

UA PROJECT GET TESTED:
A PROGRAM PLAN ADDRESSING SEXUALLY TRANSMITTED INFECTION
AMONG UNIVERSITY OF ARIZONA UNDERGRADUATE MALES

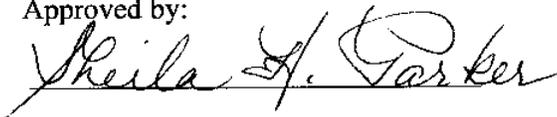
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Abstract

Sexually Transmitted Infections (STIs) are commonly transmitted among college students through risky sexual behavior. Data shows that sexual health behavior habits differ between female identified college students and male identified college students. Results from the University of Arizona Campus Health 2015 Health and Wellness Survey indicate that undergraduate males are less likely than their female counterparts to seek testing for STIs. UA Project Get Tested is a program that aims to address this disparity. A survey was conducted to assess what knowledge UA undergraduate males have about STIs and their perceptions regarding susceptibility towards contracting them. The survey results were consistent with the 2015 Health and Wellness results, showing that 30% of the respondents have not been tested for an STI within the last six months. Using this information, the program plan for UA Project Get Tested was created, containing the goals, objectives, and intended outcomes once implemented and evaluated. Upon successful completion of UA Project Get Tested, STI testing among UA undergraduate males will increase, as well as their knowledge about what makes them susceptible to contracting STIs.

**UA Project Get Tested: A Program Plan Addressing Sexually Transmitted Infection
Testing Among University of Arizona Undergraduate Males**

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Introduction

The University of Arizona is a public research institution located in Tucson, AZ. As reported for the 2015-2016 academic year, there are 32,987 undergraduate students and 9,249 graduate students (Arizona Board of Regents, 2016). These students are of different racial and ethnic backgrounds. White students make up a majority of the undergraduate population with 17,475 students. Hispanic students make up the second highest population with 8,310 students. Students identified as non-resident alien students make up 2,062 of the undergraduates, Asian students make up 1,822, and African American students make up 1,163. There are 377 American Indian/Alaskan Native students, 89 Native American/Pacific Islander students, and 317 students whose ethnicity is unknown (Arizona Board of Regents, 2014).

Every year, Campus Health Service at the University of Arizona conducts a Health and Wellness Survey focusing on undergraduate students. In 2015, 2,886 undergraduates took the survey, giving insight to their health behaviors regarding alcohol consumption, sexual activity, psychological care, and nutrition. One of the most outstanding aspects of the survey was the male population and their sexually transmitted infection (STI) testing habits. The results indicated the lack of STI testing among UA undergraduate males compared to undergraduate females, regardless of race or ethnicity (Health and Wellness Survey, 2015).

The lack of STI testing among the UA undergraduate male population is concerning. The data collected for the UA Project Get Tested program plan and the program itself holds the purpose of addressing this lack. Some infections and diseases that are transmitted sexually can be easily cured, but some show no signs or symptoms and can be very serious. In order to prevent poor health or untimely death, it is important for sexually active individuals to seek STI testing

regularly. UA Project Get Tested aims to increase awareness about STIs among UA undergraduate males and the importance of being tested for them. The program's goals, objectives, and methodology are tailored toward the males and will promote a healthier, intimate lifestyle for those men who take part in such.

Literature Review

College students are notorious for their risky sexual behavior. It is often wondered if students think about their actions before carrying through with them, and if there is a difference between how males and females manage their sexual behavior. This literature review discusses the gaps in sexual knowledge and behavior among college men specifically regarding sexually transmitted infections (STIs), and the factors that influence their decisions.

Understanding the frequency with which college males currently seek STI testing and how that differs from their female counterparts is useful in planning intervention programs. Bontempi et al explored the gender differences regarding HIV/STI testing and condom use among undergraduate students in college. Four campuses scattered across an unnamed state were selected to participate. A sample size of 5% of the undergraduate population from all four schools was selected for data collection via survey. Fifteen hundred surveys were sent out to students via email correspondence. The survey included questions that inquired about sexual behaviors: sexual activity, condom use, alcohol use, history of HIV and STI testing and STI treatment history. One thousand four hundred and ten surveys were completed. In regards to HIV/STI testing, it was found that females (61.3%) were significantly more likely to admit having had an STI test than males (36.2%) were. Females were found to use condoms less frequently than males and more likely to have gotten tested for an STI. Females get tested for STIs more often than males most likely because of the fact that females regularly visit their

gynecologist (Bontempi et al, 2013). Overall, this research shows that college males seek STI testing less frequently than college females do.

The reason for lack of STI testing among male college student could be attributed to a lack of knowledge. Moore and Smith identified the areas of sexual health where college students lacked knowledge. While it is known that college students tend to have more knowledge about HIV/AIDS, they know less about STIs and sexual health in general. The researchers obtained a sample of 242 college age participants and assigned them to 1 out of 3 intervention groups in the program F.O.R.E.play (Facts, Open communication, Responsibility, Enjoyment). Those in the first group were asked to watch an 8 minute sexual behavior video and then have a 25 minute conversation about what they learned in the video. The second group was engaged in a 35 minute PowerPoint lecture explaining the same material as was presented in the first group, and the third group of students were given websites about sexual health and asked to look up information they did not know on their own. One week after gaining more information about sexual health from their respective intervention groups, the students were asked to write a 2 page paper indicating what information was new to them. This method was used rather than a multiple choice survey because it allows for genuine self-reporting whereas taking a survey with answers already given can lead to guessing.

