PREVALENCE OF ABUSE, SUBSTANCE USE, AND SEXUALLY TRANSMITTED DISEASES AT UNIVERSITY OF HAWAI‘I MANOA

A THESIS SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAI‘I IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

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We certify that we have read this thesis and that, in our opinion, it is satisfactory in scope and quality as a thesis for the degree of Master of Science in Public Health.

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ACKNOWLEDGMENTS

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ABSTRACT

The objective of this study was to look at the prevalence of lifetime abuse, substance use/abuse, and sexually transmitted disease history of female students at the University of Hawai‘i Manoa. Associations were also analyzed on these topics. Eligible participants were 18 years old, female, and enrolled in one or more semester in 2006. 300 participants were enrolled. Self reported abuse prevalence was: emotional (50.84%), physical (19.73%), sexual (18.73%). 19.06% of participants reported smoking more than 100 cigs/lifetime, and 10.49% reporting testing positive for at least 1 STD/lifetime. Prevalence of substance abuse was found to be: Alcohol (19.24%), Marijuana (5.12%), Amphetamine (1.68%), Cocaine (2.01%). Many different positive associations were found between participants who reported abuse (emotional, physical, sexual) and cigarette smoking, substance abuse, and testing positive for an STD/lifetime. Positive associations were also found with reported lifetime cigarette smoking and substance abuse and reporting testing positive for an STD/lifetime.
# TABLE OF CONTENTS

Acknowledgments ....................................................................................... iv
Abstract ........................................................................................................ v
List of Tables .................................................................................................. viii
List of Figures ................................................................................................ ix
Chapter 1: Introduction .................................................................................. 1
  Background ................................................................................................... 1
    Significance ................................................................................................. 1
    Specific Aims ............................................................................................. 3
Chapter 2: Methods ....................................................................................... 5
  Research Design and Implementation .......................................................... 5
    Study Approval .......................................................................................... 5
    Study Population ....................................................................................... 5
    Sample Size ............................................................................................... 5
  Geographic Selection of Recruitment Sites ................................................. 6
  Recruitment Methods ................................................................................ 8
  Survey Packet ............................................................................................. 9
  Safety Monitoring Plan ............................................................................... 10
  Compensation ............................................................................................. 10
  Inclusion into the Study .............................................................................. 10
  Data Entry and Quality Assurance ............................................................ 11
  Data Cleaning ............................................................................................. 12
  Data Analysis ............................................................................................. 14
Chapter 3: Results ....................................................................................... 15
  Response Rates ......................................................................................... 15
    Monday ...................................................................................................... 15
    Tuesday ..................................................................................................... 15
    Wednesday ............................................................................................... 16
    Thursday .................................................................................................. 17
    Friday ........................................................................................................ 18
  Summary of All Days ................................................................................ 19
  Prevalence Data ........................................................................................ 20
    Demographic Data ................................................................................... 20
    Emotional Abuse ...................................................................................... 25
    Physical Abuse ........................................................................................ 26
    Sexual Abuse ........................................................................................... 26
    Emotional, Physical, and Sexual Abuse Summary ................................... 27
  Combined Abuse Data ................................................................................ 28
  Cigarette Smoking Data ............................................................................. 29
  Alcohol Use and Abuse Data ...................................................................... 30
  Marijuana Use and Abuse Data .................................................................. 32
  Amphetamine Use and Abuse Data ............................................................ 35
  Cocaine Use and Abuse Data ...................................................................... 37
  Summary of Substance Abuse ................................................................... 40
  Sexually Transmitted Disease Testing ....................................................... 43
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total Response Rates for Monday</td>
<td>15</td>
</tr>
<tr>
<td>2. Total Response Rates for Tuesday</td>
<td>16</td>
</tr>
<tr>
<td>3. Total Response Rates for Wednesday</td>
<td>17</td>
</tr>
<tr>
<td>4. Total Response Rates for Thursday</td>
<td>18</td>
</tr>
<tr>
<td>5. Total Response Rates for Friday</td>
<td>19</td>
</tr>
<tr>
<td>6. Total Response Rates for All Days of the Week</td>
<td>20</td>
</tr>
<tr>
<td>7. Reported abuse and age at first reported abuse data</td>
<td>28</td>
</tr>
<tr>
<td>8. Summary of Alcohol Use and Alcohol Intoxication</td>
<td>31</td>
</tr>
<tr>
<td>9. Summary of Marijuana Use and Marijuana Intoxication</td>
<td>33</td>
</tr>
<tr>
<td>10. Summary of Amphetamine Use and Amphetamine Intoxication</td>
<td>36</td>
</tr>
<tr>
<td>11. Summary of Cocaine Use and Cocaine Intoxication</td>
<td>38</td>
</tr>
<tr>
<td>12. Summary of All Substances Use and Intoxication</td>
<td>40</td>
</tr>
<tr>
<td>13. Summary of Substance Abuse DSM IV Criteria and Self Report</td>
<td>41</td>
</tr>
<tr>
<td>14. Summary of DSM IV Related Problems by Substance</td>
<td>43</td>
</tr>
<tr>
<td>15. All Abuse Associated with Alcohol Abuse</td>
<td>47</td>
</tr>
<tr>
<td>16. All Abuse Associated with Marijuana Abuse</td>
<td>49</td>
</tr>
<tr>
<td>17. All Abuse Associated with Amphetamine Abuse</td>
<td>51</td>
</tr>
<tr>
<td>18. All Abuse Associated with Cocaine Abuse</td>
<td>53</td>
</tr>
<tr>
<td>19. All Abuse Associated with Smoking 100 Cigarettes in Lifetime</td>
<td>55</td>
</tr>
<tr>
<td>20. All Substance Abuse Associated with Testing Positive for STDs</td>
<td>58</td>
</tr>
<tr>
<td>21. All Abuse Associated with Testing Positive for an STD in Lifetime</td>
<td>60</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1.</td>
<td>Percent of participants reporting belonging to only one race</td>
</tr>
<tr>
<td>2.</td>
<td>Percent of participants reporting belonging to more than one race</td>
</tr>
<tr>
<td>3.</td>
<td>Percent of participants reporting being at least part of races listed</td>
</tr>
<tr>
<td>4.</td>
<td>Percent of STDs that participants reported testing positive for</td>
</tr>
<tr>
<td>5.</td>
<td>Frequency of condom use as reported by participants</td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION

Background

Significance

There are many reasons for concern in today’s society; abuse (emotional, physical, and sexual), substance abuse, and sexually transmitted diseases (STDs) are just some of them. It is becoming almost commonplace to hear about the atrocities that our society is constantly producing in regards to childhood abuse and the effect that has on the victims and their future. Many studies have shown that “a history of childhood sexual abuse leads to an increase in sexual risk behaviors” (Buzi et al. 2003). This is concerning due to the fact that this increase puts this population at much higher risk of contracting STDs.

As found by Kenny et al. (1998) “Young women who engage in high-risk sexual behaviors, such as sex on a first date or with a stranger are at great risk for acquiring STDs.” Once contracted, these disease(s) will spread if not treated or if safe sexual practices are not adhered to. Sexual abuse is not the only kind of abuse to have a drastic effect on the victim in regards to sexual practices. It has also been shown that adverse childhood experiences (emotional, physical and sexual abuse) play a role in increased risk of having intercourse by age 15, and having 30 or more sexual partners (Hillis et al. 2001).

By increasing risky sexual behavior women are then more likely to contract certain STD’s. It was shown by Burkett et al. (1992) that if you increase the amount of sexual partners you have, you increase your likelihood for contracting HPV. This is of
concern due to the fact that there are quite a few STD's that are asymptomatic but can cause major health problems for women (www.cdc.gov).

