UNIVERSITY OF TEXAS AT SAN ANTONIO
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ATTITUDES, KNOWLEDGE, AND BEHAVIORS OF UTSA STUDENTS ABOUT HIV/AIDS: DEVELOPMENT OF A PRELIMINARY AWARENESS AND PREVENTION CAMPAIGN

A Thesis Submitted in Partial
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ABSTRACT: This study was an exploratory study into the knowledge, attitudes, and behaviors of University of Texas at San Antonio (UTSA) students in regards to HIV/AIDS. The literature review consisted of the history, the symptoms, transmission, prevention, and statistics on the global, national, state, local, and youth level relating to HIV/AIDS. The literature review also consisted of international, national, state, and local HIV/AIDS awareness programs, as well as theories that were applicable to behavior change. To assess the knowledge, attitudes, and behaviors of UTSA students, a survey consisting of twenty-eight questions was distributed in eleven undergraduate classes at UTSA. Four hundred and forty-three total questionnaires were collected. All of these surveys were entered into SPSS. Frequencies, trends, associations, and differences were assessed in SPSS. Knowledge, attitude, and behavior questions were analyzed on an overall basis, as well as within age and race categories. After analyzing the results, the conclusion was made that a HIV/AIDS awareness and prevention campaign should focus on 18-20 year old and 21-25 year old UTSA students. Campaign suggestions that focus on this specific target group were created.

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HIV/AIDS is problem of the past, present, and future. After conducting a literature review of the HIV/AIDS epidemic, data was collected from the target population of the study, University of Texas at San Antonio (UTSA) students, with the primary interest being in UTSA students aged 18-20 and 21-25, while other age group data were used to compare to the primary age group. A survey was distributed, collected, and analyzed and was the basis for HIV/AIDS awareness and prevention program suggestions specifically for these students.

HISTORY OF AIDS

The United States first discovered HIV/AIDS in June of 1981 ("First", 2001). At that time, physicians found cases of *Pneumocystis carinii* pneumonia (PCP) in five men in Los Angeles and reported it to the Center for Disease Control (CDC). In addition to Los Angeles, New York City and San Francisco, physicians filed reports to the CDC about the disease that was described as "cellular-immune dysfunction related to a common exposure" ("First", 2001 p.1). The CDC officially named this disease Acquired Immunodeficiency Syndrome (AIDS) in 1982 (Center for Disease Control and Prevention [CDC], n.d.). Eighteen months after the CDC the creation of an investigative team, the CDC recognized all major risk factors for AIDS. The CDC then made suggestions to prevent AIDS.

SYMPTOMS OF HIV

Physicians cannot rely upon symptoms for HIV detection, since most people do not develop symptoms. However, symptoms that may occur include: "headache, sore

throat, muscle aches", which may be attributed to the flu (Hamman, 2001 p. 198). The only possible way to know if someone is infected is to get tested (CDC, n.d.).

TRANSMISSION OF HIV

Human Immunodeficiency Virus, HIV, is the known cause of AIDS (Center for Disease Control and Prevention [CDC], 1996). HIV is spread through contact with blood and body fluids of an infected person (Center for Disease Control and Prevention [CDC], 2001). HIV can be transmitted to someone by: transferring body fluids during sexual intercourse, using the same needle as someone who is HIV positive, and receiving a blood transfusion with HIV positive blood (Hamman, 2001). The body fluids that have been proven to transmit HIV include: "blood, semen, vaginal fluid, breast milk, and other body fluids containing blood" (CDC, 2001 p.1). These fluids must enter someone's system for the disease to be transmitted (AIDS.ORG, Inc., 2001). Kissing or oral sex may also transmit HIV if blood is exchanged. Blood may be present from flossing teeth or having a mouth sore. Other body fluids that transmit HIV include: "fluid surrounding the brain and spinal cord, fluid surrounding bone joint", and fluid surrounding a fetus (CDC, 2001 p. 1). Health care workers are at an increased risk, since the general public does not normally come in contact with such fluids.

Saliva and skin are natural barriers against infections such as HIV (AIDS.ORG, INC., 2001). Skin protects from infections as long as it is not open or cut. Saliva consists of chemicals that can help kill HIV. However, if the virus gets past those barriers and into someone's system, then that person is at risk for contracting HIV.

Many myths surround HIV transmission and need to be refuted. For example, mosquito bites or swimming in the same pool as an HIV-positive person does not put

anyone at risk for contacting the disease (AIDS.ORG, Inc., 2001). There are no documented cases of sweat, saliva, and tears transmitting HIV. HIV cannot spread through casual contact with a person, for example, hugging, shaking hands, or drinking from the same glass (CDC, n.d.). HIV does not live long outside of the human body, which means it is not carried through the air or by food.

AIDS DIAGNOSIS AND EFFECTS

The last stage of HIV is AIDS (CDC, n.d.). On average, symptoms of AIDS take 8-11 years to appear after being exposed to HIV. The treatment options available for HIV-positive people only slow the breaking down of the immune system, but do not cure the disease ("What is AIDS", 1998). A person is considered HIV positive when tests confirm it. While infected with HIV, one's T-cell count decreases until he/she is in the last stage of HIV, which is AIDS (National Institutes of Allergy and Infectious Disease [NIAID], 2001). A helper T-cell is the cell in the immune system that alerts the killer cells and B cells, which in turn target infectious cells and cancer cells. Without this biological alarm system, the body never knows to fight off infections. A person is diagnosed with AIDS when an HIV-positive person has a helper T-cell count less than 200 and when opportunistic infections invade and take advantage of a weak immune system (American Social Health Association [ASHA], n.d.). These opportunistic infections that occur in AIDS patients are Pneumocystis carinii pneumonia (PCP), a type of pneumonia that attacks weak immune systems, and Kaposi's sarcoma (a rare cancer with no known cure) (Hamman, 2001).

GLOBAL HIV/AIDS STATISTICS

The AIDS Epidemic Update by UNAIDS estimated forty million people living with HIV globally in 2001; one-third of those are between the ages of 15-24 and most of them have no idea that they even carry the disease (Joint, 2001). HIV/AIDS is the fourth largest global killer. Experts project 45 million new HIV infections from 2002 to 2010 (Stephenson, 2002).

NATIONAL HIV/AIDS STATISTICS

AIDS Cases

Since AIDS first appeared in the United States, it has spread throughout the country and appears in every state and territory ("Current", 1989). Through June of 2001, a total of 455,750 people in the United States were reported to be living with AIDS or HIV (Department of Health and Human Service [DHHS], 2001). In 2000, about 41,113 new AIDS cases were diagnosed in the United States, while in 1999, 40,907 new AIDS cases were diagnosed ("Update", 2002).

Exposure Category

Heterosexual contact for AIDS incidence based on year of diagnosis for both males and females went down briefly from 1997-1999, however was back on the rise in 2000 (DHHS, 2001). Heterosexual contact is the second highest means of exposure, 10% behind homosexual contact. An estimated 264,149 males live with AIDS in the United States, yet less than ten percent contracted the disease from heterosexual contact, as seen in Table 1 ("Update", 2002). Over half of men living with AIDS contracted the disease through homosexual contact. An estimated 69,775 females, adults and adolescents, were

living with AIDS as of 2000 in the United States. Over half of the cases contracted the disease through heterosexual contact (See Table 1).

TABLE 1-National HIV/AIDS Statistics

	Heterosexual Exposure	**Homosexual Exposure**	**Injected Drug Use**	**Homosexual Exposure with Drug Users**
Male and Female-HIV cases (21,795) (Department, 2001)	17% (3,678)	31% (6,671)	10% (2,110)	3% (594)
Male- AIDS cases (Update, 2002)	9% (23,333)	57% (151,325)	—	—
Female- AIDS cases (Update, 2002)	57% (40,051)	—	—	—

Note. Department of Health and Human Services. (2001). *HIV/AIDS Surveillance Report, Vol. 13, 1.* Center for Disease Control and Prevention, Atlanta, Georgia.

Update: AIDS—United States, 2000 [Electronic version]. (2002). *Morbid and Mortality Weekly Report,* 51: 592-595.

TEXAS HIV/AIDS STATISTICS

HIV/AIDS Statistics

Texas ranks fourth on total number of AIDS positive and HIV positive cases in the United States ("HIV/AIDS", 2001). New York, California, and Florida have higher rates than Texas. However, Texas ranked 16th in the nation for rate per 100,000 population diagnosed with AIDS, with 12.8 per 100,000 population in 2000 (DHHS, 2001). Texas makes up 7.5% of the United States population (Texas State Library and Archives Commission, 2001), but only makes up 6.8% of people who live with AIDS and HIV. However, Texas only reported pediatric cases for five years, 1994-1999.

Exposure Statistics

Almost one-sixth of all HIV cases reported heterosexual transmission of HIV, however a little over one-quarter did not report any transmission category. Only a small

percentage of male HIV cases were transmitted through heterosexual transmission, however a little over one-fifth of these cases did not report any mode of exposure. Over one-third of female HIV cases in Texas occurred from heterosexual transmission, while a little over one-quarter of theses HIV cases did not report any exposure (See Table 2).

TABLE 2-Texas HIV/AIDS Statistics

	Caucasian	African Americans	Hispanics	Heterosexual Exposure	Unreported Mode of Exposure
General Population (U.S, 2002) (20,851,820)	52.4%	11.5%	32.0%	—	—
Males and Females HIV cases (HIV/STD 2000) (4,428)	38%	41%	20%	14%	27%
Males and Females AIDS cases (HIV/STD 2000) (2,790)	37%	37%	25%	—	—
Males -HIV cases (HIV/STD 2000) (3,169)	44%	34%	21%	6%	21%
Males - AIDS cases (HIV/STD 2000) (2,219)	40%	32%	27%	—	—
Females - HIV cases (HIV/STD 2000) (1,259)	23%	60%	17%	36%	27%
Females - AIDS cases (HIV/STD 2000) (571)	23%	59%	16%	—	—

Note. HIV/STD Epidemiology Division Surveillance Branch (2000). *Texas HIV/STD Surveillance Report*. Texas Department of Health, Austin, Texas.

U.S. Census Bureau(2002). *Texas Quick Facts From the US Census Bureau.* Retrieved October 3, 2002 from http://quickfacts.census.gov/qfd/states/48000.html

Ethnicity Statistics

Between January and December 2000 in Texas, 4,428 HIV cases were reported (HIV/STD Epidemiology Division Surveillance Branch [HIV/STD EDSB], 2000). Caucasian males have a higher percentage of AIDS and HIV cases than Hispanic males and African American males, however their percentage of these cases is less than the Caucasian general population percentage in Texas. African American males have a disproportionate percentage of AIDS and HIV cases compared to the African American population percentage for Texas. African American female HIV and AIDS cases in Texas are five times the percentage that African Americans have in the general population of Texas (See Table 2).

SAN ANTONIO STATISTICS

HIV/AIDS Statistics

Bexar County is the third ranked county in Texas for HIV positive cases reported (January 2000- December 2000), with 283 cases (HIV/STD EDSB, 2000). Bexar County's largest city is San Antonio, Texas. The only counties that had higher rates were the counties of Harris and Dallas, in which their largest cities are Houston and Dallas. Bexar County also ranked fourth in Texas for AIDS cases reported (January 2000- December 2000), with a 164 cases. For the rate per 100,000 population in AIDS cases in 2000, Bexar County ranked seventh out of all the counties in Texas with 11.9 cases per 100,000 population. Texas rate was 12.8 per 100,000 in 1999, so Bexar County is not far below the state average.

