent sexual practices, HIV/AIDS or STDs, and unplanned pregnancies in the United States. The last section focuses on the Health Belief Model that can be used to explain Asian American college students’ sexual behaviors.

College Students’ Sexual Behaviors, Practices, and Barriers

Research shows that college and university students are at high risk of contracting sexually transmitted infections (STIs) and unplanned pregnancies (Beckman, Harvey, & Tiersky, 1996; Opt et al., 2007). One study found that college students often underestimated their susceptibility to contract STIs and, as a result, failed to use preventative measures during sexual intercourse (Downing-Matibag & Geisinger, 2009). Downing-Matibag and Geisinger’s study supports previous findings that college students are knowledgeable about HIV transmission routes and protection methods but still engage in risky sexual practices anyway (Opt et al., 2007). Numerous researchers have found that young adults are more likely to have multiple sex partners and engage in unprotected sexual behaviors
(Beckman et al., 1996; Garwick et al., 2004; Novilla et al., 2006; Rani & Lule, 2004).

Furthermore, research studies reveal that the twenty-first century brings new threats to sexually active students. In an era of ever increasing sexual activity among young students, the threats are that much more dangerous. Higher levels of premarital sexual intercourse were documented by college students as compared to the past. Moore and Davidson (2006) reported that premarital sexual intercourse among college students has increased since 1980. In addition, Mazzaferro et al. (2006) found that young adult women ages 20 to 24 years old were significantly more likely to report having multiple sex partners and significantly less likely to ask their partners to use a condom than older women. Another study found that younger women were more likely to engage in vaginal intercourse at a very early age and were less likely to use preventative measures than women who had intercourse after age 15 (Raine et al., 2003).

Gender and Sexual Behaviors

Gender is a strong predictor of contraceptive choices. One study found that males were more likely to report the preferential use of a condom during intercourse (Lehr, Dilorio, Dudley, & Lipana, 2000), whereas females were more likely to report using hormonal-based methods to prevent pregnancy (Lye, Sipila, Vernet, & Wagenfeld, 2004).

Besides contraceptive preference, gender assertiveness to initiate sexual activities is another risk factor in contracting STIs. Studies found that men are more likely to encourage and provide motivation to have sex and are more likely to experience peer pressure to engage in sexual activities than women (Browning, Hatfield, Kessler, & Levine, 2000). As expected, studies found that men have
greater advantage over women when they negotiate sexual encounters (Amaro, 1995; Kelly & Bazzini, 2001). In addition, studies have demonstrated that men possess more permissive sexual attitudes than women (Huang & Uba, 1992; Meier, 2003).

Although there are gender differences regarding sexual initiation and unprotected sexual practices, these differences also vary among different ethnic groups. Leiblum et al. (2003) found that White college students were more sexually permissive than Asian American students and this pattern can be observed across both gender groups. While Asian American college students have less permissive attitudes about sexual matters than their minority cohorts, studies suggest that Asian American college students were less educated about safer sex practices and they were more likely to not use any protection during sexual intercourse, especially oral sex (Lin et al., 2005). A study indicating gender conflict over condom usage in Asian American groups is testimonial to the lack of preventative measures when engaging in sexual relations (Browning et al., 2000).

**Alcohol Use, Drug Use and Risky Sexual Behaviors Among College Students**

Research has commonly found that the vast majority of college students drink alcohol, use drugs, and are sexually active and frequently engage in multiple unprotected sexual practices (Cooper, 2002; Weschsler et al., 2003). Cooper’s (2002) study concluded that while drinking, alcohol can either inhibit or promote risky sexual behaviors among college students. In fact, studies indicate that the antecedent use of alcohol and drugs have been recognized as the key factors that result in unwanted sexual advances for both men and women (Brown & Vanable, 2007; Cooper, 2002; Synovitz & Byrne, 1998; Weinstock, Berman, & Cates, 2004).
Poulin and Graham (2001) found that the risk of sexual intercourse increased threefold as alcohol use increased. Also, cigarette smoking was found to be an independent risk factor for sexual intercourse among students (Poulin & Graham, 2001). Graves and Leigh’s (1995) study further indicate that college students who use alcohol, cigarettes or marijuana, and those who were heavy drinkers or who drank to intoxication were four or more times likely to have more than one sex partner and engage in unprotected sexual behaviors. In fact, recent studies found that high-risk drinkers and intravenous injection drug users were more likely have multiple sex partners and engage in unprotected sexual behaviors (Arasteh, Jarlais, & Perlis, 2008; Brown & Vanable, 2007).

The relationship between substance abuse has been documented by several studies to have influenced risky sexual practices among college students (Poulin & Graham, 2001; Wechsler et al., 2003). Cooper (2002) found that characteristics such as gender and race in relationship to drinking and risky sexual behaviors are ambiguous and suggested that the link between drinking and failure to take preventative measures during sexual activity is likely explained by the situation, developmental stage, and chronological age of the individual and his or her actions.

Rates of STIs and Prevention Strategies to Reach College Students

Sexually transmitted infections (STIs) remain a major public health challenge in the United States. Young adults and adolescents between the ages of 15 to 24 years have the highest rates of STIs such as Chlamydia, Gonorrhea, and Syphilis (Chesson, Blandford, Gift, Tao, & Irwin, 2004; Gavin et al., 2009; Workowski & Berman, 2007). The CDC estimates that approximately 19 million new infections occur each year, and the vast majority of new infections are among
young people ages 15 to 24 years old (Workowski & Berman, 2007). Currently, STI data estimates specifically for college students are not known; however, college students have been documented to engage in risky sexual behaviors that places them at the highest risk of contracting STIs and having unplanned pregnancies (Beckman et al., 1996; Garwick et al., 2004; Novilla et al., 2006; Rani & Lule, 2004; Reinisch, Hill, Sanders, & Ziemba-Davis, 1995).

Current data presented by the MMWR Surveillance summarized that approximately 1 million adolescents and young adults (aged 10-24 years) were reported to have Chlamydia, Gonorrhea, and Syphilis. Among females aged 20-24 years, 45% had human papillomavirus (HPV) evident from 2003-2004 (Gavin et al., 2009) and this trend is expected to increase unless aggressive actions are taken. Given the fact that the majority of people between the ages of 10-24 years who received an AIDS diagnosis in 2006 were among young adults aged 20-24 years old (see Figure 1), this should alarm health professionals to take serious preventative actions to promote physical health and provide effective reproductive health services among college aged students.

The American College Health Association Task Force on National Health Objectives has identified the prevention of sexually transmitted infections (STIs) as one of its top eleven priorities. One of the solutions to reducing STIs is to increase college students’ access to STI prevention resources on campus (ACHA, 2006). In addition, the U. S. Department of Health and Human Services (2007) stated that colleges and universities are among the most effective and accessible places for students to receive health information.
Figure 1. New AIDS cases per 100,000 population age 13 and over (1998-2006)

It is evident that more school-based reproductive health education focusing on the prevention of STIs and unintended pregnancies are needed. One study found that college students (and high school students) remain uninformed about sexually transmitted infections (Downs et al., 2006). On the other hand, a recent study found that although college students know how to prevent STIs during sexual intercourse, they often fail to use protection during intercourse, especially oral sex (Downing-Matibag & Geisinger, 2009). Downing-Matibag and Geisinger’s findings suggested that health professionals and educators should plan more effective and strategic program interventions on college campuses. According to the Agency for Healthcare and Quality (2008) and the World Health Organization (2009), the rapid trends of STI rates in the United States require our healthcare system to implement more effective interventions, especially targeting
appropriate groups at risk such as college-aged students and underserved minority groups.