Out of the 242 responses, 177 of the papers submitted were used to identify what college students do not know about sexual health. In terms of general information about STIs, 17.8% said they had learned something new, mostly regarding chlamydia, gonorrhea, syphilis, and HPV. A male participant stated that “the diseases except the HIV were the new information for me” (Moore & Smith, 2012). About 20% indicated that they learned something new about STI symptoms. Some of this new knowledge included the fact that not all STIs have visible

symptoms, and some can lead to sterility if not treated at all (Moore & Smith, 2012). Twelve percent of the student responses indicated learning something new about the transmission of STIs, some not knowing that they can be transferred via oral and/or anal sex, or through forms of sexual contact that is not explicitly intercourse (Moore & Smith, 2012). Twelve percent learned new things about STI treatment. Some students did not know the difference between curable and treatable STIs, while others believed that once a person contracts an STI, that person has to suffer with it for the remainder of his or her life. Overall, what this study revealed was that college students know less about STIs, their symptoms, and their treatment methods compared to what they think.

When planning a public health intervention, it is important to consider what behavior change model will be used to educate and promote the importance of the health issue at hand. One model that is often used for public health behavior change is the Health Belief Model. Researchers Zak-Place and Stern sought to find out how the Health Belief Model makes an impact of the steps college students take toward preventative sexual health. The study will show which aspect of the Health Belief Model are most prevalent in influencing the decisions these students make in regards toward intent to use condoms and to get tested for HIV and other STIs.

Ninety three male and 109 female heterosexual, sexually active undergraduate students from a selection of psychology courses participated in the study by completing questionnaires. The study measured the response cost and response efficacy for STI and HIV testing, the self-efficacy for STI and HIV testing, and the vulnerability and severity for STI and HIV testing. The study revealed that the Health Belief Model was not the best model for determining sexual health preventative behaviors. Higher perceived benefits influenced college student intentions to get tested for STIs more so than other aspects of the model. Shockingly, the perceived severity of

HIV did not spur interest in getting tested for HIV (Zak-Place & Stern, 2004). Self-efficacy, on the other hand, was found to be a good predictor for whether students will obtain testing. As for the threat of STIs, the students understood the threat, but did not find themselves as vulnerable.

In order to capitalize on the knowledge that self-efficacy is what pushes college students to get tested for STIs, programs and other interventions can place an emphasis on providing activities related to STI testing that they can master. These activities can include practicing how to self-examine for symptoms or what to say when calling to make an appointment to get tested (Zak-Place & Stern, 2004). When planning an STI awareness program for college males, it would be beneficial to use these activities.

There are different social and personal factors that motivate or discourage college males from getting tested for STIs. In one research study, Barth et al investigated the reasons behind why college students may hesitate to seek testing for sexually transmitted diseases. Using a qualitative research design, 41 undergraduate students from the University of Pittsburgh between the ages of 18 and 23 were surveyed about what influences them to seek STI testing. In an interview, they were asked open ended questions and given hypothetical scenarios that would assess what the student believed were factors relevant to seeking STI testing. Results showed that a wide range of individual, societal, and health system factors influenced a college student's decision to get tested. The feeling of embarrassment influenced 61% of the participants. They did not want peers to gossip about them or be perceived as "loose" or "irresponsible" (Barth et al, 2002). In regards to societal factors, many students touched upon the lack of knowledge about STIs among the public. Most students are only concerned with getting tested for HIV. They either do not know about the other STIs that can be contracted, or HIV is the only STI they believe is most important to get tested for.

Further exploring how the factors that encourage or inhibit college males from getting tested for STIs, Davies et al sought to find out what health issues college aged males have concerns with, what would stop them from seeking help, and what they could do to live a healthier life. Seven focus groups made up of 49 undergraduate college males from the University of Oregon were brought together to discuss five questions: 1. What health issues are you worried about? 2. What actions do you take to address your health needs? 3. What would motivate you to adopt a healthier lifestyle? 4. What keeps men from reaching their goals? 5. What could the health center and the counseling center provide to better address men's concerns (Davies et al, 2000)? The focus groups would meet for an hour and 15 minutes.

While most of the study revolved around health issues that did not pertain to STIs, STIs were briefly mentioned. They were ranked as 6th in order of frequency with which the men discussed their health concerns, tied with depression (Davies et al, 2000). The fact that STIs were ranked that low out of a list of 11 suggests that preventing contraction of STIs is not of high importance to college males. They were more concerned with alcohol and drug use, personal fitness, and body image, food and nutrition topics (Davies et al, 2000). The study did spend a lot of time investigating the barriers college men face when seeking healthcare. The greatest reason impeding college men from seeking health care is showing vulnerability. As men, they would rather hold off from seeking services for fear of being weak. Misinformation about what their college campus offers them, feeling invincible, and cost of services also contribute to the barriers towards receiving healthcare (Davies et al, 2000).

When asked how their health concerns could be better addressed, the college males suggested offering free services, incentives for attending health related workshops and classes, and providing an advice hotline (Davies et al, 2000). In terms of STI testing, free campus health

care would eliminate the excuse of not being able to afford services. If a program or intervention addressing the importance of STI testing requiring attendance was implemented on campus, offering extra credit or making free food available would attract males. The men in the study expressed how much easier it would be to get help from a healthcare professional if there was a way to get it anonymously and at their convenience. These suggestions would be useful when planning an STI testing awareness program.

Most of the literature available referred to college students in general. There was little that focused solely on college males, and even fewer that touched on only STI testing. Despite the lack of literature, knowledge about gaps in sexual health and the perceived benefits and severity will aid in planning a successful STI awareness intervention geared toward male college students.