Exposure Statistics

Less than 5% of male HIV infections occurred from heterosexual contact. Half of all female HIV infections occurred through heterosexual contact. This is close to the national AIDS rate, but above the Texas rate for females contracting HIV through heterosexual contact (See Table 3).

Ethnicity Statistics

HIV infections for Caucasians in San Antonio (39.2 %) were slightly higher than the percent of Caucasians in the general San Antonio population (32%), which is contrary to the Texas rates for HIV infections and Caucasians (See Table 3). African Americans HIV infections in San Antonio (16.9%) were twice the percentage of their general population in San Antonio (7%). This relates to the Texas rate because the difference between the HIV infections and the general population of Texas in African American was a much greater difference (See Table 2). However, Hispanics have an HIV infection rate (43.5%) below their percentage of the general population of San Antonio (59%) (See Table 3). AIDS infections for Caucasians and Hispanics come extremely close to their percentages of the population, while African Americans AIDS cases remain double what their population percentage is.

Ethnicity and Gender HIV/AIDS Statistics

Caucasian males in San Antonio hold a greater percentage of HIV cases versus Caucasian population percentage. African American male HIV cases are more than double their population percentage, while Hispanic males fall significantly below their general population rate. Caucasian and Hispanics males AIDS cases in San Antonio fall

below their general population rate, while African Americans are above (See Table 3). However, Hispanic males have a much higher percentage of AIDS cases than HIV cases.

Caucasian females have an HIV infection rate considerably close to their population rate; while in Texas, the Caucasian female HIV infection rate is around 40% less than their population rate (See Table 2). African American females have a higher HIV infection rate in San Antonio compared to their population rate. However, Hispanic HIV infection rates for females fall below their general population rate for San Antonio (see Table 3).

TABLE 3- San Antonio HIV/AIDS Statistics

	Caucasian	**African Americans**	**Hispanics**	**Heterosexual Exposure**
General Population (U.S., n.d.) (1,144,646)	32%	7%	59%	—
Male and Females HIV infections (HARS, 2002) (278)	39.2%	16.9%	43.5%	—
Males and Females AIDS infections (HARS, 2002) (180)	28.9%	14.4%	56.7%	—
Males-HIV cases (HARS, 2002) (205)	41.5%	16.6%	41.5%	4.4%
Males -AIDS cases (HARS, 2002) (162)	29.6%	13.0%	57.4%	—
Females - HIV cases (HARS, 2002) (73)	32.9%	17.8%	49.3%	50.7%
Females - AIDS cases (HARS, 2002) (18)	22.2%	27.8%	50%	—

Note: HARS (2002). *HSDA – San Antonio.* Texas Department of Health, Austin ,Texas.
U.S. Census (n.d.). *Bexar County Population,* Washington D.C.

YOUTH HIV/AIDS STATISTICS

HIV/AIDS Statistics

It is extremely important to analyze not only national, state, and city statistics, but also the impact of sexually transmitted diseases and HIV/AIDS on the age group that this study targets. Sixty-five million people in the United States live with an incurable sexually transmitted disease (Sexuality Information and Education Council of the United States [SIECUS], 2002). Two-thirds of all sexually transmitted diseases occur in people under 25 (American Social Health Organization, 2001). In comparison to older adults, 20-24 year olds are more likely to contract a sexually transmitted disease due to the lack of monogamy and the lack of protected sex. One-half of all new HIV infections occur in people 15-24 ("Youth Ignorance", 2002). The Harvard AIDS Institute estimates that "every hour, at least two Americans under 25 become infected with HIV" (Harvard AIDS Institute, 2000 p. 1).

Exposure Statistics

Heterosexual exposure to HIV in males' aged 20-24 in San Antonio is slightly higher than that of the San Antonio rate of males, all age groups, with heterosexual exposure (See Table 4). Heterosexual exposure to HIV of females' aged 20-24 in San Antonio is below the San Antonio rate for females, of all ages, and heterosexual contact (See Table 3 and 4). However, heterosexual exposure to HIV of females aged 20-24 in San Antonio is above the Texas statistic for heterosexual exposure to HIV of female (See Table 2 and 4).

HIV Statistics

Males aged 20-24 make up 12 percent of all the male HIV infections (for all age groups) in the United States. The Texas percentage for the same age group is below this percentage, while the San Antonio percentage for this age group is almost the same. The HIV infection percentage of females' aged 20-24 at the national level is 16%. The Texas percentage in this age group is slightly above that percent, while the San Antonio rate is slightly below that percent. However, the San Antonio percentage of HIV infections of females' aged 20-24 is slightly higher than that of the males. In San Antonio, females aged 20-24 obtain the highest percentage of new HIV infections for females in regards to the age group (HARS, 2002) (See Table 4).

AIDS Statistics

The AIDS case percentage of males' aged 20-24 for Texas is slightly higher than that of San Antonio. However, the AIDS case percentage in females' aged 20-24 in San Antonio is double the Texas rate (see Table 4).

HIV and AIDS Statistics

The HIV infection rate of both genders aged 20-24 in San Antonio is three times higher than the AIDS infection rate of the same group in San Antonio. The most logical reason for lack of AIDS diagnoses for ages 18-24 is due to HIV averaging 8-11 years before turning into full-blown AIDS, which is why the older age groups have a higher prevalence of AIDS cases. The highest AIDS case rate in San Antonio occurred in 30-39 year olds (HARS, 2002). If AIDS takes 8-11 years to develop, then most people contracted HIV in their twenties (see Table 4).

TABLE 4- Youth HIV/AIDS Statistics

	National	Texas	San Antonio
20-24 year old Males/Females percentage of HIV Infections	—	—	11.9% (HARS, 2002) (33)
20-24 year old Males/Females percentage of AIDS Cases	—	—	3.3% (HARS, 2002) (6)
20-24 year old Males percent- HIV Infections of all male age groups	12% (HIV/AIDS, 2001) (12,517)	9.7% (HIV/STD, 2000) (308)	11.2% (HARS, 2002) (23)
20-24 year old Males percent- AIDS Cases of all male age groups	—	3.5% (HIV/STD, 2000) (78)	1.9% (HARS, 2002) (3)
20-24 year old Females percent- HIV infections of all female age groups	16% (HIV/AIDS, 2001) (6,751)	18% (HIV/STD, 2000) (232)	13.7% (HARS, 2002) (10)
20-24 year old Females percent- AIDS Cases of all female age groups	—	8% (HIV/STD, 2000) (46)	16.7% (HARS, 2002) (3)
20-24 year old Males heterosexual exposure	8% (HIV/AIDS, 2001) (1,216)	—	—
20-24 year old Females heterosexual exposure	36% (HIV/AIDS, 2001) (2,462)	—	—

Note: Divisions of HIV/AIDS Prevention. (2001). *HIV/AIDS Surveillance Report, Vol. 12, 2.* Center for Disease Control and Prevention, Atlanta, Georgia, Table 1 and 2.

HIV/STD Epidemiology Division Surveillance Branch (2000). *Texas HIV/STD Surveillance Report*. Texas Department of Health, Austin, Texas.

HARS (2002). *HSDA= San Antonio.* Texas Department of Health, Austin, Texas.

RISK PERCEPTIONS OF TEXANS

The 1998 Behavioral Risk Factor Surveillance Survey assessed the attitudes towards HIV in Texas adults. Researchers found that 69% of the Texas adults surveyed

felt that they were not at risk and twenty-three percent felt their chances were low of contracting the disease (Bureau of HIV and STD Prevention [BHSP], 2000). Specifically, 68.5% of people aged 18-24 surveyed felt that they had no risk of contracting HIV. Researchers discovered only 57% of people in the age group 18-24 practiced monogamy, while older age groups reported more monogamous relationships. Forty-eight percent of 18-24 year olds have more than one sex partner. Nine percent of eighteen to twenty-four year olds engaged in a HIV risk activity, almost twice the percentage of any other age group.

AIDS DEATH STATISTICS

National deaths related to AIDS and heterosexual contact have gone down significantly in recent years since its peak in 1995 (Divisions of HIV/AIDS Prevention [DHAP], 2001). However, the incidence of AIDS cases has remained steady over the years. In Bexar County, AIDS deaths decreased steadily over the time period of 1992-1999, with a slight increase in 2000 (San Antonio Metropolitan Health District [SAMHD], n.d.). This occurrence of decreasing deaths related to AIDS and the steadying incidents of AIDS cases correlates with the treatment options available and how these slow the breaking down of the immune system. The incidence of new cases has not decreased that much, people are living longer due to the treatment options available, so the attitudes about the risk of HIV/AIDS are decreasing due to the death toll decreasing.

PREVENTION OF HIV/AIDS

Prevention of Transmission of HIV/AIDS

Several ways exist for someone to protect him or herself from contracting HIV through sexual acts. Abstinence is the most effective way of protecting one's self from

contracting HIV (AIDS.ORG, Inc., 2001). A monogamous relationship is also highly effective as long as: 1) both partners are HIV-negative: 2) remain faithful: and 3) neither partner gets exposed to HIV through needles or injected drug use. Injected drug use has other prevention methods, including not reusing the same needle and sterilizing the needle before inserting it into the skin (AIDS.ORG, Inc., 2001).

Additionally, the risk of contracting HIV also decreases with the use of barriers between one's genitalia and another's rectum, vagina, or mouth (AIDS.ORG, Inc., 2001). One type of barrier is a condom. In a study that involved heterosexual couples where one partner was HIV- negative and the other was HIV-positive, researchers found that condoms worked extremely well (De Vincenzi, 1994). Of the couples who used condoms consistently, none of the HIV-negative partners became infected. However, in the couples where condoms were not always used, some of the HIV-negative partners contracted the disease. According to the CDC, studies have shown that 98-100% of people who use condoms consistently and accurately remain HIV- negative (CDC, n.d.). Spermicide and birth control pills protect from impregnation, however do not function as a barrier against HIV or any other sexually transmitted diseases.

Programs for HIV/AIDS Prevention

Many HIV/AIDS awareness and prevention programs exist worldwide. These programs range from international to national and local programs. The following programs were reviewed based on the informational methods they use for HIV/AIDS prevention and include international, national, state, and local programs.

General Programs

The Global HIV Prevention Working Group is a panel of international experts on various issues, including public health, behavioral research, and social research, convened by the Bill & Melinda Gates Foundation and Henry J. Kaiser Family Foundation for sexual transmission prevention of HIV. This group recommends general programs including: behavioral change programs, STD control, and voluntary counseling and testing (Global HIV Prevention Working Group [GHPWG], 2002).

Behavioral Change

Prevention programs that play a part in changing personal behavior reduce the risk for HIV over time (Center for Disease Control and Prevention [CDC], 1998). These programs are generally based in behavioral theories, which try to change personal beliefs, attitudes, and actions through direct contact with those that the program targets. These programs use preventive messages and seek to affect community norms (GHPWG, 2002). Strategies used to achieve more positive attitudes towards safe sex include: social marketing which is a plan that will influence the modification of some action or attitude, it can apply to various subjects (Social Marketing Network, 2001), safe sex workshops, and peer education. These behavior intervention programs have been successful with youth, heterosexual women, and homosexual men. They have also been successful in promoting healthier sexual behaviors, such as condom use and fewer sexual partners. However, these healthier sexual behaviors seem to decrease over time. The solution to this is to repeat and modify these messages, if other preventive messages are needed, along with using other prevention tools.