**Asians in the United States**

The Asian and Pacific Islander population has increased in the United States over the past decade. The tremendous growth of Asian Americans in the United States makes this population one of the fastest growing racial/ethnic groups, followed by Hispanics (Ghosh, 2003; U.S. Census Bureau, 2003). Asian American/Pacific Islanders (AAPIs) have roots in more than 29 countries and speak over 100 languages with different cultures, values, and beliefs (Ghosh, 2003). Published research suggest that Asian immigrant families tend to have a different communication style and family structure as compared to our Western culture; Asians often have closed communication patterns within the family, rigid hierarchical relationships, and limited family time together (Ying, Lee, Tsai, Lee, & Tsang, 2001). While studies have found that Asian American children quickly acculturate to the mainstream to adopt American values and behaviors, their parents often continue to practice their original cultural values and traditional lifestyle. Asian immigrant parents still expect their children to maintain the traditional values and lifestyles of their native culture (Lee, Choe, Kim, & Ngo, 2000; Ying et al., 2001).

According to Frisbie, Cho, and Hummer (2001), three-fourths of the Asian American and Pacific Islander (AAPI) population growth has been due to immigration, a relatively large number compared to other minority groups (Frisbie, Cho, & Hummer, 2001). Ghosh (2003) argues that AAPIs have many social and demographic characteristics that may affect their health due to the fact
that two million Asians remain uninsured, 14% live below the poverty line, and 40% have limited English language proficiency.

Studies suggest that the great diversity within the Asian and Pacific Islander populations are associated with two different immigrant streams. The first stream is countries that already have large populations in the United States; for example, the Chinese, Filipinos, Japanese, Korean, and Asian Indians. These groups tend, on average, to be highly educated and skilled. The second stream consists of Asians who are from a lower-socioeconomic class. They have often been displaced because of war, which includes large numbers of refugees from Southeast Asian countries (Thailand, Laos, Vietnam, and Cambodia). These groups were the most disadvantaged with respect to education and income (Frisbie et al., 2001).

Ghosh (2003) reported that Asian and Pacific Islander subpopulations are dissimilar with respect to health conditions, as well as socioeconomic and demographic characteristics. The Racial and Ethnic Approaches to Community Health [REACH] 2010 Surveillance for Health Status in Minority Communities (2004) stated that minorities have poorer health conditions than the majority populations (Liao et al., 2004). In fact, the REACH study found that compared to the general U.S. population, a substantially lower percentage of Hispanic and Asian American/Pacific Islanders have reported receiving little or no preventative services (Liao et al., 2004). Williams (2008) suggested that minority women have more health challenges and barriers when it comes to medical care. This further supports the desperate need for health education.

Additionally, it is very important to consider age differences and parents’ education levels when determining factors affecting Asian American college students’ sexual health. Clearly, the associations between immigration,
acculturation, and health beliefs are complex (Williams, 2008). While many Asian American college students living in the United States have been taught traditional Asian cultural values, they are also heavily influenced by the American lifestyle and are prone to sharing American attitudes toward sexuality (Huang & Uba, 1992). Studies found that Asian American students who speak only English at home are more likely to report engaging in sexual intercourse, have unprotected sex, and practicing oral sex in the last 30 days when compared to students who speak their primary language at home (Huang & Uba, 1992; So et al., 2005).

**Asian College Students’ Sexual Practices and Behaviors**

Through assimilation and acculturation, Asian American youth have been heavily influenced by Western ideas of socialization, which has in turn, affected their sexual behaviors and practices. Okazaki (2002) reported that as Asians become acculturated to the US mainstream, their sexual attitudes and behaviors become more similar to Whites. While Asian American college students were more sexually conservative than any other ethnic group, westernized assimilation and acculturation influenced their sexual attitudes.

In addition to assimilation and acculturation factors, characteristic differences such as gender and marital status have been found to influence Asian students’ sexual practices and behaviors. A study on Southeast Asian sexual health discovered that the vast majority of unmarried, sexually active Southeast Asian youth did not practice safe sexual behaviors and failed to use birth control methods during sexual intercourse (Pachauri & Santhya, 2002). One study found that Latina and Asian women were less likely than white women to use any birth control methods (hormonal or barrier) (Raine et al., 2003). For example, a study on sexually active Filipino Americans in Los Angeles found that they do not
practice safe sex consistently during sexual activities (Maxwell, Bastani, & Warda, 2000). The lack of preventative measures during sex for students implies that they also lack the information and guidance from health care professionals. By having effective sex education programs at school, it would make this information accessible to all people, especially to those who cannot afford such services.

Asians and Unintended Pregnancy
A study by Finer and Henshaw (2006) indicated that 49% of all pregnancies in the United States were unplanned and over three million cases of unplanned pregnancies end in abortion. Data presented by the MMWR Surveillance (2009) reported that among young women aged 20 to 24 years, the estimated number of abortions was twice that of any other age group. Furthermore, the highest proportion of unplanned pregnancies among unmarried adolescents from age 15-19 years ranged from 77.3% in the Asian American/Pacific Islander (AAPI) communities to 96.9% in the non-Hispanic Black communities (Gavin et al., 2009). This finding complements previous data which showed that the highest rates of unplanned pregnancies were among minority women including Hispanic, African Americans, and Asians (Bon et al., 2001; Finer & Henshaw, 2006; Sieving et al., 1997). This shows that Asian American groups are not using preventative measures against unwanted pregnancies or STIs.

Asian American College Students Gender Differences
Age and gender differences play a role in the STI epidemic. Earlier studies on the sexual behaviors of Asian American college students have found that males are more likely to initiate sexual intercourse at an earlier age than females (Warren et al., 1997). The pattern is not just limited to Asian American males; other ethnic
groups have observed the same trend. Furthermore, Asian American males tend to hold more liberal sexual views than their female counterparts (Chang, Tsang, Lin, & Lui, 1997; Lin, Chu, & Lin, 2007). Traditionally, societal expectations in the Asian community have confined Asian women to be demure and submissive in regards to sexual issues. Asian men were expected to be more aggressive while women were expected to have more conservative sexual views (Chang et al., 1997; Lin et al., 2007).

The gender differences in sexual experience for Asian American college students in the United States can be explained by the number of years in education and exposure to the mainstream lifestyle. As one study found, the more acculturated Asian college students became, the more sexually liberal they became (Leiblum et al., 2003). A later study also reported that the longer Asian American students are in college, the more likely they will engage in risky sexual behaviors, and the same is true with any other ethnic group (So et al., 2005). As a result, So, Wong, and DeLeon (2005) stressed how hazardous it can be when students allow their relaxed views of sexual encounters to turn into action, creating tremendous consequences for public health.

**Current Challenges Facing Reproductive Services in Asian American College Students**

Unprotected sexual practices among Asian American college students can have dire consequences. Currently, the consequences of Asian American college students’ risky sexual behaviors have been documented to increase sexually transmitted infections and remain a public health concern in the United States and throughout the world (Gavin et al., 2009). Data presented from 1991 to 2003 indicated that the number of AIDS cases among Asian American and Pacific Islanders (AAPIs) in the United States increased by 634% (CDC, 2005). The
CDC further estimated in 2007 that the Chlamydia rate among AAPIs was 139.5 cases per 100,000, a slight increase from 127.3 in 2006. Gonorrhea was 18.8 cases per 100,000 which are low when compared to other ethnic groups and rates of primary and secondary syphilis remain unchanged from 2006 (CDC, 2008). The rampant increase of contracted STIs and AIDS among Asian Americans in the United States signal the urgent need for public health agencies to take immediate actions to help this group.