It has also been shown that physical and sexual abuse may lead to lifetime substance abuse and dependence problems (Libby et al. 2004). These findings have been echoed in studies looking at a U.S. sample of women (Wilsnack et al. 1997), and adolescents (Bensley et al. 1999). A history of abuse has also been significantly associated with an “increased risk for regular smoking in girls” (Simantov et al. 2000).

Substance abuse is a problem that has so many facets, including robbery, driving under the influence, failure to fulfill major role obligations, domestic disputes, social and interpersonal problems, abuse and murder. All of these outcomes can in turn lead to legal charges with the consequence being fines and imprisonment. When delving into this topic of abuse, it soon becomes clear that there is a positive association between many of the issues previously discussed.

To my knowledge there have not been any studies in a college student population that look at the prevalence and associations between different kinds of abuses (emotional, physical, and sexual), substance use, and STD's. Most studies done in the college populations are looking at prevalence of some of these issues, but do not look at the larger picture dealing with all of these topics. Most of the studies that have been done dealing with the associations of abuse and substance use, or abuse and STD's are done in high risk groups, women who are not in college, and adolescents. Most of the published studies deal with issues surrounding childhood experiences of physical and sexual abuse. There is a lack of data from studies done in the college population looking at lifetime abuse, lifetime substance use, and lifetime occurrence of STDs. It is important to view
the whole picture in regards to abuse history due to the fact that abuse later in life has also been shown to be a big problem on college campuses (Bopp 2005; ACHA 2006).

**Specific Aims**

Demographic information will be obtained and reported in regards to age (mean, median, mode, minimum, maximum, range, and standard deviation), ethnicity, race, and semesters enrolled at UH Manoa. The prevalence of reported abuse (emotional, physical, and sexual) as well as the mean, median, mode, minimum, maximum, range, and standard deviation of the age at first reported abuse will be given. The prevalence of persons who have smoked 100 cigarettes in their lifetime, as well as substance use/abuse in regards to alcohol, marijuana, amphetamines, and cocaine will also be reported. STDs tested for, persons testing positive for STDs, and condom use will also be reported as prevalence data in this population.

It is hypothesized that prior abuse history (emotional, physical, and or sexual) will be positively associated with an increased likelihood of substance abuse behaviors. In regards to alcohol, marijuana, amphetamines, and cocaine these behaviors can be characterized as substance abuse using the Diagnostic and Statistical Manual of Mental Disorders (DSM IV) criteria. To fulfill this criteria you must exhibit 1 or more of the following occurring within a 12 month period: 1. “Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (such as repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; or neglect of children or household)”. 2. “Recurrent substance use in situations in which it is physically hazardous (such as driving an automobile or operating a machine when impaired by substance use)”. 3. “Recurrent
substance-related legal problems (such as arrests for substance related disorderly conduct). 4. "Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (for example, arguments with spouse about consequences of intoxication and physical fights)" (DSM-IV 1994).

It is also thought that prior abuse history (emotional, physical, and or sexual) will be associated with an increase in the likelihood of testing positive for an STD. Prior abuse history will be defined using the definitions in the Addiction Severity Index (ASI). The definitions are as follows; 1. "Emotional abuse- made you feel bad through harsh words". 2. "Physical abuse- cause you physical harm". 3. "Sexual abuse- rape, forced sexual advances or non-consensual sexual acts" (ASI-X 1999). It is also hypothesized that persons who are deemed to be substance abusers (using DSM IV criteria) will also have a positive association with reporting a lifetime positive outcome of having an STD.
CHAPTER 2
METHODS

Research Design and Implementation

Study Approval

Before beginning the study, all of the appropriate Institutional Review Board paperwork was filled out and submitted to the University of Hawai‘i Committee on Human Studies for review. Once approval was obtained, recruitment for the study began.

Study Population

For a participant to be eligible to complete the survey they must meet the following criteria: 1. Participants must be a minimum of 18 years old. 2. Participants must be female. 3. Participants must have been or be currently enrolled in one or more of the following semesters: Spring ’06, Summer ’06, or Fall ’06. Recruitment took place on the University of Hawai‘i at Manoa campus (as defined by the campus map see Appendix A). Continuous enrollment took place until all 300 participants were officially enrolled in the study.

Sample Size

The sample size calculation was done using the computer program Epi-Info. Using alpha 0.05 with 80% power it was calculated that a sample size of 243 respondents will be needed to detect an absolute difference of 25% (prevalence ratio of 2.5 or greater). Alpha error is referring to the probability of detecting an association when there really is not one. Beta error is the probability of not detecting an association when there really is one. Power is defined as 1-Beta Error. The frequency of exposure was 33% with the prevalence of the outcome among exposed being 25%. This means that it was expected that 33% of the sample would have reported a history of abuse, and out of that
group 25% would report the outcome. The prevalence of the outcome among the unexposed was estimated as being 10%. Due to the fact that there was no literature to rely on in making these calculations, it was determined that the estimated 243 participants was a conservative estimate. Since the estimated sample size was made on a conservative assumption, it was determined that the sample size should be 300 participants.

**Geographic Selection of Recruitment Sites**

In order to randomly select recruitment sites the campus map (Appendix A) was divided into 16 equal sections each being numbered 1-16. Time intervals (each being 2 hours) were set between 8am-4pm. The time intervals were 8am-10am, 10am-12pm, 12pm-2pm, and 2pm-4pm as seen in Appendix B. A random list of numbers was generated (using random.org) for each day of the week (Monday through Friday), so that there were 5 total random number lists (Appendix C). The first random number chosen (each number represents a specific geographic location) for a specific day of the week was assigned the first time interval (8am-10am), the second number chosen for a specific day of the week was assigned the second time interval (10am-12pm) the third number chosen was assigned the third time interval (12pm-2pm), and the fourth number chosen was assigned the fourth time interval (2pm-4pm). Since there were only 4 time intervals, when the fifth random number (corresponding to a geographic location on campus) was chosen the first time interval was assigned (8am-10am).

Eight locations were chosen per day (Monday through Friday), which corresponded with the 4 time intervals (each being used twice). The fifth location started the time interval over again (8am-10am), with the sixth location being the second time
interval (10am-12pm) and so on. This made it so each time interval was chosen 2 times per each day of the week. The order the sites were visited were the order that they were chosen, and the days of the week were equally surveyed (except for Friday which only had 2 locations surveyed—see Recruitment Methods).

For example, the random numbers for Monday were chosen in this order 6, 4, 5, 7, 3, 1, 16, and 8. This means that for Monday locations 6, 4, 5, 7, 3, 1, 16, and 8 were chosen as defined by the campus map (Appendix A). Time intervals 1-4 were given to each location based on the order in which they were randomly selected. This means that since location 6 was the first location chosen it was assigned time interval number 1 (8am-10am). Since location 7 was the fourth location chosen it was assigned time interval number 4 (2pm-4pm). Location number three was the fifth location chosen, and since there were only 4 time intervals it was assigned time interval number 1 (8-10am), location 1 which was chosen sixth was assigned time interval 2 (10am-12pm), location 16 was the seventh location chosen and assigned time interval three (12pm-2pm) and location 8 was the last (8th) location chosen for Monday and was therefore assigned the fourth time interval (2pm-4pm).