STD Control

Sexually transmitted diseases that go untreated make an individual more vulnerable to the transmission of HIV (GHPWG, 2002). With the treatment of sexually transmitted diseases, the HIV incidence should decrease. Early detection and treatment of HIV is an important aspect to a prevention program.

Voluntary Counseling and Testing

Voluntary counseling and testing care for those with HIV, but also help prevent the spread of HIV to others (GHPWG, 2002). Testing positive for HIV has been proven to reduce risky behavior, but the same cannot be stated for those who test negative. If those who test positive for HIV reduce their risky behavior, then the risk of them infecting someone else decreases as well.

The previously outlined programs should not be used alone, but integrated into one comprehensive prevention program. The Joint United Nations Programme on HIV/AIDS, UNAIDS, researched nations that have successful HIV prevention efforts and developed a list of characteristics that each successful country obtained:

- Strong leadership
- HIV/AIDS awareness in the general population
- Discuss sex openly and have sex education for the youth on a national level
- Various parts of society take an active stance against AIDS
- Effort to reduce the negative feeling towards those with AIDS
- Outside help in financing, implementing, and developing of comprehensive programs (GHPWG, 2002).

These characteristics should be examined when developing a comprehensive HIV/AIDS awareness and prevention program.

National Programs

Project RESPECT

The Centers for Disease Control and Prevention created Project RESPECT to assess the efficiency of "HIV prevention counseling in changing high risk sexual behaviors and preventing new sexually transmitted diseases (STDs) and HIV" ("Welcome to PROJECT", 2001 p. 1). Researchers compared a one-on-one counseling session to the normal informational messages given. The STD clinics included in this project are located in Baltimore, Denver, San Francisco, Newark, and Long Beach. Men and women participating in this program were coming in for diagnosis and treatment of a sexually transmitted disease. Each participant arranged to have an HIV test and also to come back "every three months for a year to undergo behavioral questionnaires, STD examinations and tests, and HIV tests" ("Welcome to PROJECT", 2001 p.1). Five thousand eight hundred and seventy-six men and women participated in this research, most of whom were heterosexual. The participants were then divided into three groups and each group received a different prevention intervention method. One method was enhanced counseling, which entailed "4 interactive counseling sessions based on theories of behavioral science" ("Welcome to PROJECT", 2001 p. 2). These theories include social cognitive theory and theory of reasoned action (Center for Disease Control [CDC], 1993). Another intervention method was brief counseling, which obtained two "short, interactive counseling sessions based on CDC's client-centered HIV prevention counseling model" ("Welcome to PROJECT", 2001 p. 2). The last method incorporated

in the program was didactic messages, which included "2 brief information-only sessions that are typical of what is currently done at many test sites" ("Welcome to PROJECT", 2001 p. 2). The two counseling interventions proved more effective in achieving increased condom use by participants in those sessions than those in the didactic message intervention. Both counseling sessions had fewer new STDs at six and twelve months after beginning of program. Researchers found that the counseling intervention methods were more beneficial to adolescents ("Welcome to PROJECT", 2001).

AIDS Community Demonstration Projects (ACDP)

AIDS Community Demonstration Projects (ACDP) was a five-year study started in 1989 designed to assess the impact of community planning in relation to HIV prevention intervention. ACDP's goal was to promote condom use and bleach use (for injected drug users) to "injected drug users, females sex partners of injected drug users, female commercial sex workers, at-risk youth, and non-gay-identified men who have sex with men"(Center for Disease Control [CDC], 1999 p. 1). In this study, community members encouraged condom use and bleach use to these specific target publics ("Community-level HIV", 1999). Researchers found that individuals in these intervention communities were more likely to carry condoms with them than the non-intervention communities (CDC, 1999). Individuals who were directly contacted through this intervention method were more likely to use condoms sometimes with their main sexual partner, use condoms every time with their non-main sexual partner, and use bleach on injected drug use equipment than those not directly contacted by the program.

These two national programs, sponsored by the CDC, were comprehensive and also contain evaluations of the program to assess their success. Both of these national

programs promoted safe sex as their primary means of changing the behaviors and the incidence rate of sexually transmitted diseases in their participants.

With regards to national programs, President George W. Bush Jr. continues to push abstinence as the only guarantee of prevention for sexually transmitted diseases. The CDC website recently removed their pages on condom information and the section describing the programs that work in sex education. This removal was supposedly in direct reaction to political pressure, because this information was still valid and useful. Many critics disagree with the White House's attitudes towards HIV and other sexually transmitted diseases prevention and feel that the removal of safe sex prevention will not help, but rather hurt the fight against HIV/AIDS ("Bush", 2002). Even though almost half of high school students nationwide have had intercourse and fourteen percent of those have had four or more sexual partners (Center for Disease Control [CDC], 2002), the government still wants to focus on abstinence only prevention when half of high school students have already been sexually active.

Texas Programs

Area Action Plan

Area Action Plan, a Texas Department of Health prevention plan, is based on community planning (Academy for Educational Development [AED], 2001). The Texas Department of Health divided Texas into six sections, which each of these is a Community Planning Group (CPG). Each of these community planning groups are required to develop an Area Action Plan. This Area Action Plan (AAP) contains four steps that each group must follow. First, AAP must use the amended HIV Epidemic Profile for Community Planning, which assesses morbidity information and risk

behaviors, to find the subpopulations morbidity and behavioral risk rates. Second, the AAP must use standardized tools to do needs assessment, resource inventory, and gap analysis. Then the AAP must prioritize each subpopulation into high-risk categories at local levels. Last, the AAP must select prevention intervention tools that are based in behavioral theory. CPG members are local to the community and reflect the people affected by HIV in terms of race, gender, age, and behavioral risk, which means that they can apply their knowledge of the local area and local people to prevention needs

AIDS Outreach Center (A Fort Worth Program)

The AIDS Outreach Center in Fort Worth is an organization created in 1985 for the purpose of providing mental health care to gays, lesbians, and their families. Now the organization has grown to include: maintaining the health status of those affected by HIV, preventing the transmission of HIV, providing financial aid to those with HIV, helping plan for current and future AIDS issues in Tarrant County (near Fort Worth), and do away with discrimination towards people with AIDS (AIDS Outreach Center [AOC], n.d.). Services that the AIDS Outreach Center provides are: HIV testing, HIV education (in places such as work and school), HIV prevention (including promoting prevention methods for both heterosexual and homosexual transmission of HIV), community awareness events, advocacy (such as lobbying and community advocacy), and counseling programs.

AIDS Foundation Houston (a Houston Program)

AIDS Foundation Houston (AFH) was founded in 1982 to provide services and information regarding HIV/AIDS. AFH works with other organizations, not all of these organizations are associated with AIDS issues, to reduce the incidence rate of HIV/AIDS

and to help those with and affected by HIV/AIDS (AIDS Foundation Houston [AFH], 2002). AFH has a program called "Generation Sex", where workshops are given on self-esteem and relationship topics to display healthy patterns in life to those who may not know or engage in these healthy behaviors ("Generation Sex", 2002). Outreach Prevention Programs are another part of AFH. These programs target the homeless, injected drug users, women who are at risk, gay and bisexual men, and other high risk populations for HIV prevention messages by going out on the streets to talk to these groups ("Street Outreach", 2002).

However, the Texas Department of Health focuses mainly on abstinence only prevention message for HIV/AIDS, while other prevention messages are put second. Only one Texas Department of Health program that may have dealt with other means of prevention besides abstinence was found. No specific messages, criteria, or results for the program could be located. The only Texas Department of Health prevention program that had specific criteria was an abstinence-only program. This program, Abstinence Education, was not to promote safe sex, but to teach, "that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems" (Texas Department of Health [TDH], 2002 p.2). The lack of safe sex prevention methods for HIV/AIDS may be attributed to the George Bush Jr. administration when he was governor of Texas. Even though abstinence only programs have never been proven to prevent the spread of HIV or other sexually transmitted diseases, Bush, as governor of Texas, exclusively supported abstinence only programs and supported the refusal of funding ($1.35 million three year grant) from the CDC on the assumption that the CDC funding would prohibit abstinence

only education. His Texas Educational Commissioner felt that the CDC AIDS education grant would prevent Texas from promoting abstinence only sex education. However, Texas ended up accepting the grant (Advocacy One, 2001).

San Antonio Program

San Antonio AIDS Foundation

The San Antonio AIDS Foundation (SAAF) was founded in 1986. This program has two main goals: to give care and services to people living with HIV or AIDS and use education and testing to prevent the spread of HIV. SAAF mainly operates in Bexar County and surrounding areas ("Mission/History", n.d.). The Education Department at SAAF provides prevention education to schools, youth groups, and college campuses, among other organizations that ask them to educate a particular audience. There are three basic educational programs at SAAF: the standard program, the peer education program, and in-service training. The standard program gives general information on HIV and AIDS, such as modes of transmission, preventive tools, and testing solutions. A person who has AIDS talks to the group that SAAF is educating on how AIDS has affected his or her life. The peer education program is a five-hour long program, which gives more in-depth information to people who take that information and then educate their peers on the subject. In-service training is geared towards organizations that want training on HIV/AIDS (San Antonio AIDS Foundation [SAAF], n.d.).

The local Texas HIV/AIDS programs include those in Fort Worth, Houston, and San Antonio. However, the Fort Worth and San Antonio programs have a primary purpose of helping those who live with HIV/AIDS, with a secondary purpose of preventing such disease. AIDS Foundation Houston seems to concentrate on both issues

equally. The AFH targets the high-risk publics with an active stance, meaning the organization takes the information to these publics. In the San Antonio and Fort Worth programs, the organizations do not take a pro-active stance. These organizations either wait for an organization to contact them or they wait for people to come to them for testing. Texas local cities are in desperate need for HIV/AIDS awareness and prevention programs that focus on safe sex and abstinence, and that take a pro-active approach to prevention.

COMMUNICATION NEEDS

With no known cure and treatment options that only extend life for a certain amount of time, awareness and prevention are the only effective weapons against HIV/AIDS. Present global campaigns only reach one in five who are really at risk for getting HIV. In order to prevent 45 million new cases of HIV/AIDS in eight years (Stephenson, 2002), awareness and prevention campaigns will need to be up scaled significantly and globally. If this up scaling of global campaigns took place by 2005, experts estimate that sixty percent of those predicted cases could be prevented, which would result in saving 29 million lives from ultimate death due to AIDS. The major medical associations all agree that sexual education programs best fight the spread of HIV/AIDS ("SIECUS Urges the", 2002). The United States has a goal of reducing all new HIV infections in half by 2005 ("Update", 2002).

APPLICABLE THEORIES

The following theories were chosen on the basis that they specifically deal with the process of behavioral change, how people choose certain actions and what needs to occur for someone to choose a certain action. The social cognitive theory and the theory

of reasoned action were both used in the successful CDC program, PROJECT RESPECT. The Health Belief model was chosen by the researcher due to its specific reference to a preventive health measure.