Studies show that sex education can be properly addressed by parents; however, given the sensitivity of the issue and the reservation of Asian American communities, it can be a challenge (Kim & Ward, 2007). Consequently, another study found that Asian American college students tend to have less conversation in the home about sex and therefore are less educated about the reality of sex issues, despite being overly exposed to mass-media sex propaganda (Leiblum et al., 2003). Due to conflicting information, several researchers have suggested examining ethnic groups with an emphasis in cross-cultural view points and examining age differences in relation to sexual motives and sexual practices in Asian American communities (Browning et al., 2000).

Currently, there are a limited number of studies available on sexual health concerns and issues in Asian American communities. Perhaps more focused research detailing the use of contraceptive measures as well as evaluating factors that influence demographic characteristics and social life are needed to gain a better understanding of the sexual practices and issues among Asian American college students (Raine et al., 2003).
Asian American Students’ Health Concerns and Preventative Measures

Previous studies have suggested that one of the challenges facing reproductive health programs in many Asian American communities is cultural sensitivity. Addressing such a sensitive health topic to Asian American students before they have participated in sexual practices can be a challenge for healthcare providers due to cultural barriers and conflicts of interest in the Asian American communities (Pachauri & Santhya, 2002). A number of explanations have been posited as to why Asians are more reluctant to receive sexual health information or reproductive care services. For example, one researcher noted that Asians may perceive substantial personal and social costs with STIs and unwanted pregnancies as cultural stigmas that could lead to family abandonment or eternal dishonor. These feelings prevent them from seeking healthcare providers for health information and issues regarding sex (Bhattacharya, 2004).

Additionally, personal opinions affect whether or not sexually active individuals will practice safer sex. For instance, individuals who positively perceived condom use as not interfering with sexual pleasure were more likely to use a condom (Beckman et al., 1996; Novilla et al., 2006). On the other hand, other studies have found that many young adults were afraid that asking their partners to use a condom during sexual intercourse would result in a ‘lack of trust’ in their relationship (Crosby, Yarber, Sanders, & Graham, 2005; Gebhardt, Kuyper, & Dusseldorp, 2006; Maxwell et al., 2000; Niccolai, Ethier, Kershaw, Lewis, & Ickovics, 2003). Consequently, the failure to use protection during sexual intercourse is directly associated with increased risks of contracting sexually transmitted infections and unplanned pregnancies (Beckman et al., 1996; Crosby et al., 2005; Siegel, Klein, & Roghmann, 1999). Although this association...
is widely known among Asian American college students and their cohorts, there needs to be a more effective plan to implement strategies for prevention.

**Theoretical Context**

Many theories point to the reason why so many college students practice unsafe sexual behaviors. This project will look exclusively at the Health Belief Model, which is one of the many models explaining the conceptual formulation for understanding why individuals do or do not engage in a wide variety of health behavioral patterns. The Health Belief Model (HBM) is widely used in the public health field to investigate health behaviors, actions and decision making (Gerrard, Gibbons, & Bushman, 1996; Janz & Becker, 1984; Janz, Champion, & Strecher, 2002).

Downing-Matibag and Geisinger’s (2009) study demonstrated that the health belief model can serve as a useful framework for understanding college students’ sexually risky behaviors. Among other useful research findings, the health belief model specifically assesses Asian American college students’ sexual behaviors. This health model has enhanced various researchers’ understanding of Asian immigrants and Asian American college students’ sexual behaviors (Lin et al., 2005; Yep, 1993).

The health belief model was developed in 1950 by the U.S. Public Health Service in an attempt to understand individuals’ health-related actions. The HBM hypothesized that health-related action depends on the simultaneous occurrence of three factors (see Appendix B). The first factor is motivation or health concern to make health choices relevant. The second is the belief that one is susceptible or vulnerable to a serious health problem (perceived threat). The third is the belief that following a particular health recommendation will be beneficial in reducing
the perceived threat and also at a subjectively-acceptable cost (Janz & Becker, 1984; Rosenstock, Strecher & Becker, 1988). The model also explained the four dimensions of health:

1. Perceived Susceptibility—individuals vary widely in their beliefs of personal vulnerability to a condition. This dimension includes one’s perception of the risk of contracting a medical illness.
2. Perceived Severity—feelings concerning the seriousness of contracting an illness (it varies from person to person). This dimension includes evaluations of both medical/clinical consequences (death, disability, and pain) and possible social consequences such discrimination at work, heightened awareness with personal and social life.
3. Perceived Benefits—beliefs regarding the effectiveness of the various methods available in reducing the disease threat.
4. Perceived Barriers—the potential negative consequences of a particular health action may act as impediments to undertaking the recommended behavior (cost, dangerous, unpleasant, inconvenient, time-consuming, and so forth).

Based on the health belief model hypotheses and dimensions, conclusions from this study can further elaborate on and enhance the understanding of the factors that lead college students to engage in risky sexual behaviors, particularly sexual patterns among Asian American college students attending Fresno State University.

**Summary**

Although sexual activity is a normal process of everyday life for legally consenting individuals, practicing safer sex to prevent contracting sexually
transmitted infections and avoiding unwanted pregnancies should be as important to young people as it is to health professionals. In a culture where college students are granted with perhaps too much freedom: underage drinking, unchecked sexual partners, and other unimaginable schemes, it is vital that more effective preventative measures are implemented to lure college students to practice safer sex for the sake of their health and the sake of a whole generation.

The high prevalence of STIs and unwanted pregnancies in the United States indicates that there is a tremendous need to promote health education and disease prevention programs. School-based prevention programs have shown significant progress in the effort to delay youth initiation of sexual activity and to educate young adults to take preventative measures during sexual intercourse (Kirby et al., 1994). This belief is also supported by the American College Health Association.

Unless health professionals act swiftly to promote safer sex practices and prevent unplanned pregnancies, our society will continue to struggle through the burden of sky rocketing medical illnesses such as STIs, abortion, teen pregnancy and so on, especially in ethnic (or at-risk) communities such as the Asian American community where parents have traditionally been found to hesitate when it comes to communicating with their children about sex issues (Kim & Ward, 2007). Since many Asian American college students have never been fully exposed to sex/reproductive education at home, it is essential for health professionals who work with this group to create culturally responsive and naturalistic prevention programs or educational interventions for Asian American college students.
Chapter 3

METHODOLOGY

The purpose of this study was to analyze the sexual health practices of Asian college students attending Fresno State. This study utilized the American College Health Association – National College Health Assessment (ACHA-NCHA) data collected in the 2009 Spring semester at Fresno State to investigate students’ health practices. The data revealed Asian American college students’ sexual practices as follows: a) students’ sexual partners b) students’ frequency of contraceptive use c) factors that led college students to engage in risky sexual behaviors such as having unprotected sex.

Quantitative Study Design

Quantitative methods are characterized as information collected in a numeric format and these numeric representations are examined, analyzed and evaluated to draw conclusions (Yoshikawa, Weisner, Kalil, & Way, 2008). For the purpose of this study, only the quantitative method was used.