Research Design

The research for the UA Project Get Tested program plan consists primarily of data collection via an online survey. The purpose of the survey is to identify what knowledge UA undergraduate males have about STIs. The survey also gives insight to what style of learning is best for them, used to create a program that best serves their needs. While the survey is intended for male-identified individuals to complete, female-identified individuals are not discouraged from completing the survey either. The only requirement is that the participant must be enrolled as a student at the University of Arizona.

The research survey consists of 23 questions. Depending on the answers given, fewer questions are displayed to some participants (See Appendix A for survey). The questions are designed to measure the participants' knowledge of sex, STIs, and their perceived risk and

susceptibility. Qualtrics is the platform on which the survey was created. The software creates a link to the survey ensuring anonymity, and the link was distributed widely.

Survey participants were recruited from a variety of departments around campus in an effort to get a sample representative of the University population. Residents from residence halls, students involved in multicultural clubs, and fraternity men within the Interfraternity Council, United Sorority and Fraternity Council and the National Panhellenic Council were invited to participate. These groups were provided the link to the survey, and those who chose to participate submitted their anonymous responses. Those who chose to participate were encouraged to answer all questions to the best of their ability, but they were free to exit the survey at any time.

Research Results

A total of 220 students took the survey. One hundred and twenty two female identified students and 98 male identified students completed the survey. As this program plan is geared toward UA undergraduate males, the rest of the results will be focused on the 98 male responses.

Demographics

Knowing the sexual orientation, relationship status, age, academic classification, and living arrangements of the respondents can explain any trends in sexual behavior and health behavior habits. Ninety six percent (94 respondents) of the respondents identified themselves as heterosexual. One respondent was gay, one was bisexual, one was questioning, and the other preferred not to answer. When asked what their current relationship status was, fifty seven out of the 98 males who responded (58%) reported that they were not dating, 26 (27%) said they were exclusively dating one person, 14 (14%) said they were casually dating one or more people, and

one participant (1%) was married. Out of 94 males who responded with their age, 20 of them are 18 years old, 31 of them are 19 years old, 21 of them are 20 years old, 15 are 21 years old, 6 are 22 years old, and one respondent is 23 years old. A majority of the respondents were freshmen in college, as 42 out of the 97 males (43%) who responded to this question are freshmen. Twenty two respondents (23%) are sophomores, twenty two respondents (23%) are juniors, and 7 respondents (7%) are seniors. Two people (2%) identified themselves as graduate students, and 2 (2%) identified themselves as post-graduate individuals. When it comes to living arrangements, 52% of 96 respondents live in a residence hall on campus, 32% live off campus, 11% live in a fraternity, and 4% live with family or friends.

Knowledge about Sex

Table 1.
Results from Survey Pertaining to UA Male Knowledge About Sex.

Question	Yes	No	Not Sure	Total Responses
Do you know the difference between different types of sex (vaginal, oral, or anal)?	98%	0%	2%	96
Do you know the basic functions of the male anatomy?	97%	2%	1%	96
Do you know the difference between protected and unprotected sex?	97%	1%	2%	96
Do you know the basic functions of the female anatomy?	89%	3%	8%	96

Table 1 above displays the responses indicating what the males know about sex. A great majority knows the differences between vaginal, oral, and anal sex, the basic functions of the

male anatomy, and the difference between protected and unprotected sex. A lesser majority (89%) know the basic functions of the female anatomy.

Table 2 below displays the knowledge the males have about STIs. Almost 100% of the respondents are aware of what STIs are and 93% know how they are spread. A lesser majority have actually had formal education about STIs, calling into question the validity of their knowledge.

Table 2.
Results from Survey Pertaining UA Male Knowledge of Sexually Transmitted Infections (STIs).

Question	Yes	No	I Don't Know	Total Responses
Do you know what Sexually Transmitted Infections (STIs) are?	98%	0%	2%	94
Have you had any formal education on STIs?	83%	15%	2%	94
Do you know how some STIs are spread?	93%	3%	4%	94

Eighty two males who disclosed that they have had sex within the last 6 months answered questions pertaining to their sexual health behavior. As can be seen in Table 3 below, 74% of them used a condom the last time they were sexually active when 26% did not, suggesting that not everyone has acknowledged the importance of using condoms. When asked if they have ever been tested for an STI, 30% of the respondents said yes and 70% said no. This result remains consistent with data found in the Campus Health 2015 Health and Wellness Survey. A majority of the males who took the survey are sexually active, yet the number of those who seek STI testing is significantly lower. However, nearly the same 30% who seek testing go back to retrieve the results of the test.

Table 3.
Results Pertaining to Sexual Health Behavior

Question	Yes	No	Total Responses
The last time you had sex: was it protected?	74%	26%	82
Have you been tested for an STI?	30%	70%	82
Have you received the results for an STI test?	29%	71%	82

Table 4.
Results Pertaining to Confidence in Being Assertive about Sexual Health Behaviors
With your current sexual partner, how confident are you that you could:

Question	Not at all	A little	Somewhat	Very	Total Responses
Say no to sex if you were not in the mood?	9%	6%	19%	67%	81
Ask your partner to wait while you got some form of protection?	9%	6%	19%	67%	81
Ask your partner to use some form of protection?	15%	4%	14%	68%	81
Say no to sexual activities you do not like?	7%	10%	12%	70%	81

Table 4 above reveals the confidence level UA males have when it comes to taking initiative in their sexual health. More than half of the 81 males who responded were very confident in each category, but there is some slight apprehension towards being assertive. For example, 15% of the respondents are not at all confident that they could ask their sexual partner to use some form of protection.