Social Cognitive Theory

The social cognitive theory states two factors influence whether or not someone will adopt a preventive behavior (Bandura, 1986; Cappella, Fisbein, Hornik, Ahern, & Sayeed, 2001). First, the person must believe that the compensation for performing the preventive behavior is more important than the cost of performing the action. Second, the person must believe that he/she has the ability to perform this preventive action, no matter what situation may arise.

Theory of Reasoned Action

The theory of reasoned action posits that one factor determines whether or not an individual will perform an action: intent (Fishbein & Ajzen, 1975; Cappella et al., 2001). A person must have intentions of performing an action in order for him or her to complete the action. An intention incorporates the person's attitudes towards the behavior (cost vs. benefits) and how the person perceives the "social pressure" placed upon him or her to do the behavior (Cappella et al., 2001 p. 218). Someone must feel that the benefits of doing the act outweigh the costs (including the social pressure placed upon the person to do the specific act).

Health Belief Model

The health belief model states that two ideas must be accepted in order to persuade people to take on a preventive health behavior (Rosenstock, 1966; Cappella et al., 2001.). The first idea is that the person must feel personally in danger or susceptible

to a disease that will have a serious consequence. The second is that the person must believe that the preventive actions are more important than the complications associated with doing the preventive action, such as cost.

These theories will help define the process whereby someone chooses a new behavior. They will also help determine the messages that should be used to communicate to the most at-risk populations.

IMPLICATIONS

Communication is the best weapon against HIV/AIDS. The world needs to take full advantage of the few opportunities that the global community has in the fight against HIV/AIDS. All of the previously outlined sexual protective measures should be considered when trying to communicate preventive measures for HIV/AIDS. Both males and females should be equally informed about how to protect themselves and others from contracting the disease. Even though a low percentage of San Antonio males contract the disease through heterosexual contact, there is still a great need to inform San Antonio males of heterosexual prevention. Over half of females diagnosed with AIDS contracted the disease from a male, which means that males are also in need of heterosexual prevention information. In San Antonio, a sexual prevention program for HIV/AIDS should be developed. One main target audience should be females aged 20-24 due to the fact that this particular group has the highest contract rate of HIV out of all other female age groups in San Antonio (HARS, 2002). Males and females aged 20-24 should be a target audience of a HIV/AIDS awareness and prevention program in San Antonio, since their HIV infection rates are not far from the national rates. Furthermore, African Americans and Caucasians in San Antonio should be a target audience of a HIV/AIDS

awareness and prevention program in San Antonio due to their high HIV infection rate in relation to their population percentage.

RESEARCH QUESTIONS

Research questions for this study revolve around the awareness of UTSA students regarding HIV/AIDS transmission and prevention measures with the primary interest being UTSA students aged 18-20 and 21-25, but comparisons were made to other age groups. Comparisons were made between the independent variables: age, race, and gender. The dependent variables included attitudinal questions regarding whether or not UTSA students or themselves were threatened by HIV/AIDS, knowledge questions relating to HIV/AIDS prevention and transmission, and behavioral questions relating to sexual intercourse and protected sex. The following define each of these dependent variables. According to Pope (2002), an attitude is "a state of mind or feeling; a disposition" (p. 92). The survey assessed attitudes regarding HIV/AIDS as a threat and to whom it is perceived as a threat. A threat is "an indication of impending danger or harm" (Pope, 2002 p. 1435). In this study, threatened meant that HIV/AIDS is an impending threat. Awareness means, "having knowledge" (Pope, 2002 p. 99). According to Pope (2002), knowledge is "familiarity, awareness, or understanding gained through experience or study" (p.768). Knowledge was assessed in the survey by asking participants to rate their knowledge on the subject of HIV/AIDS and also in questions that asked participants to answer questions about HIV/AIDS transmission and prevention. Transmission means "the act or process of transmitting" (Pope, 2002 p. 1461). To transmit means " to cause to spread; pass on" (Pope, 2002 p.1461). In the survey transmission and transmit meant spreading HIV/AIDS to someone else. Preventive

means, "intended or used to prevent or hinder" (Pope, 2002 p. 1104). A preventive measure would then be an action taken to prevent something from happening. For example, using condoms to prevent HIV spread or infection would mean putting on a condom before intercourse and keeping it on until intercourse is complete as a preventive measure. A behavior is considered "the manner in which one behaves" (Pope, 2002 p.128). Predisposed behaviors must be established to know what behaviors need to change, if any, regarding sexual intercourse, different sexual partners, and the use of contraception during sexual intercourse. Abstinence would be "the act or practice of refraining from indulging an appetite" (Pope, 2002 p. 6). In this study, abstinence meant refraining from having sexual intercourse. In this study, sexual intercourse meant " sexual contact between humans involving genital contact" (Pope, 2002 p. 1271). The assessment of the participant's actions regarding sexual intercourse, different sexual partners, and the use of contraception to protect themselves from HIV/AIDS determined the sexual behaviors of the participants.

Research questions included:

1) What are the awareness levels of UTSA students regarding the transmission and prevention of HIV/AIDS?
2) What pre-disposed attitudes do UTSA students have about HIV/AIDS?
3) What are the sexual practices of UTSA students?
4) Which media do UTSA students use in general?
5) Where do UTSA students typically look for information about health issues?

6) What school functions do UTSA students attend?

These research questions were very generalized due to the exploratory nature of this study.

METHODOLOGY

Participants

The participants were UTSA students, with the primary interest in students aged 18-20 and 21-25. Students voluntarily completed a survey and were not identifiable by their responses. The UTSA population is 22,016 students (Office of the Registrar, 2002). According to the Survey System (2001), to ensure reliability, the sampling size of this survey must be 378 completed surveys by UTSA students to have a 95% confidence level and a confidence interval of 5 in relation to the entire UTSA student population, if this were a random sample. However, this is a convenience sample. Therefore, 445 questionnaires were collected; two of them were filled out by non-UTSA students and were automatically thrown out. Four hundred and forty-three valid questionnaires were completed. More females than males participated in this study. A majority of the students were either Caucasian or Hispanic (See Table 5). A majority of the students fell between the ages 18-20. More freshmen participated in this study than any other group of students, but overall a fairly even distribution among class standing was seen (See Table 6).

TABLE 5- Gender and Race Demographics

	Actual Number	Percentage of Population
Male	173	39%
Female	269	61%
Caucasian	190	42.9%
Hispanic or other Spanish speakers	177	40%
African American	31	7%
Asian	19	4.3%
Other- race	10	2.3%
Pakistani	2	.5%
American Indian	2	.5%

TABLE 6- Age and Class Standing Demographics

	Actual Number	Percentage of Population
Aged 18-20	228	51.5%
Aged 21-25	144	32.5%
Aged 26-30	31	7%
Aged 31-39	24	5.6%
Aged 40-49	7	1.6%
Freshman	148	33.4%
Sophomore	78	17.6%
Junior	114	25.7%
Senior	102	23%

Data Collection

Participants completed a survey about HIV/AIDS within the first six weeks of the Spring semester in 2003 (See Appendix A). To collect the data, professors were contacted for permission to distribute the survey in their classes. The classes were: one section of COM 2343: Intro to Mass Communication, one section of COM 3523: Public Relations, two sections of HTH 2513: Personal Health Management, one section of HTH 3533: Drugs and Health, one section of HIS 1053: US History Civil War to Present, one section of GER 1024: Elementary German II, one section of CSH 1213: World Topics: German Culture, one section of HUM 3623: Topics: The Germans, one section of PSY 1013: Introduction to Psychology, and HTH 4503: Survey of Human Disease. Contact with each professor was made prior to data collection to determine the classes that participated. Surveys were distributed in either the first ten minutes or the last ten minutes of classes. A confidentiality form was attached to the top of every survey, which participants signed (See Appendix B). The researcher announced that the questionnaire sought sensitive data and if anyone did not wish to participate, he/she could return the questionnaires blank. When the participants turned in the completed questionnaires, the

consent form was detached from each questionnaire to ensure confidentiality for each participant. Students who happened to have filled out the survey in another class previously were asked not to participate again

Data Analysis

Non-parametric and parametric statistics were used to assess frequencies, trends, associations, and differences.

RESULTS

The purpose of this study was to determine the knowledge, attitudes, and behaviors regarding HIV/AIDS of different race, gender, and ethnicity groups at UTSA and design an awareness and prevention campaign aimed specifically at the most vulnerable groups. The missing data was not used to compute any of the following statistics.

Knowledge Results

Specific questions on the survey regarding knowledge about HIV/AIDS, prevention methods, and transmission methods were examined on an overall basis and also with the age groups 18-20 and 21-25.These questions regarding UTSA students knowledge about the transmission and prevention of HIV/AIDS answered the first research question proposed: what are the awareness levels of UTSA students regarding the transmission and prevention of HIV/AIDS?

Overall Knowledge Results of UTSA Students

The overall knowledge of UTSA students was fair, but also showed that myths associated with the transmission and prevention of HIV/AIDS still prevail, such as birth control pills, diaphragms, and washing hands preventing HIV/AIDS, as well as sweat and saliva transmitting the disease. Only one participant stated that he/she was not aware of HIV/AIDS (See Table 7). Breast-feeding is also one transmission method that more people stated did not transmit HIV/AIDS than stated it did.

TABLE 7- Overall Knowledge about HIV/AIDS Prevention and Transmission

	Yes	NO
Aware of HIV/AIDS (N= 443)	99.8% (N= 442)	.2% (N=1)
HIV is the cause of AIDS (N= 429)	83.4% (N= 358)	16.6% (N= 71)
Know how to Prevent HIV/AIDS (N=441)	97.5% (N= 430)	2.5% (N= 11)
Know how HIV/AIDS is transmitted (N= 434)	97.5% (N= 423)	2.5% (N= 11)
Birth control pills-prevents transmission (N= 437)	3.9% (N= 17)	96.7% (N= 420)
Condoms-prevents transmission (N= 437)	70.9% (N= 310)	29.1% (N= 127)
Abstinence prevents transmission (N= 437)	93.8% (N= 410)	6.2% (N=27)
Diaphragms prevents transmission (N= 437)	12.8% (N= 56)	87.2% (N= 381)
Washing Hands prevents transmission (N= 437)	5.7% (N= 25)	94.3% (N= 412)
Tears transmit HIV/AIDS (N= 441)	1.4% (N=6)	98.6% (N=435)
Blood Transfusions transmits HIV/AIDS (N= 441)	96% (N=423)	4% (N= 18)
Hugging transmits HIV/AIDS (N=441)	.2% (N= 1)	99.8% (N=440)
Oral Sex transmits HIV/AIDS (N= 441)	60% (N=265)	40% (N= 176)
Saliva transmits HIV/AIDS (N= 441)	20.9% (N= 92)	79.1% (N= 349)
Kissing transmits HIV/AIDS (N=441)	5.7% (N= 25)	94.3% (N= 416)
Shaking Hands transmits HIV/AIDS (N= 441)	.2% (N=1)	99.8% (N= 440)
Vaginal Fluids transmit HIV/AIDS (N= 441)	86.8% (N= 383)	13.2% (N= 58)
Needles transmits HIV/AIDS (N= 441)	89.2% (N= 428)	10.8% (N=48)
Sweat transmits HIV/AIDS (N= 441)	3% (N=13)	97% (N= 428)
Semen transmits HIV/AIDS (N= 441)	88.8% (N=392)	11.2% (N= 49)
Breast feeding transmits HIV/AIDS (N=441)	30.4% (N= 134)	69.6% (N= 307)
Sexual Intercourse transmits HIV/AIDS (N= 441)	96.6% (N= 426)	3.4% (N= 15)

Participants had to assess their own knowledge about HIV/AIDS, whether they believed they were very knowledgeable about HIV/AIDS, knowledgeable about HIV/AIDS, or somewhat knowledgeable about HIV/AIDS. More participants considered themselves somewhat knowledgeable about HIV/AIDS than very knowledgeable. Most participants considered themselves knowledgeable about HIV/AIDS (See Table 8).