ACHA-NCHA Web-Based Survey

This project analyzed secondary data collected by the American College Health Association – National College Health Assessment (ACHA-NCHA) at California State University, Fresno. The ACHA-NCHA data is gathered as part of a national research survey designed to assist college health service providers, health educators, counselors, and administrators. The survey assessed the health of students’ lifestyles by questioning their habits, behaviors, and perceptions of
other students at each individual college/campus. Currently the survey provides the largest known comprehensive data on the health of college students.

**Sample Size and Selection**

The ACHA-NCHA user manual gives recommendations on return rates of surveys based on the school’s population. To reflect the desired response rate for a college campus with a large student population such as Fresno State which had 22,613 students in Spring 2009, the ACHA-NCHA has determined that at least 800 surveys were needed to be returned in order to have significant data. Based on the desired return rate, more than 3,799 students were randomly selected to participate in the survey during the Spring semester of 2009. The ACHA-NCHA administrators communicated with Fresno State students to ask for their participation in the survey through a letter of invitation and consent to be sent via blast-email.

**Measure of the Study: SPSS and the ACHA-NCHA Survey Instrument**

Findings from the ACHA-NCHA aim to focus on the most prevalent health topics in order to address and improve health relations for college students attending Fresno State. This particular study utilized this data to analyze Asian American college students’ sexual practices and its health implications. In addition to analyzing the health implications for Asian American college students regarding sexual relations, this study compared the health practices of Asian American college students to their ethnic cohorts.

The Statistical Package for the Social Sciences (SPSS) 16.0 version was the statistical software instrument used in analyzing this data. The survey questionnaire that is part of this study was developed by the American College
Health Association – National College Health Assessment (ACHA-NCHA). The ACHA staff, along with qualified members of the college, have been working for a decade to revise and pilot test the survey instrument for reliability and validity. The general categories of information collected from participants are: health education and safety; alcohol, tobacco, and other drug use; sexual health; mental and physical health; impedimentary blocks to academic performance; and student demographics. An estimated 40 questions were used in the Spring 2009 survey; however, for the purpose of this study, only purposely selected questions were analyzed.

Data Collection Methods and Procedures

Every Spring semester, the Student Health Center at Fresno State administers the ACHA-NCHA survey. In 2009, a web-based survey was administered to 3,799 students who were randomly selected to participate. Of the 3,799 selected students, only 1,028 students participated in the survey; yielding a 27% response rate. The return rate was higher than the previous Spring semester. The ACHA-NCHA Spring 2009 data indicates that 16.4% of Asian American and Pacific Islander students completed the survey.

In order to obtain a simple random sample of students, Digital Campus at Fresno State randomly selected undergraduate and graduate students aged 18 or older. Digital Campus used a random-number generator that assigns a number to each student. The numbers get sorted in ascending order and then are randomly selected. The first 3,799 students were then selected to participate in the study. After receiving the file with all the students’ e-mail addresses, ACHA generated a unique identification (ID) for each student. This unique ID number was imbedded in the survey URL sent to individual students. The IDs were downloaded with the
student responses to prevent duplicate responses as well as a way to follow-up with non-responders. In addition, the unique IDs were used to distribute incentives to students who participated in the survey. Once the survey data was completed and downloaded, ACHA deleted the IDs from their records to ensure participant confidentiality.

**Human Subjects**

This project has been submitted to the Department of Public Health’s Human Subjects Committee for IRB approval. Since this study used secondary data, the ACHA-NCHA data has already been reviewed and approved by the Institutional Review Board (IRB) at Fresno State. This project has been granted permission to use ACHA-NCHA data files, which is the property of the University of Health and Psychological Services.

**Data Analysis**

The study has been granted permission by the Student Health and Psychological Services to analyze data from the 2009 ACHA-NCHA survey.

Tools used to analyze the three proposed hypotheses were:

a) To investigate the first hypothesis, three questions were used to assess this hypothesis. The first question asked participants to list the number of sexual partners they have had for oral sex, vaginal intercourse, and anal intercourse. The second question asked participants to indicate the type of sexual partner(s) they had within the last two months (male, female, or transgender). The third question asked participants to indicate the type of sexual behaviors they engaged in within the last 30 days. For the first question, the Independent T-Test was used to compare the
differences in sex partners between Asian American college students and their White, Hispanic, and African American counterparts. For the second question, a descriptive comparison was used to compare the types of sexual partners between each cohort group. For the third question, a Chi-Square test was used to determine the type of sexual behavior each group indicated they engaged in within the last 30 days. Due to the small sample size of Asian participants, Asian American college students were compared to each cohort group individually.

b) The second hypothesis investigates Asian American college students’ contraceptive use compared to their White, Hispanic, and African Americans cohorts through the Nonparametric Chi-Square test. Due to the small sample size, Asian American students were paired with each cohort group individually.

c) The Chi-Square test was used to measure Asian American college students’ consequences of alcohol use when compared to their ethnic cohorts. The same measurement was used for the third analyzing due to small sample size of the Asian American college students group.

Additionally, the Spearman’s Rank Correlation was also used to determine the relationship between grade levels, class rank, gender, and the sexual practices, behaviors and contraceptive use among Asian American college students.

Summary
This study intends to analyze the ACHA-NCHA data collected at Fresno State University in the Spring of 2009. This was a secondary data analysis of both
undergraduate and graduate students attending Fresno State who are at least 18 years of age or older. This study was submitted to the Human Subject Committee and was approved for further analysis. SPSS statistical software was used to analyze the unsound and valid hypotheses.

Findings from this study contribute largely to the research understanding of sexual practices of Asian American college students regarding their contraceptive use and risky sexual behaviors. The findings in this study can also potentially strengthen the current sexual health program at Fresno State as well as improve or launch health programs on other college campuses in the United States.
Chapter 4

RESULTS

This study assessed Asian American college students’ sexual behaviors compared to their White, Hispanic, and African American counterparts. Results for this study were obtained through secondary data analysis of the ACHA-NCHA survey collected at Fresno State in the Spring semester of 2009. General examinations included college students’ overall health rating, sexual behaviors, contraceptive use, and alcohol use. In addition, this chapter provided results on three proposed hypotheses which attempted to compare Asian American college students’ sexual health, contraceptive use, and drug and alcohol use to that of their peers who were attending the same university. Additionally, this chapter analyzed findings on the correlations among Asian American college students sexual behavior. This chapter provided the results and analyses of the study.

Student Demographics and Characteristics

A total of 1,028 college students participated in the ACHA-NCHA survey, which yielded a 27% response rate. The majority of the participants were females (67.8%) between the ages of 18-24 years old. The median age was 22.0 years (see Table 1). Ninety-two percent of the students who responded indicated being heterosexual, 13.0% bisexual, and 11% were unsure (see Table 2). The vast majority of participants (85.2%) were undergraduate students and (89.8%) attending school full-time (see Table 3).
Table 1

**Student Demographics**

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<td>25-29</td>
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Table 3

*Student Academic Status*

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<td>4\textsuperscript{th} year undergraduate</td>
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<td>19.7</td>
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<tr>
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College Students’ Behaviors and Preventative Measures

Asian American college student’s practice of early preventative health behaviors related to (a) testicular self examination, (b) breast self examination, (c) receiving information regarding alcohol and other drug use, (d) pregnancy and STI prevention, (e) being tested for HIV, and (f) being tested for Chlamydia, Gonorrhea, Genital Herpes or Genital Warts/HPV, Hepatitis B or C, HIV or other related illnesses were examining in the sample.