The next set of survey results in Table 5 gives insight to the respondents’ perceived susceptibility towards contracting an STI. Most believe that there is a great risk of contracting an STI if they do not use a condom, communicate with their partner, or if they do not know their partner. While still more than half of the respondents said the following, less believe drugs and alcohol put people at risk for contracting an STI compared to not using condoms or knowing their partner.

Table 5.
Perceived Susceptibility toward Contracting an STI
 How much do you think people risk contracting an STI if:

Question	Great Risk	Moderate Risk	Slight Risk	No Risk	Total Responses
They do not use a condom?	71%	26%	2%	1%	94
They don't communicate with their partner?	65%	29%	4%	2%	94
They don't know their partner?	72%	27%	0%	1%	94
They are under the influence of drugs?	57%	34%	5%	3%	94
They are under the influence of alcohol?	57%	36%	3%	3%	94

Perceived Barriers

Not knowing where to go for health care services can be a barrier. When asked if they know where to go to receive health care services for STIs, 68 out of the 93 males who responded to this question (73%) said yes. The males were asked if they would look into a free STI education program if it was available to them. Of the 93 who answered, 53% said yes, 40% said no, and 8% said it depends. Time and whether or not their schedule permits it were major

reasons why attending such a program would not be likely for these males. One respondent would be interested in the program if the content was something he was not already aware of. Another would be interested if he already had an STI.

Learning Styles

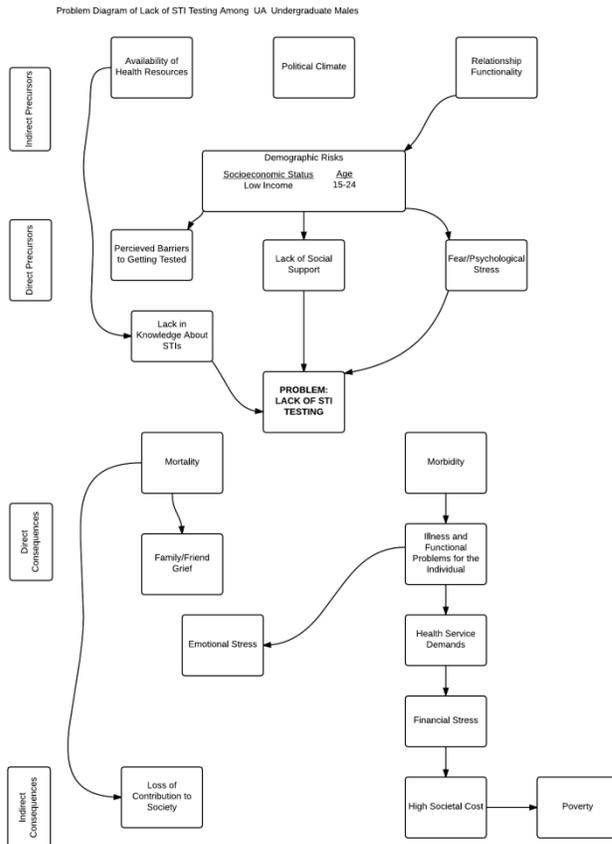
The survey asked participants how they best learn information and they were encouraged to check all that apply. Forty four males said they learn best visually, 28 said they learn best kinesthetically, and 20 said they learn best through hearing. When asked what type of setting they learn best in, 32 males said group discussion, 28 said classroom setting, 25 said one on one sessions, and 10 marked down independent study.

The Problem Statement

As previously mentioned, Campus Health Service at the University of Arizona conducts a campus-wide health and wellness survey every year. Results from the 2015 Health and Wellness Survey indicate that male identified undergraduate students seek testing for STIs less frequently than female identified undergraduate students. Testing for STIs is an important practice for the UA male undergraduates who are sexually active, as doing so frequently can prevent disease or untimely death.

An STI is an infection that is transmitted through vaginal, oral, anal, or skin to skin contact. While the terms sexually transmitted infection and sexually transmitted disease (STD) are used interchangeably, the term STI acknowledges the fact that infections become diseases when there are symptoms. Since one can have an infection without showing any symptoms, the term STI stresses the importance of getting tested (“STDs”, 2016).

The problem map listed below indicates the precursors leading to lack of STI testing among UA undergraduate males and its consequences it has directly or indirectly on the individual, family, and society. (See Appendix for larger image).



The following are the hypotheses for UA Project Get Tested:

- If UA undergraduate males increase their knowledge about how the female and male reproductive anatomies interact;
- If UA undergraduate males increase their knowledge about what makes them susceptible to contracting STIs;
- If UA undergraduate males can take advantage of resources that will allow them to overcome barriers preventing them from getting tested for STIs;

Then the percentage of UA undergraduate males who seek STI testing will increase by 60% by May 2018 with the following outcomes:

- There will be a larger percentage of UA undergraduate males who seek STI testing regularly;
- The barriers to getting tested will be reduced;
- There will be a decrease in the percentage of UA undergraduate males who engage in risky sexual behavior.

Theoretical Framework

UA Project Get Tested is designed using the Health Belief Model as its theoretical framework. The Health Belief Model was created in the 1950s by the United States Public Health Service as a result of the number of people who fail to participate in programs that detect and prevent disease (Janz and Becker, 1984). The model proposes that the following beliefs are the ones that prompt an individual to seek health care: perceived susceptibility of contracting the disease or becoming ill, perceived threat of the health issue, perceived benefits of the health programs, treatments, medications, and remedies that are supposed to address the health issue, and the perceived barriers that keep the individual from taking action to better their health (Parker, 2014).