Once recruitment had begun, it became obvious that the campus map was not always to scale, especially in dealing with the “corner locations on campus”. Locations 6 and 13 were used in recruitment for the study but were found to be not to scale based on the campus map. In these cases the principal investigator used buildings located on the specific map sections as anchor points which to recruit from. For location 6 the University of Hawaii Press building was used and for location 13 the Speech Pathology building was used.
Recruitment Methods

Recruitment was conducted over a period ranging from June 20, 2006 through September 14, 2006. Recruitment times and locations #1-3 were used Monday (8am-10am on 8/14/06, 10am-12pm on 8/21/06, 12pm-2pm on 8/21/06), Tuesday (8am-10am on 6/20/06, 10am-12pm on 8/8/06, 12pm-2pm on 8/15/06), and Wednesday (8am-10am on 8/2/06, 10am-12pm on 8/2/06, 12pm-2pm on 9/13/06). Locations #1-4 were used on Thursday (8am-10am on 7/6/06, 10am-12pm on 8/10/06, 12pm-2pm on 8/17/06, 2pm-4pm on 9/14/06). Location #4 was used to make up for incomplete surveys collected on 9/13/06 to finish recruitment for the study. Locations 1 and 2 were used on Friday (8am-10am on 7/7/06 and 10am-12pm on 7/7/06). Note that when stating location numbers (i.e. #1-3 for Monday) that is referring to the first 3 randomly selected locations and their corresponding time intervals for each day of the week.

Potential participants were approached by the principal investigator (PI) and asked if they would like to participate in a study. They were told that they would be filling out a survey dealing with abuse, substance use, and STD’s to help with a master’s thesis project. If the person responded favorably then the potential participant would learn about the study in more detail as the consent form would be orally summarized by the PI.

After the summary they were asked if they had any questions, and reminded to place the completed survey (see Appendix D) in the envelope provided and seal it before handing it back to the PI. If the participant agreed to participate and did not have any further questions they would be left alone to complete the survey anonymously. If the participant had any questions before, during, or after the survey they were answered by
the PI to the best of her knowledge. All envelopes collected were sealed by the participant (unless that participant did not want to seal the envelope) and opened only in preparation for data entry by the PI.

**Survey Packet**

The survey packet consists of a blank white envelope, consent form (see Appendix E), and the survey instrument (Appendix D). The consent form had no identifying information (it was not signed by the participant) and contained contact information for both the PI and the Committee on Human Studies at University of Hawai’i Manoa. The survey was filled out completely anonymously with the only demographic information collected being age, ethnicity, race, and semesters enrolled at U.H. Manoa. The survey instrument was three and a half page’s in length, and contained 29 questions.

The survey was thought to take approximately fifteen minutes to complete, however most students completed the survey in approximately five minutes. It took participants approximately 15 minutes or longer to complete the survey if they were not fluent in the English language, had lots of abuse/substance use history, or they did not follow the skip instructions appropriately. The participants are asked about their abuse history (emotional, physical, and sexual), substance use (cigarettes, alcohol, marijuana, amphetamines, and cocaine), their sexually transmitted disease history (STD’s tested for and tested positive for in their lifetime), and their condom use. Once the survey was complete the participant placed the survey in an unmarked envelope and was asked to seal it. This survey was not read until the time of data entry.
Safety Monitoring Plan

Due to the sensitive nature of the topics, participants were informed that they did not have to answer any questions that they felt uncomfortable with, and could stop the survey at any time if they did not want to continue. In the case of an adverse event (such as a person having an emotional breakdown) the participant would have been referred to an applicable service (see Appendix F) and the event would have been reported to the Committee on Human Studies at U.H. Manoa. If two or more adverse events had taken place during recruitment then the study would have been re-evaluated, and revised. Fortunately, no adverse events took place throughout the entirety of the study.

Compensation

The participant was not given any type of compensation for being in the study besides a heartfelt thank you from the PI. The participant will not benefit directly from being a part of this research, but will be helping to bring to light the issues of abuse, substance use/abuse, STDs, and condom use on campus. All of these issues were explained to the participants in the consent form before they agreed to fill out the survey.

Inclusion into the Study

In order for the participant to be included in the study, their eligibility had to be determined. This was done through having answered both the age question, as well as semester’s enrolled question. If the age of the participant and/or semester enrolled could not be determined the person was not officially enrolled in the study and did not count toward the total enrollment number of 300 participants.

In some cases an age was not listed but “Yes” was circled in response to the question asking if the participant is over 18 years old. In this case the PI contacted the
University of Hawaii Committee on Human Studies and asked if this answer was an acceptable for a participant to be enrolled. It was deemed acceptable and theses participants were enrolled.

There was also one case that the participant did not list their age but the age at first abuse was noted as over 18. This person was also enrolled due to the fact that the participant was clearly over age 18. If more than 7 questions (not including skip instructions) were left blank on the survey the person was not enrolled, and their responses did not count in the study. There were a total of 17 people who were surveyed but “not enrolled” due to one of the before mentioned issues. This issue will be discussed in the results section in greater detail.

**Data Entry and Quality Assurance**

Once the completed survey is taken out of the envelope each survey is numbered starting with number one (through number 300). All data preparation, data entry, and quality assurance was done by the PI of the study. All of the data were entered into a Microsoft Excel spreadsheet exactly as was written on the survey by the participant. During data entry, if a survey was not eligible for enrollment it was flagged but still given a number. Once the number of survey’s entered reached 300, the flagged survey’s were replaced with an alpha numeric version of the replaced number (i.e. if #15 was flagged as not eligible to be in the study it would be replaced with #15A which would then be replaced with #15B if need be, and so on).

The first quality assurance check was done on all data entered (100% of data). A second check was then done by the PI using random.org to choose 10% of the records to re-abstract (Appendix G). In doing this second check one minor error was found in one
of the participant's data entered. Due to this mistake, a third check was done and another 10% of the surveys were re-abstracted (using random.org), this time finding no errors (Appendix H). Please note that a few of the records were actually checked four times due to the fact that some of the random numbers (selected during the second QA and third QA checks) overlapped. Random.org was used by choosing 30 random integers ranging from 1-300 to get the random 10% of 300 that was used in the 2nd and 3rd QA checks. One of the committee members was asked if it was appropriate to proceed with the data cleaning process or if another re-abstraction was necessary. It was determined that the cleaning process could take place.

Data Cleaning

To clean the data, all of the flagged surveys (survey's that could not be used for enrollment) were replaced with their replacement surveys in the spreadsheet. Then the data was checked for consistency. There were quite a few instances where the answers completed were NA due to the previous question answered, yet the person had answered all the questions unnecessarily. In these cases the answers were changed to NA to be consistent with the previously asked questions. Answers were also changed to NA if the person did not follow the skip patterns appropriately. Answers were also cleaned if more than one answer was marked on the survey in inappropriate areas. Some participants would circle that they were both Hispanic and Non Hispanic. In this case the person was considered Hispanic because the answer is inclusive. This same situation came up in the drug use sections, and again the inclusive answers were used.
There were quite a few write in responses on the survey, some of which will be
touched in the discussion section (see sub topic condom use). As far as the analysis is
concerned, no write in responses were used, unless the participant specifically answered
the question asked, and wrote in the answer instead of circling it. This was not a
common occurrence, but did happen occasionally. Once the data was corrected, more
columns were added to aid in the data analysis. For questions that had multiple answers
(such as race) each category was made into a Yes or No question and had a separate
column. This was also the case with the DSM IV criteria questions, as well as the STD
questions.

Inclusive categories were created for anyone who reported one or more kinds of
abuse (emotional, physical, and or sexual) to be used in analysis. The two categories
created were any abuse (emotional, physical, or sexual abuse), and any abuse (physical
and or sexual abuse). Substance abuse categories were also created based on the
participant’s response to the substance use questions (using DSM IV criteria). If they had
marked one or more category in these sections of the survey then they were deemed (per
DSM IV criteria) to have abused the substance. A category called “Any abuse all
substances” was created, and if the participants had abused any of the substances they
were placed in this category.