Table 8 Levels of Students Knowledge of HIV/AIDS
(N= 441)

Very Knowledgeable (N= 71)	16.1%
Knowledgeable (N=245)	55.7%
Somewhat Knowledgeable (N= 124)	28.2%

Knowledge and Age Group Results

More 26-30 year olds, 31-39 year olds, and 40-49 year olds rated their knowledge as very knowledgeable than the 18-20 year olds and 21-25 year olds. More 18-20 year olds, 21-25year olds, and 26-30 year olds rated their knowledge as somewhat knowledgeable than 31-39 year olds and 40-49 year olds (See Table 9).

TABLE 9- UTSA Students Rate their Knowledge Regarding HIV/AIDS

	Very Knowledgeable	Knowledgeable	Somewhat Knowledgeable
18-20 year olds	12.3% (N= 28)	55.1% (N= 125)	32.6% (N= 74)
21-25 year olds	14.1% (N= 20)	60.6% (N=86)	25.3% (N= 36)
26-30 year olds	25.8% (N= 8)	45.2% (N= 14)	29% (N= 9)
31-39 year olds	33.3% (N= 8)	58.3% (N= 14)	8.3% (N= 2)
40-49 year olds	42.9% (N= 3)	42.9% (N= 3)	14.3% (N= 1)

Overall, participant's aged 18-20 had a lower rate of knowledge about HIV/AIDS than any other age group. More 18-20 yr old participants believed that HIV/AIDS could be prevented by birth control, diaphragms, and by washing hands than participants aged 21-25. More 21-25 year olds stated that they knew how to prevent HIV/AIDS than 18-20 year olds (See Table 10).

TABLE 10- Students Knowledge of HIV/AIDS Prevention and Transmission by Age Group

	Aged 18-20	**Aged 21-25**
Know how to Prevent HIV/AIDS	96.5% (N= 218)	98.6% (N=142)
Know how HIV/AIDS is transmitted	96.8%(N= 213)	98.6% (N= 141)
Birth control pills-prevents transmission	6.3% (N= 14)	7% (N= 1)
Condoms-prevents transmission	69.1% (N= 155)	74.1% (N= 106)
Abstinence prevents transmission	93.3% (N= 209)	93.7% (N= 134)
Diaphragms prevents transmission	16.5% (N= 37)	11.9% (N= 17)
Washing Hands prevents transmission	8% (N= 18)	4.2% (N= 6)

Knowledge and Race Results

Cross-tabs between race and knowledge of how to transmit and prevent HIV/AIDS were assessed (See Table 11). There was a large difference between minorities' knowledge and non-minorities, especially within the Asian population . The Asian population had the lowest percentage reporting abstinence preventing HIV/AIDS. Asians and African Americans have a higher percentage of those who believe that birth control pills and washing of hands prevents HIV/AIDS than Hispanics and Caucasians.

TABLE 11- Prevention Method Knowledge and Race Analysis

	Yes	NO
Knows how to prevent HIV/AIDS	Caucasian-98.4% (N= 187) Hispanic-96% (N= 170) Asian-94.7% (N= 18) African American- 96.7% (N=29)	Caucasian-1.6% (N= 3) Hispanic- 4% (N= 6) Asian-5.3% (N= 1) African American-3.3% (N= 1)
Birth control pills-prevents transmission	Caucasian-2.7% (N= 5) Hispanic-2.3% (N= 4) Asian-5.3% (N= 1) African American-9.7% (N= 3)	Caucasian-97.3% (N= 183) Hispanic-97.7% (N= 169) Asian-94.7% (N= 18) African American-90.3% (N= 28)
Condoms-prevents transmission	Caucasian-69.7% (N= 131) Hispanic-74.6% (N= 129) Asian-73.7% (N= 14) African American-67.7% (N= 21)	Caucasian-30.3% (N= 57) Hispanic-25.4% (N= 44) Asian-26.3% (N= 5) African American-32.3% (N= 10)
Abstinence prevents transmission	Caucasian-95.2% (N= 179) Hispanic-93%(N= 161) Asian-78.9% (N= 15) African American-93.5% (N= 29)	Caucasian-4.8% (N= 9) Hispanic-7% (N= 12) Asian-21.1% (N= 4) African American-6.5% (N= 2)
Diaphragms prevents transmission	Caucasian-12.8% (N= 24) Hispanic-14.5% (N= 25) Asian-21.1% (N= 4) African American-3.2% (N= 1)	Caucasian-87.2% (N= 164) Hispanic-85.5% (N= 148) Asian-78.9% (N= 15) African American-96.8% (N= 30)
Washing Hands prevents transmission	Caucasian-3.7% (N= 7) Hispanic-7.5% (N= 13) Asian-10.5% (N= 2) African American-6.5% (N= 2)	Caucasian-96.3% (N= 181) Hispanic-92.5% (N= 160) Asian-89.5% (N= 17) African American-93.5% (N= 29)

Attitude Results

When looking at the attitudes of UTSA students relating to HIV/AIDS, four questions were asked of the participants: how threatened are UTSA students to HIV/AIDS?, how threatened are you to HIV/AIDS?: how at risk are blood transfusion receivers, heterosexuals, homosexuals, and injected drug users?; and is HIV/AIDS a problem of the past, present, or future? These attitudinal questions were asked in relation to the research question: what pre-disposed attitudes do UTSA students have about HIV/AIDS?

Overall Attitudes of UTSA Students

Overall, participants perceived that UTSA students in general were more at risk than themselves (See Table 12). More participants believed they themselves were not threatened at all by HIV/AIDS than those who believed that UTSA students were not threatened at all by HIV/AIDS.

TABLE 12- Overall Attitudes of UTSA Students Towards the Threats of HIV/AIDS

UTSA students very threatened	8.6% (N= 38)	UTSA students somewhat threatened	48.1% (N= 213)
UTSA students threatened	32.7% (N= 145)	UTSA students not threatened at all	8.6% (N= 38)
You are very threatened	3.4% (N= 15)	You are somewhat threatened	40.4% (N= 179)
You are threatened	11.7% (N= 52)	You are not threatened at all	42.7% (N= 189)

Another attitudinal question was asked to see if any attitudes exist that would make any certain group more at risk of contracting HIV/AIDS than another group. As seen in Table 13, homosexuals are perceived as being more highly at risk than heterosexuals.

TABLE 13- UTSA Students Attitudes Relating to How at Risk Homosexuals and Heterosexuals are to HIV/AIDS

Group	Highly at Risk	Medium at Risk	Low at Risk	No Risk
Heterosexuals-overall	24.9% (N= 104)	43% (N= 179)	22.1% (N= 92)	10% (N= 42)
Homosexuals-overall	45.7% (N= 192)	38.8% (N= 163)	11.9% (N= 50)	3.6% (N= 15)

The fourth attitudinal question addresses the attitudes of UTSA students on HIV/AIDS as a whole on the past, present, and future (see Table 14). More participants believe that HIV/AIDS believe that HIV/AIDS is more of a problem of the present than of the past or future.

TABLE 14- UTSA Students Attitudes Regarding HIV/AIDS Being a Problem in the Past, Present, and Future

	Yes	No
Past (N= 438)	63% (N= 276)	37% (N= 162)
Present (N= 438)	93.4% (N= 409)	6.6% (N= 29)
Future (N= 438)	82.6% (N= 362)	17.4% (N= 75)

Attitudes and Age Group Results

A one-way analysis of variance test was completed with the independent variables of gender, race, and age along with the attitudinal question about how threatened other UTSA students were. This showed a significant difference between age and attitudes relating to how threatened UTSA students were to HIV/AIDS (See Table 15).

TABLE 15- ANOVA of Gender, Age, and Race Along With How Threatened UTSA Students Are To HIV/AIDS

		Sum of Squares	df	Mean Square	F	Sig.
gender	Between Groups	.626	4	.156	.430	.787
	Within Groups	159.171	438	.363		
	Total	159.797	442			
age	Between Groups	18.324	4	4.581	2.414	**.048**
	Within Groups	831.138	438	1.898		
	Total	849.463	442			
race	Between Groups	28.979	4	7.245	1.915	.107
	Within Groups	1657.039	438	3.783		
	Total	1686.018	442			

Participants aged 18-20 and participants aged 40-49 had a lower percentage than all other age groups when relating to whether they and other UTSA students were very threatened by HIV/AIDS. Participants aged 18-20 and participants aged 40-49 had the highest percentage than all other age groups when relating to whether they and other UTSA students were not threatened at all by HIV/AIDS (See Table 16).

TABLE 16- Age Group Attitudes About Perceived Threat of HIV/AIDS to UTSA Students and the Participants Themselves

	UTSA students very threatened	UTSA students threatened	UTSA students somewhat threatened	UTSA students not threatened at all	You are very threatened	You are threatened	You are somewhat threatened	You are not threatened at all
18-20	5.7% (N= 13)	28.9% (N= 66)	52.2% (N= 119)	10.5% (N= 24)	1.8% (N= 4)	11.8% (N= 27)	38.2% (N= 87)	45.6% (N= 104)
21-25	12.5% (N= 18)	34% (N= 49)	46.5% (N= 67)	6.3% (N= 9)	4.2% (N= 6)	14.6% (N= 21)	48.6% (N= 70)	31.9% (N= 46)
26-30	6.5% (N= 2)	38.7% (N= 12)	45.2% (N= 14)	9.7% (N= 3)	3.2% (N= 1)	9.7% (N= 3)	19.4% (N= 6)	67.7% (N= 21)
31-39	12.5% (N= 3)	41.7% (N= 10)	37.5% (N= 9)	4.2% (N= 1)	8.3% (N= 2)	4.2% (N= 1)	41.7% (N= 10)	45.8% (N= 11)
40-49	0% (N= 0)	57.1% (N= 4)	14.3% (N= 1)	14.3% (N= 1)	0% (N= 0)	0% (N=0)	28.6% (N= 2)	57.1% (N= 4)

A one-way analysis of variance test was completed with the independent variables of gender, race, and age along with the attitudinal question about how threatened were they themselves felt to HIV/AIDS. As seen in Table 17, a significant difference can be seen between age and race with this attitudinal question. Eighteen to twenty-year olds had the second lowest percentage in those who believed that they themselves were very threatened by HIV/AIDS, second only to 40-49 year olds (See Table 16). Participants aged 21-25 and 31-39 had the highest percentage of those who believe that they themselves are very threatened by HIV/AIDS.