With the Health Belief Model as the theoretical framework for this program, the program content will take into account the UA males' perceived susceptibility to contracting an STI, any perceived threats they believe STIs pose to their health, the benefits they wish to receive from participating in the program, and any social or physical barriers that would prevent them from getting tested for STIs and participating in the program.

Program Description

Statement of Purpose

The purpose of UA Project Get Tested is to promote healthy sexual health behavior by encouraging undergraduate males who are sexually active to seek testing for STIs. It is important for students, regardless of their sexual activity, to learn how to make responsible decisions that affect their relationships, health, and overall wellbeing.

Program Goals and Objectives

Goal One: To increase the percentage of sexually active UA undergraduate males who seek testing for STIs.

- Process Objective: By the end of October 2017, all freshman, sophomores, juniors, and seniors who are sexually active or who are susceptible to becoming sexually active will be enrolled in the program.
- Impact Objectives
 - Learning Objectives:
 - Cognitive Objective: By the end of the program, 70% of all undergraduate males enrolled and actively participating in the program will identify the modes of transmission for 5 different STIs.
 - Affective Objective: By the end of the program, 70% of all undergraduate males enrolled and actively participating in the program will consider how an STI test will benefit their wellbeing.

- Psychomotor: By the end of the program, 70% of all undergraduate males who are enrolled and actively participating in the program will complete an online worksheet indicating 3 ways STIs can be prevented.
- Behavioral Objective: One month after the end of the program, 85% of the undergraduate males enrolled in the program will make an appointment at Campus Health Services or any other nearby health clinic for a STI screening test.
- Environmental Objective: By the end of the program, 70% of the undergraduate males enrolled and actively participating in the program will serve as role models for their peers regarding the responsible act of seeking STI testing.
- Outcome Objective:
 - The percentage of UA undergraduate males who seek STI testing will increase by 60% by May 2018.

Goal Two: To increase the knowledge UA undergraduate males have about what makes them susceptible to contracting STIs.

- Process Objective: By August 1st, 2016, 3 counselors from UA Counseling and Psych Services will be hired to speak about sensitive subjects with any of the males enrolled and actively participating in the program if they need to do so.
- Impact Objectives
 - Learning Objectives:
 - Cognitive Objective: By the end of the program, 80% of the males enrolled and actively participating in the program will list 4 forms of risky sexual behavior that should be avoided.

- Affective Objective: By the end of the program, 80% of the males enrolled and actively participating in the program will realize effective communication with their partner can mitigate the spread of STIs.
- Psychomotor Objective: By the end of the program, 80% of the males enrolled and actively participating in the program will discuss four separate ways on how they can or could personally reduce risky sexual behavior.
- Behavioral Objective: By the end of the program, 80% of the males enrolled and actively participating in the program will reduce their susceptibility to contracting an STI by asking their partner to use some form of protection when engaging in sexual activities.
- Environmental Objective: By the end of the academic year, 85% of the male undergraduate community will be part of a campus culture where it is okay to speak openly about sexual health with their current or future partners.
- Outcome Objectives:
 - Regardless of sexual activity, 85% of the males enrolled in the program will be able to apply the skills and knowledge they have learned to increase their awareness of what makes them susceptible to contracting STIs.

Program Methodology

UA Project Get Tested will make use of the following health education methods:

- Online Lectures: Each of the five weeks, there will be a lecture the students can access that provides information about the male and female anatomy, different STIs, methods of prevention and relationship communication tips.
- Audiovisual materials: In order to appeal to the visual and auditory senses, the lectures will be slide show presentations with a voiceover reading the material. YouTube videos, videos from the Health Promotion and Preventive Services staff at Campus Health, and other resources will be made available on D2L for the students to access and supplement the lectures.
- Group discussion: The course will feature discussion posts through D2L and will require students to respond to said posts. This mimics a virtual classroom and facilitates group discussion, two methods of learning students indicated most useful in the research survey.
- Social Media: In order to keep the course entertaining and appeal to the millennial generation, social media such as Facebook, Twitter, and Instagram will be incorporated into the curriculum. Students will be encouraged to post about knowledge from the course they find interesting and use the hashtag #UAProjectGetTested. The hashtag can be looked up on the social media websites and talked about on the D2L discussion board.

Program Implementation Plan

Target Audience

This health education program is targeted toward male University of Arizona undergraduate students, whether sexually active or not yet sexually active, ranging from ages 18 to 25.

Distribution Channels for the Program

UA Project Get Tested is a 5 week online course that will be offered through the University of Arizona's technological learning platform, Desire 2 Learn (D2L). Delivering this program online versus in person prevents scheduling conflicts with other classes and takes less time out of their day compared to going to lecture, two factors students had reservations about. Activities will be due at the end of each week, but participants can work on them at any time leading up to the due date. UA Project Get Tested will not be offered for academic credit, but will be mandated by the University's administration and sponsored by the Health Promotion and Preventive Services office at Campus Health. All freshmen, sophomore, junior, and senior males will be required to participate, and a hold will be placed on their transcripts and Bursar's account until completed.

Staffing Needs

For UA Project Get Tested to run smoothly and effectively, a project director and teaching committee must be hired. The project director will oversee all aspects of the program and facilitate its implementation and functioning. The teaching committee will develop the course content and grade assignments. The project director should be either a registered nurse, nurse practitioner, physician assistant or physician, as well as a certified health education specialist (CHES) in order to give health credibility to the course. The teaching committee should be CHES certified as well, preferably 3-4 staff members from the Health Promotion and Preventive Services department in Campus Health. In addition, three counselors from UA Counseling and Psych Services (CAPS) will be hired to be on-call for any student who may be affected by the sensitive subjects brought up in the course. A designated program evaluator will also need to be hired to conduct the evaluation of UA Project Get Tested at the end of its duration.