There was a lot of confusion with two of the smoking questions “How many
cigarettes do you smoke daily?” and “If you do not smoke cigarettes daily, how often
would you say you smoke cigarettes?” Questions arose both while people were taking
the survey, as well as in how to handle the responses received for these questions (during
data entry and data cleaning). Due to these issues, the validity of the questions was not
assured, which required that they be dropped from the analysis. However, the question asking “Have you smoked 100 cigarettes in your life?” was kept in the analysis due to the fact that there were not discrepancies regarding the validity of the question.

**Data Analysis**

Statistical Analysis Software (SAS) was used to analyze the data for this study. “Proc Freq” was used to obtain the prevalence data in the analysis, and was used on all data analyzed except numeric data. “Proc univariate” was used to get the results for mean, median, mode, minimum, maximum, range, standard deviation, etc. for all age data (including age at first reported abuse). In non-normally distributed data the standard deviation is not an appropriate descriptive statistic and will not be reported. For the association analysis “Proc freq tables variable 1*variable 2/cmh” was used, and the prevalence ratio, 95% Confidence intervals, and Mantel-Haenszel Chi Squared test p-values (alpha 0.05) will be reported. In those analyses that came back with less than 5 observations in one of the cells the Fisher’s exact test was used to obtain a p-value which will be reported in the results section. In this case the programming was “Proc freq tables variable 1*variable 2/exact”. Even though estimates with less than 5 people are fairly unreliable due to the fact that these statistical tests only take random error into account, results will be reported briefly.
CHAPTER 3
RESULTS

Response Rates

Monday

On Monday 3 collection locations were used (6, 4, & 5). At the first location chosen (location #6), 0 surveys were collected and 3 people were ineligible. At the second location chosen (location #4), 7 surveys were collected, 6 people were ineligible, and 3 people did not hear about the study because they were late for either class or work etc. At the third location chosen (location #5), 26 surveys were collected, 6 people were ineligible, and 8 people were late. On Monday the total survey’s collected totaled 33, there were 15 people ineligible, and 11 people did not hear about the study because they were late. Overall the response rate was 100% since no one heard about the study and decided not to participate. See Table 1 below.

Table 1. Total response rates for Monday’s 3 locations.

<table>
<thead>
<tr>
<th>Location</th>
<th># Collected</th>
<th># Ineligible</th>
<th># No Info</th>
<th># Refused</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Location</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>2nd Location</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>3rd Location</td>
<td>26</td>
<td>6</td>
<td>8</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Overall</td>
<td>33</td>
<td>15</td>
<td>11</td>
<td>0</td>
<td>100%</td>
</tr>
</tbody>
</table>

Tuesday

On Tuesday 3 collection locations were used (16, 1, & 2). At the first location chosen (location #16), 23 surveys were collected, 4 people were ineligible, and 29 people were late and did not hear about the study. At the second location chosen (location #1),
45 surveys were collected, 9 people were ineligible, 34 people were late, and 2 people found out about the study but refused to participate. The response rate for this location is 95.74% (45/47=0.9574). At the third location chosen (location #2), 29 surveys were collected, 14 people were ineligible, and 10 people were running late and did not hear about the study. On Tuesday there were 97 total surveys collected, there were 27 people ineligible, 73 people did not hear about the study because they were running late, and 2 people did not want to participate after finding out about the study. Overall the response rate was 97.98% (97/99=0.9798). See Table 2 below.

Table 2. Total response rates for Tuesday’s 3 locations.

<table>
<thead>
<tr>
<th>Tuesday</th>
<th># Collected</th>
<th># Ineligible</th>
<th># No Info</th>
<th># Refused</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Location</td>
<td>23</td>
<td>4</td>
<td>29</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>2nd Location</td>
<td>45</td>
<td>9</td>
<td>34</td>
<td>2</td>
<td>95.65%</td>
</tr>
<tr>
<td>3rd Location</td>
<td>29</td>
<td>14</td>
<td>10</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Overall</td>
<td>97</td>
<td>27</td>
<td>73</td>
<td>2</td>
<td>97.98%</td>
</tr>
</tbody>
</table>

**Wednesday**

On Wednesday 3 collection locations were used (6, 12, & 13). At the first location chosen (location #6), no females walked by in the 2 hour time window. At the second location chosen (location #12), 21 surveys were collected, 6 people were ineligible, 10 people were running late and did not hear about the study, and 2 people refused to participate after hearing about the study. The response rate for this location is 91.30% (21/23=0.9130). At the third location chosen (location #13), 38 surveys were collected, 6 people were ineligible, and 13 people were late. On Wednesday the total
survey's collected totaled 59, there were 12 people ineligible, 23 people did not hear about the study because they were running late, and 2 people did not want to participate after finding out about the study. Overall the response rate for this day was 96.72% (59/61=0.9672). See Table 3 below.

Table 3. Total response rates for Wednesday's 3 locations.

<table>
<thead>
<tr>
<th>Wednesday</th>
<th># Collected</th>
<th># Ineligible</th>
<th># No Info</th>
<th># Refused</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Location</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>2nd Location</td>
<td>21</td>
<td>6</td>
<td>10</td>
<td>2</td>
<td>91.30%</td>
</tr>
<tr>
<td>3rd Location</td>
<td>38</td>
<td>6</td>
<td>13</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Overall</td>
<td>59</td>
<td>12</td>
<td>23</td>
<td>2</td>
<td>96.72%</td>
</tr>
</tbody>
</table>

Thursday

On Thursday 4 collection locations were used (8, 2, 4, & 1). At the first location chosen (location #8), 12 surveys were collected, 5 people were ineligible, 11 people were late for class and did not hear about the study, and 2 people refused to participate after learning about the study. The response rate for this location is 85.71% (12/14=0.8571).

At the second location chosen (location #2), 37 surveys were collected, 12 people were ineligible, and 26 people were running late and did not hear about the study. At the third location chosen (location #4), 6 surveys were collected, 9 people were ineligible, and 6 people did not hear about the study because they were running late. At the fourth location chosen (location #1), 2 surveys were collected, 1 person was ineligible, and 1 person was running late and did not want to hear about the study. On Thursday the total survey’s collected totaled 57, there were 27 people ineligible, 44 people did not hear
about the study because they were running late, and 2 people did not want to participate after finding out about the study. Overall the response rate for this day was 96.61% (57/59=0.9661). See Table 4 below.

Table 4. Total response rates for Thursday’s 4 locations.

<table>
<thead>
<tr>
<th>Location</th>
<th># Collected</th>
<th># Ineligible</th>
<th># No Info</th>
<th># Refused</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Location</td>
<td>12</td>
<td>5</td>
<td>11</td>
<td>2</td>
<td>85.71%</td>
</tr>
<tr>
<td>2nd Location</td>
<td>37</td>
<td>12</td>
<td>26</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>3rd Location</td>
<td>6</td>
<td>9</td>
<td>6</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>4th Location</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Overall</td>
<td>57</td>
<td>27</td>
<td>44</td>
<td>2</td>
<td>96.61%</td>
</tr>
</tbody>
</table>

Friday

On Friday 2 collection locations were used (16 & 2). At the first location chosen (location #16), 23 surveys were collected, 3 people were ineligible, 48 people were late and did not hear about the study, and one person heard about the study and refused to participate. The response rate for the location is 95.83% (23/24=0.9583). At the second location chosen (location #2), 48 surveys were collected, 14 people didn’t hear about the study because they were running late, and 2 people heard about the study but did not want to participate. The response rate for this location is 96% (48/50=0.96). On Friday the total survey’s collected totaled 71, there were 3 people ineligible, 62 people did not hear about the study because they were running late, and 3 people did not want to participate after finding out about the study. Overall the response rate for this day was 95.95% (71/74=0.9595). See Table 5 on page 19.
Table 5. Total response rates for Friday’s 2 locations.