Data for the study showed that college aged Asian American males and Hispanic males (at 32% and 33% respectively) were more likely to perform testicular self examinations, whereas only 26% White and 10% African American males performed the same preventative technique. On the other hand, 52% of White females and 40% of Asian American females performed breast self-examinations, while only 35% of Hispanic females and 15% of African American females performed the breast self-examination in the last 30 days. Additional results showed that 38% of Asian American students had no idea where to seek information regarding alcohol and drug use (see Table 4).

Despite the fact that 43% White, 21% Asian American, 18% Hispanic, and 9% African American college students have been tested for HIV infection, the majority of the participants have never received additional information regarding STI prevention or pregnancy prevention. On the other hand, 70% of the participants indicated that they were not interested in receiving pregnancy prevention information (see Figure 3), 62% were not interested in receiving preventive information on STI prevention (see Figure 4), and 74% indicated the same uninterested for alcohol and other drug use (see Figure 7).

Although less than a quarter of Asian-American students had been tested for HIV infection, what is disturbing is not the fact that three quarters of the
Table 4

Preventative Measures

<table>
<thead>
<tr>
<th>Selective Variables</th>
<th>Asians N (Yes)</th>
<th>Caucasians N (Yes)</th>
<th>Hispanics N (Yes)</th>
<th>African Americans N (Yes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male testicular self exam</td>
<td>14</td>
<td>38</td>
<td>33</td>
<td>1</td>
</tr>
<tr>
<td>Female breast self exam</td>
<td>49</td>
<td>147</td>
<td>81</td>
<td>5</td>
</tr>
<tr>
<td>Tested for HIV</td>
<td>36</td>
<td>179</td>
<td>59</td>
<td>4</td>
</tr>
<tr>
<td>Diagnosed/treated: Chlamydia</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Diagnosed/treated: Gonorrhea</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Diagnosed/treated: Genital herpes</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Diagnosed/treated: Genital warts/HPV</td>
<td>2</td>
<td>12</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Diagnosed/treated: Hepatitis B or C</td>
<td>1</td>
<td>1</td>
<td>.4</td>
<td>0</td>
</tr>
<tr>
<td>Diagnosed/treated: Urinary tract infection</td>
<td>17</td>
<td>36</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td>Diagnosed/treated: Pelvic inflammatory disease</td>
<td>1</td>
<td>1</td>
<td>.7</td>
<td>0</td>
</tr>
<tr>
<td>Diagnosed/treated: HIV</td>
<td>0</td>
<td>1</td>
<td>.24</td>
<td>0</td>
</tr>
</tbody>
</table>

Note. Only the ‘yes’ respond were included in the table.
Asian-American student population have yet to be tested, nonetheless, the vast majority of them are uninterested in receiving preventative information that could save or improve the quality of their lives, such as STI prevention, pregnancy prevention, and drug related issues. Figures 2-7 illustrate participants uninterested in receiving STIs, pregnancy, and alcohol or other drug use information as well as demonstrated individuals who indicated they have *never* received information regarding pregnancy prevention, STI prevention and alcohol or drug use prevention.

**Figure 2. Received pregnancy information**
Figure 3. Interested to receive pregnancy prevention information

Figure 4. Receive STD/I prevention information
Figure 5. Interested to receive STD/I prevention information

Figure 6. Received alcohol and other drug use information
Descriptive Findings and Hypotheses

Out of the 126 Asian American college students who reported being sexually active, 73% have only had one sex partner while 20% reported having two or more sex partners within the last 12 months. In comparison, 82% of White college students reported one sex partner while 13% reported having two or more partners; 70% of Hispanic college students reported having one partner while 30% reported having two or more partners; and only 58% of African American college students reported having one sex partner while 42% reported having two or more sex partners (see Table 5).

Of the individuals who reported being sexually active within the last 30 days, 42% of Asian American college students engaged in oral sex, with similar
Table 5

*Selected Sexual Behaviors and Contraceptive Use*

<table>
<thead>
<tr>
<th>Selective Variables</th>
<th>Asians</th>
<th>Caucasian</th>
<th>Hispanic</th>
<th>African American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had Sexual Partner(s)</td>
<td>126 75</td>
<td>333 78</td>
<td>183 55</td>
<td>19 46</td>
</tr>
<tr>
<td>Last 30 days Sexual Activity: Oral</td>
<td>69 42</td>
<td>187 45</td>
<td>120 37</td>
<td>16 39</td>
</tr>
<tr>
<td>Last 30 days Sexual Activity: Vaginal</td>
<td>101 60</td>
<td>272 66</td>
<td>141 43</td>
<td>15 36</td>
</tr>
<tr>
<td>Last 30 days Sexual Activity: Anal</td>
<td>7 4</td>
<td>23 5</td>
<td>9 2</td>
<td>1 2</td>
</tr>
<tr>
<td>Used a method of Birth Control last vaginal intercourse</td>
<td>106 63</td>
<td>269 64</td>
<td>144 44</td>
<td>13 31</td>
</tr>
<tr>
<td>Used Emergency Contraception</td>
<td>20 12</td>
<td>43 10</td>
<td>47 14</td>
<td>6 15</td>
</tr>
<tr>
<td>You/partner become pregnant</td>
<td>4 2</td>
<td>21 5</td>
<td>6 2</td>
<td>0 0</td>
</tr>
<tr>
<td>Last 30 days: Alcohol Used</td>
<td>164 98</td>
<td>332 77</td>
<td>207 62</td>
<td>22 52</td>
</tr>
</tbody>
</table>

Note. Selected frequency variables only accounted for participants who answered “yes” to the selected questions. Individuals who answered “no” or “have done but not in the last 30 days” were not included.
numbers for their counterparts: 45% of Whites, 37% of Hispanics and 39% of African Americans who reported the same sexual behaviors. The percentage increased for engagement in vaginal intercourse in the last 30 days: 60% of Asian American, 66% of White, 43% of Hispanic, and 36% of African American college students. In terms of anal intercourse, fewer numbers were reported: only 4% Asian American, 5% White, 2% Hispanic, and 2% African American college students.

For study participants who reported engaging in oral, vaginal, and anal intercourse in the last 30 days, 40% Asian American, 47% White, 37% Hispanic, and 41% African American college students indicated that they have *never* used a condom or any other barrier method during oral sex. On the opposite end of the spectrum, only 2% of Asian American, 2% of White, 1% of Hispanic, and 0% of African American college students reported to have *always* used a condom or other barrier methods during oral sex.

The practice of using condoms or other barrier methods increased slightly when engaging in vaginal intercourse: 21% of Asian American, 17% of White, 13% of Hispanic, and 12% of African American college students reported that they have *always* used condoms or other barrier method for vaginal intercourse within the last 30 days. On the other end, for those who reported to have *never* used a condom or other barrier method, White students were among the highest at 30%, followed by Asian Americans at 19%, Hispanics at 11% and then by African Americans at 5%.

The practice of using condoms or other barrier methods were lowest during anal intercourse: with only 4% Asian American, 5% White, 1% Hispanic, and 5% African American college students reported to have *always* used a condom or
other barrier methods. On the other end, 5% Asian American, 10% White, 8% Hispanic, and 0% African American college students reported to have *never* used a condom or any other barrier methods during anal intercourse in the last 30 days.