TABLE 17- ANOVA of Gender, Age, and Race Along With how Threatened Participants Themselves are to HIV/AIDS

		Sum of Squares	df	Mean Square	F	Sig.
gender	Between Groups	.987	4	.247	.681	.606
	Within Groups	158.810	438	.363		
	Total	159.797	442			
age	Between Groups	24.116	4	6.029	3.200	**.013**
	Within Groups	825.347	438	1.884		
	Total	849.463	442			
race	Between Groups	39.370	4	9.842	2.618	**.035**
	Within Groups	1646.648	438	3.759		
	Total	1686.018	442			

However, more participants aged 21-25 perceived heterosexuals at greater risk than those participants aged 18-20 (See Table 18). More participants aged 21-25 also perceived homosexuals highly at risk than those aged 18-20.

TABLE 18- Age Group Attitudes Relating to How at Risk Homosexuals and Heterosexuals are to HIV/AIDS

Group	Highly at Risk	Medium at Risk	Low at Risk	No Risk
Heterosexuals- 18-20 yr olds attitudes	21.1% (N= 48)	38.6% (N= 88)	21.9% (N= 50)	11.4% (N= 26)
Homosexuals- 18-20 yr old attitudes	40.4% (N= 92)	35.5% (N= 81)	13.2% (N= 30)	4.4% (N= 10)
Heterosexuals- 21-25 yr old attitudes	25% (N= 36)	45.8% (N= 66)	18.8% (N= 27)	6.3% (N= 9)
Homosexuals-21-25 yr old attitudes	45.8% (N= 66)	38.2% (N= 55)	8.3% (N= 12)	3.5% (N= 5)

Attitude and Race Results

Minorities felt that UTSA students are both very threatened and threatened by HIV/AIDS more than non-minorities do. Caucasians have the highest percentage in believing that UTSA students are only somewhat threatened (See Table 19). Caucasians also have the lowest percentage in believing that they themselves are very threatened by HIV/AIDS. More Caucasians and African Americans felt that they were not threatened at all by HIV/AIDS.

TABLE 19- Race Attitudes Relating to the Threat of HIV/AIDS to UTSA Students and the Participants Themselves

	UTSA students very threatened	UTSA students threatened	UTSA students somewhat threatened	UTSA students not threatened at all	You are very threatened	You are threatened	You are somewhat threatened	You are not threatened at all
Caucasian	5.8% (N= 11)	29.5% (N= 56)	56.3% (N= 107)	7.9% (N= 15)	.5% (N= 1)	10.5% (N= 20)	42.1% (N= 80)	45.8% (N= 87)
Hispanic	10.2% (N= 18)	34.5% (N= 61)	42.9% (N= 76)	9.6% (N= 17)	5.1% (N= 9)	14.1% (N= 25)	40.1% (N= 71)	39% (N= 69)
Asian	15.8% (N= 3)	36.8% (N= 7)	31.6% (N= 6)	10.5% (N= 2)	5.3% (N= 1)	15.8% (N= 3)	42.1% (N= 8)	31.6% (N= 6)
African American	16.1% (N= 5)	32.3% (N= 10)	38.7% (N= 12)	9.7% (N=3)	6.5% (N= 2)	6.5% (N= 2)	32.3% (N= 10)	48.4% (N= 15)

Sexual Behaviors

Overall Sexual behaviors of UTSA Students

Other questions on the survey dealt with sexual behaviors of UTSA students (See Table 20). The following results answer the research question: what are the sexual practices of UTSA students. A majority of the participants have had sexual intercourse in their lifetime. More participants that have had sexual intercourse had only one to two partners in their lifetime than more than 1-2 partners. Only one-fifth of the participants that have ever had sexual intercourse reported that they protect themselves from HIV/AIDS at all time.

TABLE 20- Overall Sexual Behaviors

Ever Had Sexual Intercourse	81.1% (N= 355)	Never Had Sexual Intercourse	18.9% (N= 83)
1-2 Partners	28.9% (N= 128)	3-4 Partners	16.5% (N= 73)
5-6 Partners	11.3% (N= 50)	7-8 Partners	7.7% (N= 34)
9-10 Partners	2.5% (N= 11)	11-12 Partners	2.7% (N= 12)
13+ Partners	5.6% (N= 25)	Do Not Know How Many Partners	4.5% (N= 20)
Protect All the Time	22.1% (N= 98)	Protect 75% of the Time	32.1% (N= 142)
Protect 50% of the Time	11.5% (N= 51)	Protect 25% of the Time	8.4% (N= 37)
Never Protect	5.6% (N= 25)		

Sexual Behavior and Race Results

As seen in Table 21, when a one-way analysis of variance test was completed with the independent variables age, gender, and race and the dependent variable of whether or not the participants have had sexual intercourse, a significant difference was noticed between age and race.

TABLE 21- ANOVA of Gender, Age, and Race Along with Ever Having Sexual Intercourse

		Sum of Squares	df	Mean Square	F	Sig.
gender	Between Groups	.552	2	.276	.763	.467
	Within Groups	159.245	440	.362		
	Total	159.797	442			
age	Between Groups	32.419	2	16.209	8.729	**.000**
	Within Groups	817.044	440	1.857		
	Total	849.463	442			
race	Between Groups	19.357	2	9.678	2.555	**.079**
	Within Groups	1666.661	440	3.788		
	Total	1686.018	442			

More Caucasians have had sexual intercourse than any other race (See Table 22). More Asians have never had intercourse than any other race.

TABLE 22-Race Cross-Tabs Relating to Having Intercourse

Ever had sexual intercourse	**Yes**	**No**
Caucasian	87.3% (N= 165)	12.7% (N= 24)
Hispanic	80.6% (N= 141)	19.4% (N= 34)
Asian	55.6% (N= 10)	44.4% (N= 8)
African American	64.5% (N= 20)	35.5% (N= 11)

Sexual Behavior and Age Group Results

When a one-way analysis of variance test was completed with the independent variable age, gender, and race and the dependent variable defined as the percentage of the time sex was protected, a significant difference was seen between age and this variable (See Table 23).

TABLE 23- ANOVA of Gender, Age, and Race Along with Percentage of Time Sex is Protected

		Sum of Squares	df	Mean Square	F	Sig.
gender	Between Groups	1.350	5	.270	.745	.590
	Within Groups	158.447	437	.363		
	Total	159.797	442			
age	Between Groups	35.527	5	7.105	3.815	**.002**
	Within Groups	813.936	437	1.863		
	Total	849.463	442			
race	Between Groups	28.674	5	5.735	1.512	.185
	Within Groups	1657.344	437	3.793		
	Total	1686.018	442			

More 18-20 year old, 26-30 year olds, and 40-49 year olds protect themselves all of the time than 21-25 year olds and 31-39 year olds. A higher percentage of 31-39 year olds and 40-49 year olds never protect themselves from HIV/AIDS compared to the other age groups (See Table 24)

TABLE 24- AGE Group and Protection During Sex Analysis

Age Group	Protect 100% of the time	Protect 75% of the time	Protect 50% of the time	Protect 25% of the time	Never protect yourself
18-20 yr old	27.6% (N= 63)	21.1% (N= 48)	12.3% (N= 28)	6.1% (N= 14)	3.9% (N= 9)
21-25 yr old	13.9% (N= 20)	46.5% (N= 67)	11.1% (N= 16)	10.4% (N= 15)	5.6% (N= 8)
26-30yr old	22.6% (N= 7)	45.2% (N= 14)	9.7% (N= 3)	9.7% (N=3)	6.5% (N= 2)
31-39 yr old	16.7% (N= 4)	37.5% (N= 9)	16.7% (N=4)	12.5% (N= 3)	8.3% (N= 2)
40-49 yr old	28.6% (N= 2)	14.3% (N= 1)	0% (N=0)	14.3% (N=1)	42.9% (N= 3)

Seeking Information Results

Seeking Health Information

Participants were also asked if they had ever tried to find out information about health issues and from where, which answered the research questions: where do UTSA students typically look for information about health issues? The majority of the participants have tried to seek out information about health issues (See Table 25). Of

those who have sought out health information, the Internet, doctor, and family/friend were reported as the most popular avenues of trying to find out information about health issues. Radio was the lowest avenue accessed for information about health issues.

TABLE 25- Seeking Out Health Information and From Where

	Yes	No
Have sought out information about health issues (N= 433)	73.2% (N= 317)	26.8% (N= 116)
UTSA student Health Services	19.4% (N= 62)	80.6% (N= 258)
Doctor	62.7% (N= 200)	37.3% (N= 119)
Hospital	20% (N= 64)	80% (N= 255)
Internet	80.6% (N= 258)	19.4%(N= 62)
Family/Friend	49.5% (N= 158)	50.5% (N= 161)
Radio	7.5% (N= 24)	92.5% (N= 295)
Television	27.6% (N= 88)	72.4% (N= 231)
Newspaper	21.6% (N= 69)	78.4% (N= 250)

Seeking HIV/AIDS Information

A similar question addressed if and where participants have sought out information about HIV/AIDS. More participants have not sought out information about HIV/AIDS than those who have (See Table 26). Of those who have sought out information about HIV/AIDS, again the Internet, doctor, family/friend are the most popular avenues of accessing information about HIV/AIDS. The UTSA Student Health Service is the least accessed avenue to seek out information about HIV/AIDS.

TABLE 26- Seeking Out Information About HIV/AIDS and From Where

	Yes	No
Have sought information about HIV/AIDS	34.9% (N= 151)	65.1% (N= 282)
UTSA student Health Services	10.3% (N= 16)	89.7% (N= 140)
Doctor	47.4% (N= 74)	52.6% (N= 82)
Hospital	17.9% (N= 28)	82.1% (N= 128)
Internet	66.9% (N= 105)	33.1% (N= 52)
Family/Friend	35.3% (N= 55)	64.7% (N= 101)

Media Use Results and School Event Attendance

One question asked on the survey dealt with what media UTSA students accessed and how often, which refers back to the research question: Which media do UTSA students use in general? Television, radio, and the Internet were the most popular media assessed on a daily basis (See Table 27). National Public Radio obtained the highest percentage for media never accessed.

TABLE 27- Overall Media Use and Frequency

	Never	Daily	Weekly	Bi-Weekly	Monthly	Once a semester
Television	1.1% (N= 5)	74% (N= 328)	13.5% (N= 60)	2.3% (N= 10)	.5% (N=2)	0% (N= 0)
Radio	1.8% (N= 8)	72.2% (N= 320)	14.4% (N= 64)	2.3% (N= 10)	.5% (N= 2)	0% (N= 0)
Paisano	21.2% (N= 94)	2.3% (N= 10)	23.5% (N= 104)	11.1% (N= 49)	13.3% (N= 59)	8.8% (N= 39)
SA Express News	16.3% (N= 72)	15.1% (N= 67)	30% (N= 133)	9% (N= 40)	9% (N= 40)	3.6% (N= 16)
Internet	2.9% (N= 13)	65.5% (N= 290)	17.2% (N= 76)	3.6% (N= 16)	2% (N= 9)	.2% (N= 1)
National Public Radio	44.7% (N= 198)	11.1% (N= 49)	7.9% (N= 35)	5.9% (N= 26)	4.7% (N= 21)	4.3% (N= 19)

The last set of questions asked on the survey dealt with UTSA student participation regularly (at least once a month) to school functions. The questions relating to attendance at school events related back to the research question : what school functions do UTSA students attend? Overall, the majority of participants do not attend school events on a regular basis (see Table 28). Athletic events and guest lectures are among the most popular school events attended regularly.