<table>
<thead>
<tr>
<th>Location</th>
<th># Collected</th>
<th># Ineligible</th>
<th># No Info</th>
<th># Refused</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Location</td>
<td>23</td>
<td>3</td>
<td>48</td>
<td>1</td>
<td>95.83%</td>
</tr>
<tr>
<td>2nd Location</td>
<td>48</td>
<td>0</td>
<td>14</td>
<td>2</td>
<td>96.00%</td>
</tr>
<tr>
<td>Overall</td>
<td>71</td>
<td>3</td>
<td>62</td>
<td>3</td>
<td>95.95%</td>
</tr>
</tbody>
</table>

Summary of All Days

Subjects mentioned previously were reported ineligible due to the following reasons: they were not enrolled at the University of Hawai‘i at Manoa during the semesters of eligibility, they were under 18 years old, they were faculty members and not students, they did not speak English, or they had already filled out a survey previously. Note that the total amount of surveys completed was 317. There were 17 surveys that were not eligible to be officially enrolled due to the fact that surveys were either incomplete, or the eligibility requirements could not be determined from the survey responses recorded. There were 12 surveys dropped due to them being incomplete which was defined as 7 or more questions being left blank (not including skip instructions). There were 5 surveys dropped due to the fact that the eligibility requirements could not be determined from the survey responses recorded (either age or semesters enrolled).

The total number of people approached was 623, of which 317 completed surveys. There were 84 people who were deemed ineligible, 213 people walked away without hearing about the study (usually saying that they were running late for work, class, etc.). A total of 9 people refused to be in the study after finding out what the survey topic was, and hearing about the study. The total response rate was found to be
97.24\% (317/326=0.9724). The total values for all days of the week are listed in Table 6 (see below).

Table 6. Total response rates for all days of the week.

<table>
<thead>
<tr>
<th></th>
<th># Collected</th>
<th># Ineligible</th>
<th># No Info</th>
<th># Refused</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>33</td>
<td>15</td>
<td>11</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Tuesday</td>
<td>97</td>
<td>27</td>
<td>73</td>
<td>2</td>
<td>97.98%</td>
</tr>
<tr>
<td>Wednesday</td>
<td>59</td>
<td>12</td>
<td>23</td>
<td>2</td>
<td>96.72%</td>
</tr>
<tr>
<td>Thursday</td>
<td>57</td>
<td>27</td>
<td>44</td>
<td>2</td>
<td>96.61%</td>
</tr>
<tr>
<td>Friday</td>
<td>71</td>
<td>3</td>
<td>62</td>
<td>3</td>
<td>95.95%</td>
</tr>
<tr>
<td>Overall</td>
<td>317</td>
<td>84</td>
<td>213</td>
<td>9</td>
<td>97.24%</td>
</tr>
</tbody>
</table>

Prevalence Data

Demographic Data

The age of participants in the study ranged from age 18 to age 61, with a mean age of 23.35 (standard error 0.35). 81.29\% of participants were ages 18-25, 10.20\% of participants were ages 26-31, and 8.5\% of participants were ages 32-61. The majority of participants fell into the age category of 18-25 years old. There were 6 participant values missing (N=294) due to the reasons discussed in Chapter 2 Methods sub-topic inclusion into the study. Subjects reported semesters enrolled at the University of Hawai‘i Manoa as follows: Spring 2006 (58.0\% enrolled), Summer 2006 (65.67\% enrolled), Fall 2006 (77.00\% enrolled) with no participants leaving this question blank (N=300). 40.67\% of participants responded that they were only enrolled in 1 of the 3 semesters, which means that 58.33\% of participants were enrolled in more than one of the 3 semesters. In regards
to ethnicity only 6.97% of participants reported that they were Hispanic, while 93.03% of respondents reported being Non-Hispanic (13 of the 300 surveys left this question blank, N=287).

62.63% of participants reported being of Asian or Pacific Islander Ancestry which is fairly consistent with the 57% that are reported to be enrolled at U.H. Manoa per the U.H. Manoa website (manoa.hawaii.edu). This calculation was obtained using the definitions of Asian Ancestry: Asian Indian, Chinese, Filipino, Japanese, Korean, and Vietnamese, and Pacific Islander: Hawaiian & Samoan (www.census.gov). There is no way to know if these are the same definitions being used by the U.H. website in making this statistic and also no way to know how up to date that listed statistic is.

The race question on the survey had the most categories and participants were told to mark all races that apply. The following percent of participants responded that they were only of one race: 0.34% American Indian or Alaskan Native, 1.35% Asian Indian, 1.68% Black or African American, 8.42% Chinese, 7.41% Filipino, 0.67% Hawaiian (Native), 15.15% Japanese, 1.00% Korean, 1.00% Samoan, 1.35% Vietnamese, 28.28% White (origins in Europe, the Middle East, or North Africa). This total accounts for 66.65% of participants who reported being solely of one race. See Figure 1 on page 22. 1.00% of participants declined to answer the question, and 1.00% of participants left this question blank. 32.39% reported being of more than one race, note that this equals 100.05% due to rounding error.
Of the 32.39% of participants who reported being of more than one ethnicity each participant will be put into one category based on the categorized race reported (see below). If any participant with a “mixed race” circled Hawaiian (Native) then they will be considered part Hawaiian (7.11%). If they circled Samoan then they will be considered part Samoan (1.68%). If American Indian or Alaskan Native was circled then they will be considered part American Indian or Alaskan Native (7.41%). If Black or African American was circled then they will be considered part Black of African American (0.34%). If Guamanian or Chamorro was circled then they will be considered part Guamanian or Chamorro (0.34%). If Vietnamese was circled than the person was considered part Vietnamese (1.02%). If they noted that they were part Filipino then they
were considered Part Filipino (5.73%). If Chinese was noted than the person was considered part Chinese (4.05%). If Japanese was noted then they were considered Japanese (4.71%). See Figure 2 below.

11 respondents also noted that they were part Korean but this category was not created due to the fact that these participants were already classified into other categories. So this data is not taking into account the 3.37% of participants reporting that they are part Korean. Note that the order the categories are listed here is the order that the races were taken into account (i.e. if someone reported that they were both Hawaiian (Native) and Samoan then they would be counted here as Hawaiian (Native)).

![Figure 2. Percent of participants reporting belonging to more than one race.](image-url)
Now we will look at the percent reported for each of the races (the total will be over 100% as 32.39% of respondents reported belonging to more than one ethnicity). Participants will be placed into each racial category that they listed. American Indian or Alaskan Native (8.42%), Asian Indian (1.68%), Black or African American (4.04%), Chinese (19.87%), Filipino (16.5%), Guamanian or Chamorro (0.34%), Hawaiian (Native) (7.74%), Japanese (27.61%), Korean (4.38%), Samoan (2.69%), Vietnamese (3.03%), White (origins in Europe, the Middle East, or North Africa) (47.47%), declined to answer (1.01%). See Figure 3 below. None of the people surveyed listed that they were Marshallese, Micronesian, or Palauan which were also available races for selection. The total equals 143.77% due to the fact that participants reported multiple races (ranging from 1 race to 5 races listed). 3 people did not answer this question (N=297).

![% Reported for Each Race](chart.png)

Figure 3. Percent of participants that reported being at least part of races listed.
Emotional Abuse

Emotional abuse answers are based on any abuse received throughout the participant’s lifetime. When participants were asked if in their opinion, if they have ever had someone emotionally abuse them (make them feel bad through harsh words), 50.84% of participants responded that they had experienced some emotional abuse in their lifetime. So conversely 49.16% of respondents said that they had not experienced any emotional abuse in their lifetime. Only one person who was enrolled in the study did not answer this question (N=299).