Overall, using a method of birth control during the last time college students had vaginal intercourse were highest among White students at 64%, followed by Asian Americans at 63%, Hispanics at 44%, and African Americans at 31%. The three most reported methods used while engaging in vaginal intercourse were the birth control pill, the male condom, and withdrawal. Hispanic students were more likely to use birth control pills at 71% as compared to Asian Americans at 60%, African Americans at 53% and Whites at 44%. Similar trends were reported for using a male condom: 82% of Hispanics, 62% of Asian Americans, 54% of Whites, and 54% of African American college students. Withdrawal was the least popular preventative measure out of the three methods, as only 22% of Whites reported practicing this technique, followed by 27% of Asian Americans, 39% of Hispanics, and 53% of African Americans. In addition, table 3 shows that 15% of African Americans, 14% of Hispanics, 10% of Whites, and 12% of Asian-Americans had used an Emergency Contraceptive method within the last two months.

**Hypothesis 1**

The first hypothesis predicted that Asian-American college students’ sexual behaviors were different when compared to their counterparts. Three questions were used to assess this hypothesis:

**Q1:** Are there differences between Asian American, White, Hispanic and African American college students’ sexual behaviors for number of sex partners?
The Independent Sample Test statistic for equality of means showed $t = -0.923$, with an associated degree of freedom of 588 and the $p$ value equal 0.18. Since the $p$ value was more than 0.05 significance level, this means that there were no statistically significant differences in the number of sex partners among Asian American and White students. Asian American college students are just as likely as White students to have multiple sex partners. The reader is advised to remember that the numbers of Asian American participants were very low compared to White (see Table 2, p. 35).

No differences were found among Asian American and Hispanic college students’ sex partner practices. Since the $p$ value was at 0.08, more than the 0.05 significance level, there were no statistically significant differences among Asian and Hispanic sex partners. Asian American college students were just as likely as Hispanic college students to have multiple sex partners. Conversely, Asian American participants were also low compared to Hispanic college students in the study.

There were no differences found ($p = 0.437$) for Asian American and African American college students therefore, the number of sex partners for Asian American and African American students were just as equal. Nonetheless, African American participants were very low compared to Asian American (see Table 2, p. 35)

**Q2:** Are there differences between Asian American, White, Hispanic and African American college students’ sexual behaviors for types of sexual partners?

The majority of college students who participated in the survey identified themselves as heterosexual within the last 12 months. Among Asian American students, 55% females identified themselves as heterosexuals, and 22% of males identified themselves as heterosexuals. Fifty-five percent of White female
participants also identified themselves as heterosexuals, 29% males identified themselves as heterosexuals, while 40% Hispanic females identified themselves as heterosexuals and 20% males identified themselves as heterosexuals. African American females reported 44% being heterosexuals and 2% males identified themselves as heterosexuals (see Table 6).

Table 6

<table>
<thead>
<tr>
<th>Sexual Partner(s)</th>
<th>Asians N</th>
<th>Caucasian N</th>
<th>Hispanic N</th>
<th>African American N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Sexual Partners</td>
<td>88</td>
<td>216</td>
<td>128</td>
<td>18</td>
</tr>
<tr>
<td>Female Sexual Partners</td>
<td>34</td>
<td>112</td>
<td>62</td>
<td>1</td>
</tr>
<tr>
<td>Transgender Sexual Partners</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Q3: Are there differences between Asian American, White, Hispanic and African American college students’ sexual behaviors for types of sexual behaviors?

A Nonparametric Chi-Square Test was used to determine Asian American college students’ sexual practices when compared to their counterparts. With an alpha set at 0.05, the Pearson Chi-Square reported statistically significant differences at $p = 0.00$ for all sexual practices (oral sex, vaginal intercourse, and anal intercourse). There were statistically significant differences among Asian American college students’ practice of sexual behaviors compared to their White, Hispanic, and African American counterparts. Sixty percent of Asian American college students reported engaging in vaginal intercourse, while 66% of White, 43% of Hispanic, and 37% of African American college students reported engaging in the same sexual practices within the last 30 days.
In regards to oral sex, 42% of Asian American college students reported engaging in this behavior. In comparison, 45% of White, 37% of Hispanic, and 39% of Hispanic college students reported engaging in oral sex within the last 30 days. The lowest percentages were in regards to practicing anal intercourse, as less than 0.4% of Asian American, 0.5% of White, 0.3% of Hispanic, and 0.3% of African American college students reported engaging in this sexual behavior within the last 30 days.

**Hypothesis 2**

The Nonparametric Chi-Square was used to test for the second hypothesis which assessed contraceptive use among Asian-Americans. The hypothesis assumed Asian American college students were less likely to use a method of birth control the last time they had intercourse compared to their ethnic cohorts.

With an alpha set at 0.05, the Pearson Chi-Square reported statistically significant, \( p = 0.00 \). Thereby, rejecting the null hypothesis and accepting the alternative hypothesis that there were statistically differences between ethnicities and the use of birth control methods the last time students had vaginal intercourse. African Americans reported the lowest frequency of using birth control methods at 31%, with Hispanics at 44% and higher for Whites at 64% and Asian Americans at 63%.

**Hypothesis 3**

The Nonparametric Chi-Square was also used to test for the third hypothesis. Hypothesis three assumed that Asian American college students were less likely to have unprotected sex as a consequence of drinking when compared to White, Hispanic, and African American college students. Seventy-two percent of Asian American college students reported that they did not have unprotected
sex after drinking, whereas, 64% of White, 56% of Hispanic, and 41% of African American college students reported the same behavior.

The Pearson Chi-Square test reported the $p$ at 0.00, which indicated statistically significant differences. We concluded that Asian college students are less likely to engage in unprotected sexual activity as a consequence of drinking compared to their ethnic counterparts (White, Hispanic, and African American). Nevertheless, even though they were less likely to engage in unprotected sexual activities as a result of intoxication, 60% of Asian American college students reported using alcohol within the last 30 days. Only 21% indicated that they had never used alcohol. Based on the data, Asian American college students were just as likely as their counterparts to drink alcohol.

**Spearman’s Rank of Correlations: Asian American College Students’ Sexual Behaviors**

The Spearman’s Rank Correlation was used to determine the relationship between Asian American college students’ grade levels, class rank, gender, their sexual practices, behaviors and contraceptive use exclusively to further the understanding of Asian American college students’ sexual health behaviors. Although there were weak negative correlations, the nonparametric correlations reported statistically significant differences for Asian American college students by age ($p = 0.011$), use of birth control methods last time had vaginal intercourse ($p = 0.00$), last 30 days use of condom or barrier method during oral sex ($p = 0.001$), last 30 days use of condom or barrier method during vaginal intercourse ($p = 0.042$), last 30 days practice of anal intercourse ($p = 0.017$), last 30 days practice of vaginal intercourse ($p = 0.002$), last 30 days practice of oral sex ($p = 0.00$), number of sex partners within the last 12 months ($p = 0.00$) and practice of unprotected sex as a consequence of drinking ($p = 0.00$) (see Table 7). The data
suggested that there were relationships between Asian American college students’ age and their sexual practices such as the use of birth control methods the last time they engage in a sexual behavior (see Table 7).