Facility and Equipment Needs

No facility is needed for the males enrolled in the program to meet up in, as the students can participate in the online course anywhere that has a reliable internet connection. If a student does not have access to a computer or to reliable internet, the University of Arizona Main Library is open 24 hours a day, 7 days a week to enrolled students. Students can use computers there, or rent a laptop. A multimedia facility will be needed for the teaching committee to plan and create lesson content. They will need to have access to computers, video cameras, microphones, projectors, and any other materials required to record lectures to be posted online.

Program Implementation Timeline

UA Project Get Tested is expected to start October 1st 2017. About a year prior to the start of the program, specific tasks will have been completed.

Beginning August 2016, the project director, teaching team, CAPS counselors, and program evaluator will have been hired. During the months of September and October, the team will conduct a needs assessment of the undergraduate male population to see if any behaviors or perceptions have changed since the research survey for this program plan had been conducted. During November and December 2016, the project director and teaching committee will develop the hypotheses, goals, and objectives of the program.

During the months of January and February 2017, the project director and teaching committee will meet and design the methods and activities that will be used in the online program. They will type out the slide show lectures, record videos, and develop the D2L site in a format that works best for the program. In March and April, the team will market UA Project Get Tested around campus in the form of print and social media, and word of mouth. They will also

use this time to randomly select 100 male freshmen, sophomores, and juniors to participate in a pilot test of the program the following school year. UA Project Get Tested will begin its pilot test the Monday of the first full week of classes in August. The students that were selected the previous year will take the five week course and fill out a satisfaction survey at the end. The project director and learning team will take the feedback from the satisfaction surveys and evaluate the efficiency of the class. Provided the results are good, UA Project Get Tested will be implemented fully in October 2017.

Program Evaluation Plan

The objectives for UA Project Get Tested have been written in a way that their results can be measured and evaluated. The process, impact, and outcome objectives turn into process, impact, and outcome evaluation objectives.

Process Evaluation

UA Project Get Tested has two process objectives:

- By the end of October 2017, all freshman, sophomores, juniors, and seniors who are sexually active or who are susceptible to becoming sexually active will be enrolled in the program.
- By August 1st, 2016, 3 counselors from UA Counseling and Psych Services will be hired to speak about sensitive subjects with any of the males enrolled and actively participating in the program if they need to do so.

As mentioned in the program description, UA Project Get Tested is mandatory for all male freshman, sophomores, juniors and seniors. The program evaluator will not need to

determine the sexual activity of each male on campus. They will either be sexually active, or will most likely become sexually active at some point in their lives. As for the CAPS counselors, the program evaluator will be a part of the hiring process and will determine which counselors are professionally capable of providing counseling specific to sexual health, experiences and behavior.

Impact Evaluation

The learning objectives for goals one and two would have all been completed online through lecture activities and discussion board posts. The teaching committee would have graded these and the program evaluator would look over and compile the results.

The behavioral objectives for goals one and two are as follows:

- One month after the end of the program, 85% of the undergraduate males enrolled in the program will make an appointment at Campus Health Service or any other nearby health clinic for a STI screening test.
- By the end of the program, 80% of the males enrolled and actively participating in the program will reduce their susceptibility to contracting an STI by asking their partner to use some form of protection when engaging in sexual activities.

The program evaluator can access the records at Campus Health and check for an increase of individuals who make an appointment for STI testing. The evaluator does not need to identify the individuals, as obtaining names and other private health information would be a violation of the Health Insurance Portability and Accountability Act. To assess the changed behavior of a college male asking his partner to use protection, the program evaluator would

initiate a post-program questionnaire one month after the end of the program. The environmental objectives would be evaluated the same way.

Outcome Evaluation

Again, using a post-program questionnaire, the program evaluator will be able to tabulate the results to determine if the goals of UA Project Get Test have been met. Sample questions can be found in Appendix C.

Evaluation Timeline

See Appendix D.

References

- 2015 Health and wellness survey*. (2015). Unpublished raw data, Campus Health Health Promotion and Preventive Services Department, University of Arizona, Tucson, AZ.
- Arizona Board of Regents. (2014). 2014-15 University of Arizona fact book. Retrieved April 16, 2016, from <http://factbook.arizona.edu/2014-15/students/demographics>
- Arizona Board of Regents. (2016). About the university. Retrieved April 17, 2016, from <http://www.arizona.edu/about>
- Barth, K., Cook, R., Downs, J., Switzer, G., & Fischhoff, B. (2002). Social Stigma and Negative Consequences: Factors That Influence College Students' Decisions to Seek Testing for Sexually Transmitted Infections. *Journal Of American College Health*, 50(4), 153-159. <http://dx.doi.org/10.1080/07448480209596021>
- Bontempi, J., Mugno, R., Bulmer, S., Danvers, K., & Vancour, M. (2009). Exploring Gender Differences in the Relationship between HIV/STD Testing and Condom Use among Undergraduate College Students. *American Journal Of Health Education*, 40(2), 97-105. <http://dx.doi.org/10.1080/19325037.2009.10599084>
- Davies, J., McCrae, B., Frank, J., Dochnahl, A., Pickering, T., & Harrison, B. et al. (2000). Identifying Male College Students' Perceived Health Needs, Barriers to Seeking Help, and Recommendations to Help Men Adopt Healthier Lifestyles. *Journal Of American College Health*, 48(6), 259-267. <http://dx.doi.org/10.1080/07448480009596267>
- Janz, N.K., and M.H. Becker. 1984. "The Health Belief Model—A Decade Later." *Health Education Quarterly* 11(1): 1-47.