If participants answered yes to the question of emotional abuse, they were then asked to write in how old they were when this abuse took place. Some people wrote in an age range (in this case the youngest age listed was used), some listed just one age, and others wrote in responses such as “childhood” (age 7 was used), “middle school” (age 12 was used), “teenage years” (age 14 was used), “throughout lifetime” or “age 0” (in these cases age 1 was used). Due to the fact that there was such variation in the write in responses, the age at first reported emotional abuse will be used and the results will be shown here.

16 participants out of those who answered yes to having experienced emotional abuse in their lifetime did not write in an answer as instructed, so the question was considered to be left blank. The mean age at first reported abuse was 12.68 years old with a standard deviation of 6.94. The mode was found to be age 10, with a median age of 12. With age one being the minimum age reported and 41 being the maximum age reported (range 40).
**Physical Abuse**

Physical abuse answers are pertaining to any abuse the participant may have received during their lifetime. When participants were asked in their opinion, if they had ever had someone physically abuse them (cause them physical harm), 19.73% of participants responded that they had experienced physical abuse in their lifetime. 80.27% of participants responded that they had not experienced any physical abuse in their life. One person left this question blank (N=299).

If participants answered yes to the question of being physically abused, they were then asked to write in how old they were when this abuse took place. Some people wrote in an age range (in this case the youngest age listed was used), some listed just one age, and others wrote things in like “childhood” (age 7 was used), “middle school” (age 12 was used), “teenage years” (age 14 was used), “throughout lifetime” or “age 0” (in these cases age 1 was used). Due to the fact that there was such variation in the write in responses, the age at first reported physical abuse will be used and the results will be shown here. 5 participants out of those who answered that they had been physically abused did not write in a response. The mean age at first reported abuse was 13.27 years old with a standard deviation of 7.97. The mode was found to be age 7, with a median age of 12. With age one being the minimum age reported and 41 being the maximum age reported (range 40).

**Sexual Abuse**

Sexual abuse answers are pertaining to the participant’s opinion of any sexual abuse the participant may have received during their lifetime. When participants were asked in their opinion, if they had ever had someone sexually abuse them (rape, forced
sexual advances, or non consensual sex acts), 18.73% of participants responded that they had experienced sexual abuse in their lifetime. 81.27% of participants responded that they had not experienced any sexual abuse in their life. One person left this question blank (N=299).

If participants answered yes to the question of being sexually abused, they were then asked to write in how old they were when this abuse took place. Some people wrote in an age range (in this case the youngest age listed was used), some listed just one age, and others wrote things in like “childhood” (age 7 was used), “middle school” (age 12 was used), “teenage years” (age 14 was used), “throughout lifetime” or “age 0” (in these cases age 1 was used). Due to the fact that there was such variation in the write in responses, the age at first reported sexual abuse will be used and the results will be shown here. There were no participants who left the age question blank if they were supposed to answer it. The mean age at first reported abuse was 13.54 years old with a standard deviation of 5.82. The mode was found to be age 17, with a median age of 14. With age three being the minimum age reported and 28 being the maximum age reported (range 25).

**Emotional, Physical, Sexual Abuse Summary**

All of these abuse questions were pertaining to any abuse that the participant may have received throughout their lifetime. The responses of yes to the question have you ever been abuse are as follows: Emotional (50.84%), Physical (19.73%), and Sexual (18.73%). The mean ages, standard deviation, median, and mode at first reported abuse are as follows: Emotional (mean=12.68, Std.=6.94, median=12, mode=10), Physical (mean=13.27, Std.=7.97, median=12, mode=7), and Sexual (mean=13.54, Std.=5.82,
median=14, mode=17). It is important to note that the mode ages vary quite a bit based on the type of abuse reported. While entering the data it was noted that there seemed to be clusters of sexual abuse reported both in early childhood as well as around college age (mode 17). See Table 7 below.

Table 7. Reported abuse, and first reported age data.

<table>
<thead>
<tr>
<th>% Reporting Abuse</th>
<th>Mean Age</th>
<th>Median Age</th>
<th>Mode Age</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>50.84</td>
<td>12.68</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Physical</td>
<td>19.73</td>
<td>13.27</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Sexual</td>
<td>18.73</td>
<td>13.54</td>
<td>14</td>
<td>17</td>
</tr>
</tbody>
</table>

Combined Abuse Data

The emotional, physical, and sexual abuse data were combined to make up 2 new variables. The first one dealt with all three of the abuses listed, emotional, physical, and sexual. If a participant had reported any of these three types of abuse they were put into this category which included 57.86% of participants. 31.44% of the participants in this category reported being abused in more than one of the categories listed. There was one missing response to this category (N=299).

The second category consisted of any physical and or sexual abuse. These categories of abuse may be considered less subjective due to the more specific definitions given by the ASI-X criteria. They are seen to be more severe forms of abuse in other studies dealing with these topics. If a participant reported either type of abuse (physical and or sexual) then they were placed into this category which included 32.44% of participants. 6.02% of participants reported that they had been both sexually and
physically abused during their lifetime. There was one missing response to this category (N=299).

**Cigarette Smoking Data**

Participants were asked about their smoking history, and if they had smoked at least 100 cigarettes in their life. 19.06% of participants reported that they had smoked 100 cigarettes in their lifetime whereas 80.94% of participants reported that they had not. Only one participant did not respond to this question (N=299).

There were also 2 other questions asked in the survey, which were not analyzed due to the questionable validity of the questions. Many questions were asked by participants about these two questions both during and after the survey which strengthened the uncertainty surrounding them. If participants answered that they had smoked 100 cigarettes in their lifetime they were then asked to write in how many cigarettes they smoke daily. This question posed a big problem because the participants were not sure how to answer the question, which made a lot of the responses hard to interpret (past vs. current smoking, irregular smoking etc.).

The next question was trying to get at how often the participant smokes if they did not smoke daily. Again this question got confusing and some answers were hard to interpret, so it was dropped as well. If participants did not report smoking cigarettes daily they were asked to note how often they smoked cigarettes. The participants were supposed to circle the category which applied to them (never, less than once a month, 1-3 times a month, 1-2 times a week, 3-6 times a week). Unfortunately, most participants circled more than one category, wrote in a response, or left it blank. All three of the smoking questions were provided by Dr. Jay Maddock at the University of Hawai‘i
Unfortunately, 2 of the 3 smoking questions were left out of the analysis due to the previously mentioned issues.

**Alcohol Use and Abuse Data**

All of the alcohol questions are pertaining to the participant's heaviest period of substance use in their lifetime (which could be their current use). The participants were asked (at heaviest use) on average how often they drink per week. Participants were asked to circle one of the following responses: never, less than weekly, 1-2 days per week, 3-4 days per week, 5-6 days per week, and 7 days per week. 13.31% reported that they had never tried alcohol, 40.96% reported drinking it less than weekly, 20.48% reported 1-2 days per week, 14.68% reported 3-4 days per week, 6.14% reported 5-6 days per week, and 4.44% reported drinking 7 days per week. This means that 45.74% of participants reported drinking between 1-7 days a week at their heaviest use. 7 participants did not answer this question (N=293). See Table 8 on page 31.

The participants were then asked if in their lifetime they have ever gotten intoxicated from drinking alcohol. 67.91% responded that they had been intoxicated (sometime during their lifetime), 18.92% said that they drank alcohol but had never been intoxicated from using it. For 13.18% of participants the question was not applicable because they had never tried alcohol. Four participants who should have answered this question did not (N=296).

If the participant answered that they had been intoxicated in their lifetime, they were then asked to report the days per week of intoxication at heaviest use. 40.68% of participants reported getting intoxicated less than weekly, 17.97% reported getting intoxicated 1-2 days per week, 6.78% of participants reported getting intoxicated 3-4
days per week, 1.36% reported getting intoxicated 5-6 days per week, and 1.36% of participants reported getting intoxicated 7 days a week. For 31.86% of participants this question was not applicable, and 5 participants left this question blank (N=295). This shows that 27.47% of participants reported drinking alcohol to intoxication between 1-7 days per week. See Table 8 below.