Table 7

<table>
<thead>
<tr>
<th>Variables</th>
<th>Correlations Coefficient</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.008 *</td>
<td>0.804</td>
</tr>
<tr>
<td>Age</td>
<td>-0.080 *</td>
<td>0.011 *</td>
</tr>
<tr>
<td>Year in school</td>
<td>-0.039 *</td>
<td>0.217</td>
</tr>
<tr>
<td>Use a BC Method</td>
<td>-0.152</td>
<td>0.000 *</td>
</tr>
<tr>
<td>Last 30 days: Condom/Barrier for Anal</td>
<td>-0.055 *</td>
<td>0.083</td>
</tr>
<tr>
<td>Last 30 days: Condom/Barrier for Vaginal</td>
<td>-0.065</td>
<td>0.042 *</td>
</tr>
<tr>
<td>Last 30 days: Condom/Barrier for Oral</td>
<td>-0.103</td>
<td>0.001 *</td>
</tr>
<tr>
<td>Last 30 days: Anal</td>
<td>-0.076</td>
<td>0.017 *</td>
</tr>
<tr>
<td>Last 30 days: Vaginal</td>
<td>-0.101</td>
<td>0.002 *</td>
</tr>
<tr>
<td>Last 30 days: Oral</td>
<td>-0.125</td>
<td>0.000 *</td>
</tr>
<tr>
<td>Last 12 months: # Sexual Partners</td>
<td>-0.122</td>
<td>0.000 *</td>
</tr>
<tr>
<td>Consequence of drinking: Had unprotected sex</td>
<td>-0.149</td>
<td>0.000 *</td>
</tr>
</tbody>
</table>

Note. * Significant at the 0.05 level.

Summary

Findings from this study showed that the vast majority of the college students who participated in the NCAH-ACHA web-based survey were sexually active, have consumed alcohol (or have been intoxicated), and engaged in risky sexual behaviors. Based on the three proposed hypotheses, statistically significant differences were found for Asian American college students and their ethnic
cohorts (White, Hispanic, and African American). Findings suggested that Asian American college students were just as likely as their peers to have multiple sex partners.

In addition, risky sexual behaviors such as not using contraceptive method(s) for sexual practices were just as high for Asian American participants as compared to their counterparts. For data where there were differences, such as the statistically significant differences between ethnicity and the use of birth control methods, this simply means that Asian American participants used less contraceptive methods such as condoms for vaginal, anal, and oral sex within the last 30 days when compared to their ethnic cohorts. As for the statistically significant differences between ethnicity and having unprotected sex as a consequence of drinking alcohol, Asian American college students were less likely to engage in unprotected sexual activity as a consequence of drinking ($p = 0.00$). Nevertheless, data for the study showed that 60% of the Asian American participants reported using alcohol within the last 30 days.

The study also found weak correlations between Asian American college students’ age and their risky sexual practices. Younger Asian American college students were less likely to practice safer sex, such as using birth control methods, the last time they engaged in sexual activities. This merely suggests that in general, youth has its disadvantages, however, this pattern is inconclusive.
Chapter 5

DISCUSSION

In an effort to reduce unintended pregnancy and STI rates in the United States, Healthy People 2010 presents goals and objectives to guide healthcare professionals and organizations. To further strengthen Healthy People 2010’s mission, this study investigated Asian American college students’ sexual behaviors, practices, contraceptive use, and alcohol use. The study compared Asian American college students’ risky sexual behaviors to their White, Hispanic, and African American counterparts attending Fresno State. Finally, this study assessed the relationship between Asian American college students’ grade levels, gender, their sexual practices, behaviors and contraceptive use. Findings from this study revealed many important sexual health factors as indicated by Asian American college students who participated in the NCHA-ACHA 2009 web-based survey.

Some of the goals of this study were to understand and initiate productive ideas for health care professionals and organizations in their attempt to fight against the spread of sexually transmitted infections (STIs) and unplanned pregnancies, not just for Asian American college students, but for all diverse student populations throughout the nation. In order to do so, reliable reporting of sexual practices, contraceptive protection and risky behaviors are required to effectively develop sexual health education and disease prevention programs that will be culturally appropriate to meet students’ health needs. Published literature reveals limited data regarding health concerns of the Asian American and Pacific
Islanders (AAPIs) living in the United States, and even less among Asian American college students (Ghosh, 2003; Wislar & Fendrich, 2000).

Findings from this study demonstrated that Asian American college students were just as likely as their peers to practice unsafe sex, such as having multiple sex partners. The result is similar to that of Lin, Chu & Lin’s (2007) and Maxell, Bastani, & Warda (2000), which suggested that Asian American college students do not practice safer sex consistently during sexual activities. For example, 20% sexually active Asian American college students reported having two or more sex partners within the last 12 months, compared to only 13% of Whites. Statistics show that 30% of Hispanic and 42% of African American college students reported having two or more sex partners within the last 12 months, which is slightly higher than the reported rates for Asian American and White college students attending Fresno State in the Spring of 2009.

Furthermore, the data suggested that college students (especially Hispanic and African American) are more prone to multiple relationships. This result is similar to Gavin et al. (2009) and Santelli, Brener, Lowry, Bhatt, and Zabin’s (1998) findings which revealed that Black and Hispanic young adults were more likely to indicate having two or more sex partners. In addition, the study showed that the vast majority of college students were sexually experienced, consumed alcohol and engaged in risky sexual behaviors, which similar to that of Brown & Vanable (2007), Gavin et al. (2009), and Patrick, Covin, Fulop, Calfas, & Lovato (1997). The results of this study indicate a substantial amount of serious, risky sexual health behaviors among college students. Nevertheless, to better identify the correlations between each ethnic group’s risky sexual practices, more research has to be done to understand their cultural point of view about relationships.
Implications

The findings from this study found that Asian American college students who participated in the survey were sexually active and practiced risky sexual behaviors such as not using birth control methods within the last 30 days. This finding was also true for all other ethnic groups who participated in the NCHA-ACHA survey in 2009. For these reasons, it is crucial for health professionals on college campuses to educate Asian American students as well as their ethnic cohorts about the risk factors involved with engaging in unprotected sexual behaviors. Health professionals can provide positive sexual health information so that students can make informed, family planning decisions before engaging in sexual activity.

Research shows that healthcare providers face many challenges trying to reach the Asian American communities on sexual health issues because of the cultural sensitivity and hesitation in many of the Asian American communities. Our study showed that Asian American college students and their cohorts were reluctant to receive sexual health information and preventative care services on STIs, pregnancy, alcohol and drug use. Perhaps one of the reasons for this hesitance is a lack of discussion about sensitive sexual issues at home.

Currently, many reproductive health education programs lack the financial ability to provide engaging and comprehensive sex education to college students. More funding should be dedicated to the improvement of health education and disease prevention programs aiming to reduce sexually transmitted infections and unintended pregnancy, particularly at the college level.

Findings from this study suggest that there were statistically significant differences in sexual practices among Asian American college students when compared to their White, Hispanic, and African American counterparts. Namely,
differences in sexual practices were found in age, differences in the use of birth control methods, and differences in the number of sexual partners loosely kept by each cohort. Kirby et al. (1994) suggests that school-based prevention programs are the most effective in delaying student initiation of sexual activity and in educating students to use protection during sexual intercourse. It would be extremely beneficial to have more school-based reproductive health education programs focused on the prevention of STIs and unintended pregnancies, especially targeted toward appropriate groups who are at high risk such as college-aged students and underserved minority groups.

Furthermore, reproductive health educators should also be aware of the low utilization of preventative measures in the Asian American community and promote the positive use of contraceptives and STI barriers (‘contraceptives’, only referring to birth control methods, not necessarily STI preventative forms). Young parenthood is not an ideal situation for our future generation of leaders. Failure to use birth control pills could drastically change the lives of our students for the worse. Also, due to the fatal consequences and rampant spread of HIV and AIDS in the United States, preventing sexually transmitted infections (STI) should be one of our nation’s priorities (Garwick et al., 2004; Hollar & Snizek, 1996). We should be doing our very best to educate students to make responsible choices.