Moore, E., & Smith, W. (2012). What College Students Do Not Know: Where Are the Gaps in Sexual Health Knowledge?. *Journal Of American College Health*, 60(6), 436-442.

<http://dx.doi.org/10.1080/07448481.2012.673521>

Parker, S. H. (2014). *The practice and process of health education in health promotion*.

Dubuque, IA: Kendall Hunt.

STDs. (2016). *Planned Parenthood*. Retrieved 28 April 2016, from

<https://www.plannedparenthood.org/learn/stds-hiv-safer-sex>

Zak-Place, J., & Stern, M. (2004). Health Belief Factors and Dispositional Optimism as

Predictors of STD and HIV Preventive Behavior. *Journal Of American College Health*,

52(5), 229-236. <http://dx.doi.org/10.3200/jach.52.5.229-236>

Appendices

Appendix A. Full Survey



This survey is intended for students enrolled at the University of Arizona.

You are invited to voluntarily complete the survey following this page because you are a student at the University of Arizona.

The purpose of this survey is to identify what knowledge college males have regarding sexually transmitted infections (STIs). There are no guaranteed benefits associated with completing this survey, but the information will be used in developing a health education program as part of an Honors College thesis.

This survey takes approximately 15 minutes to complete. Please read each item carefully.

The data will be entered into a database with no links to your email address and no identifying information, thus guaranteeing your anonymity. Therefore, please answer honestly. You can obtain further information from the principal investigator at hcthesispi@email.arizona.edu.

If you have questions about your rights as a research subject you may call the University of Arizona Human Subjects Protection Program office at (520) 626-6721. If you have questions, complaints, or concerns about the research and cannot reach the Principal Investigator; or want to talk to someone other than the Investigator, you may call the University of Arizona Human Subjects Protection Program office. If you would like to contact the Human Subjects Protection Program via the web (this can be anonymous), please visit <http://www.orcr.arizona.edu/hspp>.

This survey is voluntary. You are free to exit this survey at any time, but please understand that each question requires a response.

Thank you for your participation.

1. Are you enrolled as a student at the University of Arizona?

Yes

No

2. What is your gender?

M

F

3. Which of the following best describes you?

Heterosexual

Gay

Lesbian

Bisexual

Queer

Questioning

Prefer not to answer

4. What is your current relationship status?

Not Dating

Casually Dating (one or more people)

Exclusively Dating One Person

Engaged

Married / Partnered

Other _____

5. What is your age in years? _____

6. What is your race?

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- North African/Middle Eastern

7. What is your ethnicity?

- Hispanic or Latino
- Non-Hispanic or Non-Latino

8. Please list any other ethnic or cultural identification you may have.

9. What is your academic classification?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate
- Post Graduate

10. What are your living arrangements?

- Fraternity
- Sorority
- Residence Hall
- Off Campus Housing
- Family or Friends

11. The next set of questions will be pertaining to your knowledge about sex.

	Yes	No	Not Sure
Do you know the basic functions of the male anatomy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you know the basic functions of the female anatomy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you know the difference between different types of sex (vaginal, oral, or anal)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you know the difference between protected and unprotected sex?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Now the next set of questions will be pertaining to your knowledge of Sexually Transmitted Infections (STIs).

	Yes	No	I Don't Know
Do you know what Sexually Transmitted Infections (STIs) are?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you know how some STIs are spread?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you had any formal education on STIs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Within the last six months, have you ever had sex (either vaginal, oral or anal)?

- Yes
- No

14. Within the last six months, have you ever had an STI?

Yes

No

15. Please answer the following questions.

	Yes	No
The last time you had sex: was it protected?	<input type="radio"/>	<input type="radio"/>
Have you been tested for an STI?	<input type="radio"/>	<input type="radio"/>
Have you received the results for an STI test?	<input type="radio"/>	<input type="radio"/>

16. With your current sexual partner, how confident are you that you could:

	Not at all	A little	Somewhat	Very
Say no to sex if you were not in the mood?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Say no to sexual activities you do not like?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ask your partner to wait while you got some form of protection?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ask your partner to use some form of protection?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. How much do you think people risk contracting an STI if:

	Great Risk	Moderate Risk	Slight Risk	No Risk
They do not use a condom?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They don't communicate with their partner?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They don't know their partner?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They are under the influence of drugs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They are under the influence of alcohol?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. When thinking about relationships you have with people in your daily life,

	Yes	No	I don't know
Do you think you would benefit if you had someone to talk to about your overall health?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you think you would benefit if you had someone to talk to about personal issues regarding sex?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. Do you know where to go to receive health care services for STIs?