Table 8. Summary of Alcohol Use and Alcohol Intoxication

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Less than weekly</th>
<th>1-2 days</th>
<th>3-4 days</th>
<th>5-6 days</th>
<th>7 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Use</td>
<td>13.31%</td>
<td>40.96%</td>
<td>20.48%</td>
<td>14.68%</td>
<td>6.14%</td>
<td>4.44%</td>
</tr>
<tr>
<td>Alcohol Intoxication</td>
<td>31.85%</td>
<td>40.68%</td>
<td>17.97%</td>
<td>6.78%</td>
<td>1.36%</td>
<td>1.36%</td>
</tr>
</tbody>
</table>

The next questions that were asked were dealing with alcohol abuse using both DSM IV criteria as well as self perception. To look at alcohol abuse as defined by the DSM IV criteria the participants were asked if in a 12 month period they (participants were asked to circle all that applied): 1. Had recurring problems at work, school, or home related to alcohol use (repeated absences, poor performance, expulsion from school, neglect of children or household). 2. Use alcohol more than once when it was physically hazardous (driving or operating machinery under the influence). 3. Have alcohol related legal problems on more than one occasion (arrests for alcohol related reasons). 4. Continue to use alcohol despite having persistent social or interpersonal problems caused or made worse by their alcohol use (arguments about alcohol use, physical fights over alcohol use). 5. None of the above.

A total of 67.35% of participants who used alcohol stated that they had never had any of the above listed problems with alcohol. For 13.40% of people this question was
not applicable due to their lack of alcohol use. 6.53% reported having recurring problems at work, school, or home related to alcohol use (repeated absences, poor performance, expulsion from school, neglect of children or household). 14.78% reported using alcohol more than once when it was physically hazardous (driving or operating machinery under the influence). 2.41% reported having alcohol related legal problems on more than one occasion (arrests for alcohol related reasons). 3.44% reported continued use of alcohol despite having persistent social or interpersonal problems caused or made worse by their alcohol use (arguments about alcohol use, physical fights over alcohol use). 7.91% of the participants who used alcohol reported having more than one of these problems during a 12 month period.

According to the DSM IV criteria if the participants noted any of these problems as occurring then they were considered to have abused alcohol. A new variable was created to look at the prevalence of any abuse with alcohol as defined by the DSM IV criteria. It was found that 19.24% of participants reported activities and/or behaviors consistent with alcohol abuse. All participants were asked if in their opinion they either have or had a substance abuse issue with alcohol and only 3.40% believed that they did. This is quite a big discrepancy in actual alcohol abuse versus perceived alcohol abuse.

**Marijuana Use and Abuse Data**

All of the marijuana questions are pertaining to the participant’s heaviest period of substance use in their lifetime (which could be their current use). The participants were asked (at heaviest use) on average how often they smoke marijuana per week. 62.54% reported that they had never tried marijuana, 27.42% reported less than weekly, 3.68% reported 1-2 days per week, 2.34% reported 3-4 days per week, 0.67% reported 5-
6 days per week, and 3.34% reported smoking marijuana 7 days per week. This means that 10.03% of participants reported smoking marijuana between 1-7 days a week at their heaviest use. Only one participant did not answer this question (N=299). See Table 9 below.

The participants were then asked to report the days per week of intoxication during their heaviest use. 37.25% responded that they had gotten “stoned” or “high” in their lifetime. 100% of participants that reported smoking marijuana also reported getting “stoned” or “high” from using this drug. One participant who noted that they smoked marijuana left the marijuana to intoxication question blank. 28.52% of participants reported getting “stoned” or “high” less than weekly, 2.35% reported getting “stoned” or “high” 1-2 days per week, 2.35% of participants reported getting “stoned” or “high” 3-4 days per week, 0.67% reported getting “stoned” or “high” 5-6 days per week, and 3.36% of participants reported getting “stoned” or “high” 7 days a week. It was shown that 8.73% of participants reported getting “stoned” or “high” between 1-7 days a week at their lifetime heaviest use. For 62.75% of participants this question was not applicable, and 2 participants left this question blank (N=298). See Table 9 below.

Table 9. Summary of Marijuana Use and Marijuana Intoxication

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Less than weekly</th>
<th>1-2 days</th>
<th>3-4 days</th>
<th>5-6 days</th>
<th>7 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana Use</td>
<td>62.54%</td>
<td>27.42%</td>
<td>3.68%</td>
<td>2.34%</td>
<td>0.67%</td>
<td>3.34%</td>
</tr>
<tr>
<td>Marijuana Intoxication</td>
<td>62.75%</td>
<td>28.52%</td>
<td>2.35%</td>
<td>2.35%</td>
<td>0.67%</td>
<td>3.36%</td>
</tr>
</tbody>
</table>

The next questions dealing with marijuana are looking at both defined (DSM IV) criteria for abuse as well as self perceived abuse with marijuana. To look at marijuana
abuse as defined by the DSM IV criteria the participants were asked if in a 12 month period they (participants were asked to circle all that applied): 1. Had recurring problems at work, school, or home related to marijuana use (repeated absences, poor performance, expulsion from school, neglect of children or household). 2. Use marijuana more than once when it was physically hazardous (driving or operating machinery under the influence). 3. Have marijuana related legal problems on more than one occasion (arrests for marijuana related reasons). 4. Continue to use marijuana despite having persistent social or interpersonal problems caused or made worse by their marijuana use (arguments about marijuana use, physical fights over marijuana use). 5. None of the above.

A total of 31.06% of participants who used marijuana reported that they had never had any of the problems listed in regards to their marijuana use. For 63.82 % of participants this question was not applicable. 2.73% reported having recurring problems at work, school, or home related to marijuana use (repeated absences, poor performance, expulsion from school, neglect of children or household). 3.07% reported using marijuana more than once when it was physically hazardous (driving or operating machinery under the influence). 0% reported having marijuana related legal problems on more than one occasion (arrests for marijuana related reasons). 0.68% reported continued use of marijuana despite having persistent social or interpersonal problems caused or made worse by their marijuana use (arguments about marijuana use, physical fights over marijuana use). 1.36% of the participants who used marijuana reported having more than one of these marijuana related problems during a 12 month period.

According to the DSM IV criteria if the participants noted any of these problems as occurring then they were considered to have abused marijuana. A new variable was
created to look at any abuse with marijuana and it was found that 5.12% of participants reported activities and behaviors consistent with marijuana abuse. All participants were asked if in their opinion they either have or had a substance abuse issue with marijuana and only 1.34% believed that they did. There is a discrepancy is actual marijuana abuse versus perceived marijuana abuse.

**Amphetamine Use and Abuse Data**

All of the amphetamine questions are pertaining to the participant’s heaviest period of substance use in their lifetime (which could be their current use). The participants were asked (at heaviest use) on average how often they use amphetamines (“ice” or “meth”) per week. 96.30% reported that they had never tried amphetamines, 2.36% reported less than weekly, 0.34% reported 1-2 days per week, 0.34% reported 5-6 days per week, and 0.67% reported using amphetamines 7 days per week. This means that 1.35% of participants reported using amphetamines between 1-7 days a week at their heaviest use. Three participants did not answer this question (N=297). See Table 10 on page 36.