TABLE 28- Overall Attendance at School Events

	Yes	No
Attend School Events Regularly (N= 443, missing data= 8)	29.2% (N= 127)	70.8% (N= 308)
Athletic Events	68.2% (N= 88)	31.8% (N= 41)
UTSA Concerts	27.9% (N= 36)	72.1% (N= 93)
Holiday Functions	24.8% (N= 32)	75.2% (N= 97)
Guest Lectures	43.4% (N= 56)	56.6% (N= 73)
Fraternity and Sorority Events	24.8% (N= 32)	75.2% (N= 97)

DISCUSSION SECTION

Knowledge

The questions relating to knowledge focused primarily on HIV/AIDS prevention and transmission. Only one person out of 443 stated that they were not aware of HIV/AIDS, which shows that HIV/AIDS awareness programs have been working. It is still not widely known that HIV causes AIDS. This may be due to medical reports without substantial evidence stating that HIV does not cause AIDS and causing confusion among the general public. Overall, UTSA student knowledge about the ways that HIV/AIDS is transmitted was good. Some myths that surround HIV/AIDS still lurk in the minds of UTSA students, such as saliva, kissing, and sweat transmitting HIV/AIDS. Participants did not have high rates reporting that breast-feeding, oral sex, vaginal fluids, and semen transmit HIV/AIDS. This may possibly be due to sexual intercourse being stressed as the mode of transmission for HIV/AIDS, while not communicating why sexual intercourse is a mode of transmission. Any bodily fluid that contains blood transmits HIV/AIDS, such as semen and vaginal fluids, so oral sex can transmit HIV/AIDS through semen and vaginal fluids. Since sexual intercourse and injected drug using have been the main modes of transmission publicized, people have not been educated about breast feeding being a mode of transmission for HIV/AIDS because it has nothing to do with either of the above-mentioned items. Even though more participants stated that they knew how to prevent HIV/AIDS than those who knew how HIV/AIDS was transmitted, their knowledge did not support their claim.

Two main groups that were not very educated about HIV/AIDS prevention were 18-20 year olds and minorities. More 18-20 year olds stated that birth control pills, diaphragms, and washing their hands would prevent HIV/AIDS than their expected count. Overall, participants did know that abstinence prevents HIV/AIDS. However, minorities did have a lower rate of knowledge about prevention methods than non-minorities, especially Asians, and African-Americans. Participants had better knowledge of what transmits HIV/AIDS than the prevention methods associated with HIV/AIDS. This is perhaps due to the fact that Texas promotes abstinence only education policies. The only prevention method promoted by the Texas Department of Health, and now the United States government, is abstinence. Perhaps this is why all the younger participants do not know how to prevent HIV/AIDS transmission since it has not been communicated to them through school. Even if people wanted to find out information about HIV/AIDS prevention, the Center for Disease Control, a known credible source for health information, now does not have that information on their website because of government policies. Most subjects who have tried to find out information about HIV/AIDS reported doing so through the Internet. With the CDC prevention information off their website, people may not be getting accurate and credible information from the Internet, since websites can be created by anyone with whatever information that they wish to place on it. Overall, transmission methods need to be communicated to all UTSA students. Prevention methods need to be communicated especially to 18-20 year olds and minorities.

Attitudes

Many of the questions on the distributed survey assessed the participants' attitudes about HIV/AIDS. One important question that had participants rate their own knowledge displayed some surprising attitudes. Overall, fewer participants rated their knowledge as very knowledgeable than knowledgeable or somewhat knowledgeable. When analyzing this further, fewer 18-20 and 21-25 year olds stated themselves as very knowledgeable than expected. This question assesses the participants' own perceptions of their knowledge. Nobody knows someone better than they know themselves, which means that their knowledge about HIV/AIDS is not what it should be, if they do not state that they are very knowledgeable. Attitudes were also assessed about how at risk participants perceive UTSA students and themselves of contracting HIV/AIDS. More 18-20 year olds and 40-49 year olds see themselves and UTSA students in general at no risk of contracting HIV/AIDS. The older age group may believe this due to either being in stable relationships (such as marriage) or possibly less sexually active, relating to fewer different partners and sexual behavior that might be typical at this age. According to the 1998 Behavioral Risk Factor Surveillance Survey, fewer 18-24 year olds in Texas practiced monogamy than older age groups (BHSP, 2000).

Fewer Caucasians felt that UTSA students and themselves were very threatened by HIV/AIDS than any other race. However, more Caucasians and African Americans felt that they were not threatened at all by HIV/AIDS than any other race. Perhaps Caucasians feel this way because the spread of HIV/AIDS has been focused on minorities, due to their increasing HIV infections. African Americans may feel that they themselves are not threatened by HIV/AIDS, due to fewer African Americans have ever

had sex than Caucasians and Hispanics. Even though most participants believe that their own knowledge is knowledgeable or somewhat knowledgeable about HIV/AIDS, only a little over one-third of the participants have ever tried to find out information about HIV/AIDS. Perhaps most people have not tried to find out information about HIV/AIDS, since they do not perceive UTSA student or themselves at risk of contracting HIV/AIDS.

Another significant attitudinal question related to the risk of heterosexuals and homosexuals contracting to HIV/AIDS. Overall, homosexuals were seen more highly at risk than heterosexuals. Heterosexuals were perceived less highly at risk by 18-20 year olds than any other age group. The first documented cases of HIV/AIDS in the United States were in homosexual males. Perhaps since HIV/AIDS was first documented in HIV/AIDS, HIV/AIDS is perhaps perceived as a homosexual disease rather than a sexually transmitted disease that can occur no matter what someone's sexual orientation is. Most of the awareness and prevention programs, such as AIDS Community Demonstration Projects, AIDS Outreach Programs, and AIDS Foundation Houston, targeted injected drug users, female sex workers, or gay men. The only two programs that reached other groups were the San Antonio AIDS Foundation and Project RESPECT. Most participants of Project RESPECT were heterosexual, even though that was not the only target. These attitudinal questions help analyze what perceptions participants have that need to be either reinforced or changed. Caucasians, African Americans, and 18-20 year olds need to be a primary focus of an attitudinal change campaign. Hispanics and Asians need to be a primary focus as well to reinforce their attitudes about HIV/AIDS.

Behavior

The sexual behaviors of UTSA students need to be analyzed in conjunction with age and race groups' knowledge and attitudes. Overall, protected sex should be a main target of any media campaign since only one-fifth of the participants protected themselves 100% of the time during sexual intercourse. A media campaign should focus on communicating HIV/AIDS similar to how pregnancy programs have communicated their messages- it only takes once. It only takes getting exposed to HIV or AIDS once to contract the disease. Another target public in a behavioral campaign should be Caucasians, since more Caucasians have had sexual intercourse than any other race. However, since minorities' knowledge about HIV/AIDS prevention is lower than non-minorities, the campaign should incorporate all races with behavioral change related to prevention methods. Fewer 21-25 year olds protect themselves 100% of the time than any other age group, which would make them a main target of a behavioral change program. Something that was unusual was the fact that 18-20 year olds and 40-49 year olds have the highest percentage of those who protect themselves from HIV/AIDS, even though both of those age groups have the lowest risk perceptions of themselves. Even being the second highest age group that protects themselves from HIV/AIDS, only 27% of 18-20 year olds protect themselves all of the time from HIV/AIDS. However, since 18-20 year olds have a lower rate of knowledge relating to prevention methods for HIV/AIDS than any other age group, are they really protecting themselves from HIV/AIDS or are they using birth control pills, diaphragms, and washing their hands to prevent HIV/AIDS? A behavioral change program should concentrate on 18-20 year olds and 21-25 year olds of all races, while hoping to influence all UTSA students.

Limitations

As this was a convenience sample, the results are not be generalizable to other organizations, university or college campuses, or other 18-20 year olds or 21-25 year olds. The research was based on the participants reporting their own knowledge, attitudes, and behaviors, which limits the validity of the study due to self-reporting. The research addressed a sensitive subject, which meant that the validity of the findings depended largely on the honest cooperation of the participants.

Media Campaign

A media campaign for UTSA students should concentrate on 18-20 year olds and 21-25 year olds relating to HIV/AIDS awareness, prevention, attitudes, and behaviors, along with a major concentration on minorities and knowledge. The following will provide a few suggestions that an awareness and prevention campaign at UTSA could use.

One possibility for targeting this younger audience would be Freshman Orientation. At Freshman Orientation, major emphasis should be made on the UTSA Student Health Services. UTSA Student Health Services offer HIV/AIDS testing and counseling for a small fee. Two general programs suggested by the Global HIV Prevention Working Group are STD Control and Voluntary Counseling and Testing, which state that treating of sexually transmitted diseases, testing, and caring for those with HIV prevent future HIV incidences (GHPWG, 2002). Project RESPECT also mentioned how counseling sessions proved more effective than just didactic messages. The UTSA Student Health Services should also offer preventive counseling rather than only providing counseling before and after HIV tests. It would be better to provide these

counseling sessions all around campus and not limit them to the UTSA Student Health Services Center. This would help provide better exposure for the counseling sessions and reach more UTSA students. The UTSA Student Health Services would also need to promote their services more. Posters should be placed in strategic places around campus providing this information about the Student Health Services. Perhaps the UTSA Student Health Services could get a sponsor for a month that will take care of the fees associated with these testing and counseling services for students. Possible sponsors could be the San Antonio AIDS Foundation, the Texas Department of Health, or UTSA. Freshman Orientation should also concentrate on how the UTSA Student Health Services provide condoms and reading material about HIV/AIDS and other sexually transmitted diseases. The pamphlets created should focus on possible modes of transmission and the correct ways of protecting oneself from HIV/AIDS (See Appendix C). The pamphlet should also focus on how important prevention is relating to "it only takes once". A pamphlet should state the consequences of HIV/AIDS and whom HIV effects (everyone). Statistics relating to youth and UTSA students should be provided as well. The services that the UTSA Student Health Services provide should be listed. The pamphlets should provide information on why HIV/AIDS prevention is important and how anyone can prevent HIV/AIDS with the right knowledge and tools. According to the theory of reasoned action, the benefits of protecting oneself must apparently outweigh the costs. According to the health belief model, first the person must feel susceptible to contracting HIV/AIDS. Secondly, preventive actions must be perceived as less costly than the complications associated with the preventive act. These pamphlets should incorporate all these ideas from these theories. Possible applications for pamphlets include passing them

out, along with condoms, at Freshman Orientation, at athletic events, at holiday functions (such as Fiesta), during core classes (such as the basic History or Algebra courses), and at the Sombrilla during peak hours and at special events.

Registered Student Organizations should also be a main target, especially those organizations that primarily focus on minorities. Registered Student Organizations could share these pamphlets with their student organizations, as well as volunteer to pass out these pamphlets at the above functions. Registered Student Organizations could sponsor a day devoted to HIV/AIDS awareness and prevention by asking the San Antonio AIDS Foundation (SAAF) to come speak to UTSA students about the dangers of HIV/AIDS. SAAF provides a standard program that gives general information on HIV/AIDS and then someone gives a testimonial about AIDS and how it has affected their life. This SAAF standard program would be a good addition to Freshman Orientation or a basic course that is required and has time to devote to this lecture.

Radio and television were popular mediums accessed by UTSA students. Either a radio or television station could sponsor a doctor coming to guest lecture (since guest lectures were a popular school event attended) or SAAF standard session and promote it through mentioning it on air and giving a preview of the program. A public service announcement should be sent to the top five radio and television stations with the hope of making it on the air. The lecture could also be taped and placed on the numerous television screens around campus, which would reach a wide UTSA audience.