**Future Research and Recommendations**

For quantitative reasons regarding accurateness, future researchers might consider collecting a larger Asian American sample size to better represent the actual number of Asian American college students attending Fresno State. While the focus of the current study was Asian American college students, the sample size was small in comparison to the rest of the population (White and Hispanic).
Only 16.4% of the sample size was Asian-American, as compared to 42.1% White, 32.6% Hispanic and 4.2% African American.

The term ‘Asian-Americans’ encompass such a wide spectrum of different ethnic groups within this large community. Future research should focus on the sexual behaviors, practices, and contraceptive use between the different ethnic groups within the larger Asian-American community. Asian American/Pacific Islanders (AAPIs) have roots in more than 29 countries and have different cultures, values, beliefs and expectations. Also, there are numerous Asian groups: Chinese, Japanese, Vietnamese, Hmong, and so much more who are attending Fresno State. It would be more accurate to specifically investigate each ethnic group separately or even possibly do a cross-sectional study to assess whether or not each group’s lifestyles are different.

In addition to investigating different lifestyles among Asian American college students, future research should focus on cross-sectional study in the AAPI communities by comparing parents and their children’s opinions about sexual practices. This will help healthcare professionals understand the different sexual health beliefs and issues among each generation of Asian Americans and analyze their implications.

This study did not investigate the associations between sexual health and immigration, acculturation, and educational background. Future research should consider these important factors among Asian American college students as they weigh heavily on social dispositions. A different study found that Asian American college students have been heavily influenced by western ideas of socialization, which in turn affected their sexual behaviors and practices (Okazaki, 2002). While research suggests that many Asian American college students living in the United States have been taught traditional Asian cultural values at home, they are
also heavily influenced by the American lifestyle at school and would be more inclined to share American attitudes toward sexuality (Huang & Uba, 1992), which can affect their choice of sexual behaviors such as having multiple sexual partners and so forth. Interestingly enough, further research regarding the correlations between the length of exposure to education and risky sexual behaviors for Asian American college students would benefit the overall understanding of health issues for this community.

Sadly, many of the participants indicated that they had not received information about STI prevention, pregnancy prevention, drug and alcohol use. Even more profound is the issue of students not being interested in receiving information on such health topics (see Figures 2-7, pp. 39-42). According to Barth, Cook, Downs, Switzer, and Fischhoff (2002), social stigmas and negative consequences appear to represent significant barriers for college students' to seek reproductive health information and receive screening services. A combined quantitative and qualitative study could reveal the reasoning behind these choices. It is very important that students are provided with the information necessary to make informed choices; however, it is just as important to find out about students’ apathy.

Research has shown that many people are hesitant to reveal detailed information about their sex lives, which is a very sensitive and stigmatizing topic for many individuals and communities, particularly the Asian American communities (Kim & Ward, 2007). Nevertheless, insightful information from Asian American college students’ sexual beliefs, behaviors, and contraceptive choices are of vital importance for healthcare providers who work with this population. To proactively support this sharing of information, it would help to provide a focus group where participants are provided psychological support and
where participants can have a safe environment to express their opinions. Also, like anything productive, a collaborative effort between targeted communities and health care professionals would be immensely beneficial.

Additionally, the questionnaire instrument sample size should be considered for future studies. Although the NCHA-ACHA survey instrument has been pilot tested for its reliability and validity, the NCHA-ACHA questionnaires may not specifically be targeted at just Asian American college students. For a study that is specifically targeted at Asian American college students, researchers should pilot test the NCHA-ACHA survey among Asian American students for cultural sensitivity and appropriateness before distribution. Also, future research should include more specific questions about students’ sexual practices, risky behaviors, and contraceptive use such as factors or decisions contributing to why students engage in certain risky behaviors or make certain health-related choices.

Summary

This chapter provided crucial implications and directions for future studies targeting Asian American college students’ sexual practices, behaviors, and contraceptive use. Recommendations were also suggested for healthcare providers and/or health educators working in reproductive health services serving Asian American college students. For example, the study showed that all college students (Asian American, White, Hispanic, and African American) indicated being sexually active with multiple sex partners but are reluctant to obtain preventative information regarding STIs, pregnancy, drug and alcohol use. Future study should focus on a combined quantitative and qualitative assessment to effectively explore the differences among each racial and ethnic group, particularly within the Asian American communities because they have different
cultural values, beliefs, and lifestyles. Also, for accurateness of the target group, future research should collect a larger Asian American sample size as the current study only had 16.4% Asian American participants compared to the rest of their ethnic cohorts. Therefore, the results may not be used to generalize the behaviors of the entire Asian American student population attending the university.

Acculturation and assimilation of students are also important factors and should be considered for future research studies. The current study did not investigate acculturation and assimilation; which may provide insightful explanations for the sexual choices that Asian American students made. Given the gravity of the direction of our young people’s health now and in the future, a conscious effort must be made to guide them in the right direction. It is crucial that health care professionals promote healthy lifestyles, not just for our Asian American youth, but for all youth around the nation. Providing them with the necessary resources and guidance will help them become responsible, productive members of society and most importantly, it will help them make crucial and informed decisions about their sexual health, which could very well save the nation altogether.
REFERENCES
REFERENCES


APPENDICES
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<tr>
<th>Student Demographic</th>
<th>N</th>
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<tr>
<td>Undergraduate</td>
<td>18,216</td>
<td>84.7</td>
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<tr>
<td>Graduate</td>
<td>2,424</td>
<td>11.3</td>
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<tr>
<td>Postbaccalaureate</td>
<td>860</td>
<td>4.0</td>
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<tr>
<td><strong>All Students</strong></td>
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<tr>
<td>Full-time</td>
<td>17,468</td>
<td>81.2</td>
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<tr>
<td>Part-time</td>
<td>4,032</td>
<td>18.8</td>
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<tr>
<td><strong>Gender</strong></td>
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<tr>
<td>Female</td>
<td>12,698</td>
<td>59.1</td>
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<td>Male</td>
<td>8,802</td>
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<td><strong>Ethnicity</strong></td>
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<tr>
<td>African-American</td>
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<td>American Indian</td>
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<td>Asian</td>
<td>3,209</td>
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<td>Hispanic</td>
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<td>White</td>
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<td>Other/Unknown</td>
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<td>International Students</td>
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<td><strong>Total Headcount</strong></td>
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Source: California State University, Fresno, Institutional Research, Assessment and Planning, 2010.
APPENDIX B
HEALTH BELIEF MODEL
**INDIVIDUAL PERCEPTIONS**  
Perceived susceptibility to Disease “X”  
Perceived Seriousness (Severity) of Disease “X”

**MODIFYING FACTOR**  
Demographic Variables  
(age, sex, race, ethnicity, etc.)  
Sociopsychological variables

**LIKELIHOOD OF ACTION**  
Perceived benefits of Preventive action  
Minus  
Perceived barriers to Preventive action

Perceived Threat of Disease “X”

Cues to Action  
Mass Media Campaigns  
Advice from others  
Reminder postcard from physician or dentist  
Illness of family member or friend  
Newspaper or magazine article

Likelihood of Taking Recommended Preventive Health Action

Source: Janz & Becker, 1984 [Reproduced with permission of *Medical Care*]
California State University, Fresno

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