- Yes
- No
- Not sure

20. If there was a free program available for you to learn more about STIs, would you check it out?

- Yes
- No
- It depends. (Please explain briefly below)

21. How do you best learn information? Check all that apply.

- Visually
- Hearing and/or by sound
- Kinesthetically (movement, hands on activity, applying skills)

22. In what type of setting do you learn best in? Check all that apply.

- Classroom setting
- Group discussion
- Individual sessions (1-on-1)
- Self-tutorial or independent study

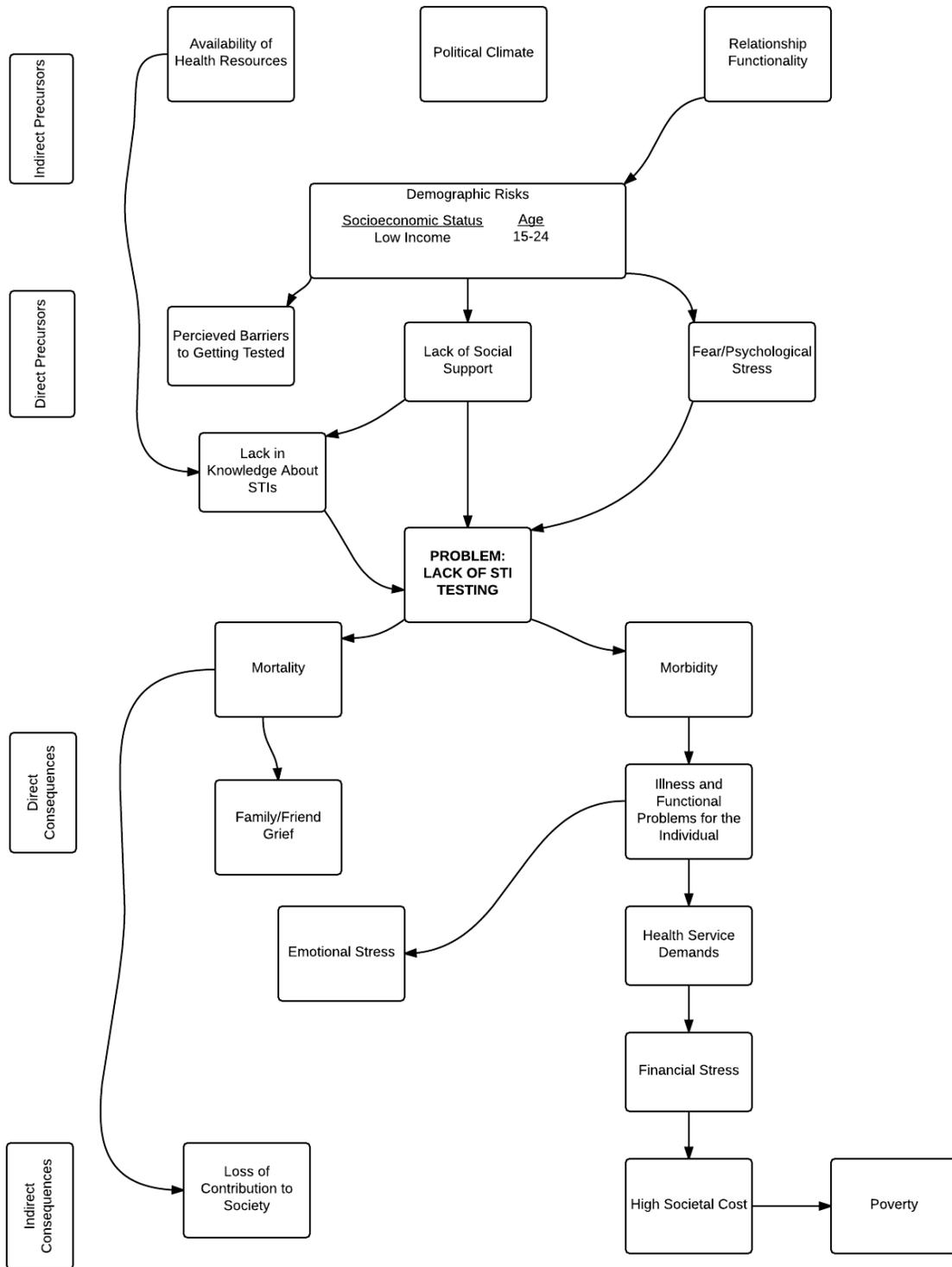
23. Are you aware that there is a health service facility on campus available to students by the name of Campus Health?

- Yes
- No

Thank you for completing this survey!

Appendix B: Problem Diagram

Problem Diagram of Lack of STI Testing Among UA Undergraduate Males



Appendix C: Sample Evaluation Questions

Thank you for your participation in UA Project Get Tested. Please take the time to complete the following questions. Your answers will be used to help UA Project Get Tested staff make this program more effective and enjoyable.

	Not at all	A little	Somewhat	Very
I am more likely to seek testing for STIs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am more likely to use protection when engaging in sexual activity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Yes	No	I don't know
I know what STIs are.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know how STIs are spread.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know what makes me susceptible to contracting an STI.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Yes	No	I don't Know
This program was well executed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This program was worth my time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend this program to a friend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix D: Evaluation Timeline

March 2017	<ul style="list-style-type: none"> • Market UA Project Get Tested
April 2017	<ul style="list-style-type: none"> • Recruit students who will participate in pilot test the following school year
August 2017	<ul style="list-style-type: none"> • UA Project Get Tested pilot test for five weeks. • Administer pre-program questionnaires at the start of the program.
September 2017	<ul style="list-style-type: none"> • Pilot test ends. Administer post-program questionnaire. • Program evaluator compares results to pre-program questionnaire and determines if outcome objectives were met.
October 2017	<ul style="list-style-type: none"> • UA Project Get Tested full implementation. Pre-program questionnaires are administered.
November 2017	<ul style="list-style-type: none"> • Program ends. Post-program questionnaire administered. Program evaluator compares results to pre-program questionnaire and determines if outcome objectives were met.
December 2017	<ul style="list-style-type: none"> • Evaluation report written by program evaluator.