The Internet was a major avenue in which students' access information. A link to the UTSA student Health Services should be placed on the home page of UTSA, so that it is more visible to the students. One page exists on the UTSA Student Health Services site

relating to HIV/AIDS. This page consists of three short paragraphs that only give broad information about sexually transmitted diseases and suggests students come to the UTSA Student Health Services for more information. A more in-depth look at all sexually transmitted diseases should be completed and placed on the website to provide more information for the students at their convenience, instead of making them go to the UTSA Student Health Services to get important information that they need. An in-depth detail of the AIDS epidemic, including statistics, transmission and protection methods, UTSA statistics, a look at what UTSA Student Health Services provides, and where to get additional information should be an additional web page linked to the UTSA Student Health Services Page (See Appendix D) In-depth details of how to get condoms, testing, and counseling should be provided as a link to this page. Also, the UTSA Student Health Services should look at updating their site, since most pages on the site still list the Science Building as their location and they moved to the Recreation and Wellness Center a few moths ago.

One other idea that would promote protected sex would be to have condom machines in men's and women's bathrooms. The store located on campus could sell condoms as well. Open availability to condoms will promote safe sex.

Freshman Orientation, UTSA Student Health Services, Registered Student Organizations, radio, television, and the Internet are a few examples of how an awareness and prevention campaign would meet UTSA's needs. A pamphlet and web page were designed based on the needs of UTSA students in relation to HIV/AIDS (See Appendix C and D). The pamphlet design and web page design will be given to the UTSA Student Health Services so that they may implement the suggestions listed if they wish to.

Whatever media options a campaign takes, it has several basic requirements. According to the Global HIV Prevention Working Group, campaigns should repeat and modify the messages continually (GHPWG, 2002). It should be a cyclical process that is continually re-evaluated and re-adjusted to fit the needs of UTSA. Strong leadership is also needed to be a successful program, which means that the university at least needs to support the HIV/AIDS awareness and prevention program, if not be in charge of it. Open discussion of sex is a requirement of a successful program. UTSA needs an HIV/AIDS awareness and prevention campaign. With the provided information and suggestions, a comprehensive and successful campaign can be created.

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APPENDIX A

INTRODUCTION:
I am Jennifer Hicks, a student at UTSA. I am doing a research project as part of my Honors Thesis. The purpose of this survey is to assess students' general knowledge of HIV/AIDS, their attitudes towards HIV/AIDS, and related sexual practices. The responses will undoubtedly help create an HIV/AIDS awareness and prevention campaign for the University of Texas at San Antonio. All individual answers are confidential and will be analyzed in combination with others. Thank you for your time and cooperation.

1) Are you a UTSA student? *(If your answer is no do not fill out survey, if yes continue)*
___Yes ___No

2) Sex
___Male___Female

3) **Age** *(fill in)*
_____
_____

4) Race *(Mark one)*
___Caucasian ___Hispanic
___Asian ___African-American
___American Indian
___Other_____

5) What is your class standing? *(Mark one)*
___Freshman ___Sophomore ___Junior ___Senior

6) Have you ever tried to find out information on health issues? *(If no skip to question 8, if yes continue)*
___Yes ___No

7) Where did you try to find additional information on health issues? *(Mark all that apply)*
___UTSA Student Health Services ___Doctor ___Hospital ___Internet ___Family/friend
___Radio ___Television ___Newspaper ___Other (specify)_____

8) Are you aware of HIV/AIDS? *(If no answer questions 26, if yes continue)*
___Yes ___No

9) How would you rate your knowledge about HIV/AIDS? *(Mark one)*
___Very Knowledgeable ___ Knowledgeable ___Somewhat Knowledgeable

10) Does HIV cause AIDS?
___Yes ___No

11) Do you know how to prevent HIV/AIDS? *(If no skip to question 13, if yes continue)*
___Yes ___No

12) What prevents the transmission of HIV/AIDS? *(Mark all that apply)*
___Birth Control Pills or Patches ___Condoms ___Abstinence ___Diaphragms ___Washing Hands

13) Do you know how HIV is transmitted? *(If no skip to question 15, if yes continue)*
___Yes ___No

14) In your knowledge, what transmits HIV/AIDS? *(Mark all that apply)*
___Tears ___Blood Transfusions ___Hugging ___Oral Sex ___Saliva
___Kissing ___Shaking Hands ___Vaginal Fluids ___Needles ___Sweat
___Semen ___Breast Feeding ___Sexual Intercourse ___Other (specify)_____

15) Have you ever had any form of sexual intercourse? *(If no skip to question 19, if yes continue)*
___Yes ___No

16) How many different sexual partners have you had in your lifetime? *(Mark one)*
___1-2 ___3-4 ___5-6 ___7-8 ___9-10 ___11-12 ___13+ ___ Do Not Know

17) In general, what percentage of the time did you protect yourself from HIV/AIDS during intercourse? *(Mark one)*
___All (100% of the time) ___Most (75% of the time) ___ Half (50% of the time)
___Some (25% of the time) ___Never protect yourself from HIV/AIDS

18) If you do protect yourself from contracting HIV/AIDS during intercourse, what form or forms of protection do you use? *(Please fill in)*

_____

19) Have you ever tried to find out information about HIV/AIDS for your own use? *(If no skip to question 21, if yes continue)*

___Yes ___No

20) Where did you try to find additional information on HIV/AIDS? *(Mark all that apply)*

___UTSA Student Health Services ___Doctor ___Hospital
___Internet ___Family/friend ___Other (specify)_____

21) Have you ever been tested for HIV/AIDS?

___Yes ___No

22) In your opinion, how threatened are UTSA students in regards to the dangers of HIV/AIDS? *(Mark one)*

___Very Threatened ___ Threatened ___Somewhat Threatened ___Not Threatened at All

23) In your opinion, how threatened are you in regards to the dangers of HIV/AIDS? *(Mark one)*

___Very Threatened ___ Threatened ___Somewhat Threatened ___ Not Threatened at All

24) Rate the following groups relating to their risk of contracting HIV/AIDS. *(Mark 1 for highly at risk, 2 for medium at risk, 3 for low at risk, and 4 for no risk)*

_____Blood Transfusion Receivers _____Heterosexuals _____Homosexuals _____Injected Drug Users

25) Do you believe that HIV/AIDS ...*(Mark all that apply)*

___was a problem in the past ___is a problem of the present ___will be a problem in the future

26) What are the most common media that you access? *(Mark each media with the correct number that best relates to how much you use the media)*

___Local television
___Radio
___The Paisano (UTSA School Newspaper)
___The San Antonio Express News
___Internet
___National Public Radio (NPR)
___Other (specify)_____

0= never use that media
1= daily
2= every week
3= once every two weeks
4= once every three weeks
5= once a month
6= once every two months
7= once a semester

27) Do you attend events sponsored by the university regularly (at least once a month)? *(If no submit survey, if yes continue)*

___Yes ___No

28) What are some school events that you attend? *(Mark all that apply)*

___Athletic Events ___ UTSA concerts (orchestra, choir, etc)
___Holiday Functions (Christmas, fiesta, and other holidays)
___Guest Lecturers ___Fraternity and Sorority Events
___Other (specify)_____

THANK YOU VERY MUCH FOR YOUR COOPERATION

APPENDIX B
CONSENT TO PARTICIPATE IN RESEARCH AS A HUMAN SUBJECT

1. Protection of Subject's Rights

The research proposal described below has been reviewed by the University Standing Committee on Human Research through the Office of Research Development at UTSA. It has been found to be consistent with The Rights of Human Subjects included in federal, state, and institutional regulations. It is, therefore, approved.

2. Purpose of the Study:

This experiment will provide the researcher with information regarding participants knowledge, attitudes, and behaviors regarding HIV/AIDS.

3. **Procedure:**

You will be presented with a survey at the end of class to complete, while leaving the classroom, the participant will hand survey to distributor, at that time the distributor will detach informed consent from survey and separate the two.

4. **Received and Understand the Information Presented:**

I have read the statements of purposes and procedures of the study (including any probable discomfort risk). I have been allowed to ask questions about these and all such questions have been fully answered. I understand that:

a. I have the right to withdraw, without prejudice, from the study at any time, and, I will still receive credit for my participation.
b. If I elect to withdraw from the study, any information I have given will not be used.
c. All information will be kept strictly confidential. Neither my name nor any other identifying characteristics will be used without my permission when the information is reported.
d. If I find any question to be disturbing, I have the option of not answering the question.
e. I am 18 years old or older.
f. Refusal to participate will not result in any loss of benefits to which I am entitled.
g. I understand and agree to an interview via ☐ face to face ☐ audio recording ☐ video recording ☐ telephone

5. For further information and assistance.

If you have any comments or further questions, contact Dr. Georgia Johnston

Dept/Division of Health and Kinesiology telephone number 210-458-5439

If you believe you have been injured or harmed as a consequence of your participation, contact Mr. Noe Saldaña, Office of Research Development by calling 210-458-4340.

Privacy Notice

With a few exceptions, you are entitled to be informed about the information U.T. San Antonio collects about you. Under Sections 552.021 and 552.023 of the Texas Government Code, you are entitled to receive and review this information. Under Section 559.004 of the Texas Government Code, you are entitled to have U.T. San Antonio correct information about you that is held by us and that is incorrect, in accordance with the procedures set forth in the University of Texas System Business Procedures Memorandum 32. The information that U.T. San Antonio collects will be retained and maintained as required by Texas records retention laws (Section 441.180 et seq. of the Texas Government Code) and rules. Different types of information are kept for different periods of time.

I voluntarily consent to take part in the above described research study:

Participant - Print Name:	_____	Researcher – Print Name:	Jennifer Hicks
Signed:	_____	Signed:	_____
Date:	_____	Date:	_____

Appendix C- HIV/AIDS Informational Pamphlet

UTSA Student Health Services

The UTSA Student Health Services is located in the Recreation and Wellness Center. The UTSA Student Health Services offers confidential HIV testing for a small fee. Counseling is offered with the HIV test. Condoms and educational materials, such as pamphlets and videos, are also available at the UTSA Student Health Services.

UTSA Student Health Services

6900 N. Loop 1604 W

San Antonio, Texas 78249

1.500 Recreation and Wellness Center

210-458-4142

www.utsa.edu/students/health/index.htm

With no known cure, communicating protection methods is the only way to stop HIV/AIDS from continually spreading globally. Twenty-nine million lives may be saved from the eventual death of aids, just by communicating prevention methods on a global scale. Help in this fight against HIV/AIDS, protect yourself from HIV/AIDS and protect others by educating them on prevention.

To Find Additional Information:

Visit the UTSA Student Health Services

www.utsa.edu/students/health.htm

Center for Disease Control

www.cdc.gov/hiv/pubs/facts.htm

Sexuality Information and Education Council for the United States

www.siecus.org/pubs/fact/FS_truth_condoms_02.pdf

Joint United Nations Programme on HIV/AIDS

www.unaids.org/

HIV/AIDS

The Global Epidemic

6 Billion

People Live in the World



40 Million Have HIV

Inside Find

Statistics, protection methods, ways of transmitting, and what UTSA offers its students

APPENDIX D

HIV/AIDS Web Page for UTSA Student Health

Services on Attached Floppy Disk