3.71% of participants reported that they had gotten “high” from using amphetamines in their lifetime. Participants were then asked to report the days per week that they got or are getting “high” from amphetamines. 2.36% of participants reported getting “high” less than weekly, 0.34% reported getting “high” 1-2 days per week, 0.34% reported getting “high” 5-6 days per week, and 0.67% of participants reported getting “high” from amphetamine use 7 days a week. So 1.35% of participants responded that at their heaviest use they had gotten “high” from using amphetamines between 1-7 days per week. 100% of participants who reported using amphetamines also reported getting
“high” from using amphetamines. For 96.30% of participants this question was not applicable, and 3 participants left this question blank (N=297). See Table 10 on Page 36.

Table 10. Summary of Amphetamine Use and Amphetamine Intoxication

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Less than weekly</th>
<th>1-2 days</th>
<th>3-4 days</th>
<th>5-6 days</th>
<th>7 days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amphetamine Use</strong></td>
<td>96.30%</td>
<td>2.36%</td>
<td>0.34%</td>
<td>0%</td>
<td>0.34%</td>
<td>0.67%</td>
</tr>
<tr>
<td><strong>Amphetamine Intoxication</strong></td>
<td>96.30%</td>
<td>2.36%</td>
<td>0.34%</td>
<td>0%</td>
<td>0.34%</td>
<td>0.67%</td>
</tr>
</tbody>
</table>

The next questions are dealing with amphetamine abuse (defined using DSM IV criteria) as well as self perceived abuse with amphetamines. To look at amphetamine abuse as defined by the DSM IV criteria the participants were asked if in a 12 month period they (participants were asked to circle all that applied): 1. Had recurring problems at work, school, or home related to amphetamine use (repeated absences, poor performance, expulsion from school, neglect of children or household). 2. Use amphetamines more than once when it was physically hazardous (driving or operating machinery under the influence). 3. Have amphetamine related legal problems on more than one occasion (arrests for amphetamine related reasons). 4. Continue to use amphetamines despite having persistent social or interpersonal problems caused or made worse by their amphetamine use (arguments about amphetamine use, physical fights over amphetamine use). 5. None of the above.

A total of 2.35% of participants who used amphetamines reported that they had never had any of the problems listed in regards to their amphetamine use (response was none of the above). For 95.97% of people this question was not applicable due to the fact that they had never used amphetamines. 1.68% of participants who used
amphetamines reported having recurring problems at work, school, or home related to amphetamine use (repeated absences, poor performance, expulsion from school, neglect of children or household). 1.01% reported using amphetamines more than once when it was physically hazardous (driving or operating machinery under the influence). 0% reported having amphetamine related legal problems on more than one occasion (arrests for amphetamine related reasons). 1.01% reported continued use of amphetamines despite having persistent social or interpersonal problems caused or made worse by their amphetamine use (arguments about amphetamine use, physical fights over amphetamine use). 1.68% of the participants who used amphetamines reported having more than one of these amphetamine related problems during a 12 month period.

According to the DSM IV criteria if the participants reported any of these problems as occurring then they were considered to have abused amphetamines. A new variable created to look at any abuse with amphetamines. It was found that 1.68% of participants reported activities and behaviors consistent with amphetamine abuse. All participants were asked if in their opinion they either have or had a substance abuse issue with amphetamines and 1.00% believed that they did (3 out of the 5 participants). So 40% of the people who are in fact abusing amphetamines do not perceive themselves as doing so.

**Cocaine Use and Abuse Data**

All of the cocaine questions are pertaining to the participant’s heaviest period of substance use in their lifetime (which could be their current use). The participants were asked (at heaviest use) on average how often they use cocaine (“coke” or “crack”) per week. 93.96% reported that they had never tried cocaine, 3.36% reported less than
weekly, 0.67% reported 1-2 days per week, and 2.01% of participants reported using cocaine 3-4 days per week. This means that 2.68% of participants reported using cocaine between 1-4 days a week at their heaviest use. Two participants did not answer this question (N=298). See Table 11 below.

6.04% of participants reported getting “high” from cocaine, which means that 100% of participants who reported using cocaine also reported getting high from using it. 3.36% of participants reported getting “high” less than weekly, 1.01% reported getting “high” 1-2 days per week, and 1.68% reported getting “high” from cocaine 3-4 days per week. 2.68% of participants reported that they had gotten “high” from using cocaine between 1-4 days a week at their heaviest use. For 93.96% of participants this question was not applicable, and 2 participants left this question blank (N=298). See Table 11 below.

Table 11. Summary of Cocaine Use and Cocaine Intoxication

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Less than weekly</th>
<th>1-2 days</th>
<th>3-4 days</th>
<th>5-6 days</th>
<th>7 days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cocaine Use</strong></td>
<td>93.96%</td>
<td>3.36%</td>
<td>0.67%</td>
<td>2.01%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Cocaine Intoxication</strong></td>
<td>93.96%</td>
<td>3.36%</td>
<td>1.01%</td>
<td>1.68%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The next questions dealing with cocaine abuse are using DSM IV criteria as well as self perceived abuse with cocaine. To look at cocaine abuse as defined by the DSM IV criteria the participants were asked if in a 12 month period they (participants were asked to circle all that applied): 1. Had recurring problems at work, school, or home related to cocaine use (repeated absences, poor performance, expulsion from school, neglect of children or household). 2. Use cocaine more than once when it was physically hazardous.
(driving or operating machinery under the influence). 3. Have cocaine related legal problems on more than one occasion (arrests for cocaine related reasons). 4. Continue to use cocaine despite having persistent social or interpersonal problems caused or made worse by their cocaine use (arguments about cocaine use, physical fights over cocaine use). 5. None of the above.

A total of 4.35% of participants who reported using cocaine reported that they had never had any of the problems listed with this substance. For 93.65% of people this question was not applicable. 1.00% reported having recurring problems at work, school, or home related to cocaine use (repeated absences, poor performance, expulsion from school, neglect of children or household). 1.00% reported using cocaine more than once when it was physically hazardous (driving or operating machinery under the influence). 0% reported having cocaine related legal problems on more than one occasion (arrests for cocaine related reasons). 1.00% reported continued use of cocaine despite having persistent social or interpersonal problems caused or made worse by their cocaine use (arguments about cocaine use, physical fights over cocaine use). 0.66% of the participants reported having more than one of these cocaine related problems during a 12 month period.

According to the DSM IV criteria if the participants noted any of these problems as occurring then they were considered to have abused cocaine. A new variable was set up to look at any abuse with cocaine and it was found that 2.01% of participants reported activities and behaviors consistent with cocaine abuse. All participants were asked if in their opinion they either have or had a substance abuse issue with cocaine and 1.34%
believed that they did (4 out of the 6 participants). So 33.33% of the people who are in fact abusing cocaine do not perceive themselves as abusing this drug.

**Summary of Substance Abuse**

Table 12 (below) shows the prevalence of reported substance use without intoxication, as well as substance use to the point of intoxication. It is seen below that daily alcohol use to the point of intoxication is rarer than the reported daily alcohol use without intoxication. In regards to the other drugs (marijuana, amphetamines, and cocaine) reported daily drug use to intoxication is similar to that of daily drug use not specifying intoxication. Note that one person who noted using marijuana left the intoxication question blank which explains the difference in values of use vs. intoxication in regards to this substance.

**Table 12. Summary of All Substances Use and Intoxication**

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Less than weekly</th>
<th>1-2 days</th>
<th>3-4 days</th>
<th>5-6 days</th>
<th>7 days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alcohol Use</strong></td>
<td>13.31%</td>
<td>40.96%</td>
<td>20.48%</td>
<td>14.68%</td>
<td>6.14%</td>
<td>4.44%</td>
</tr>
<tr>
<td><strong>Alcohol Intoxication</strong></td>
<td>31.85%</td>
<td>40.68%</td>
<td>17.97%</td>
<td>6.78%</td>
<td>1.36%</td>
<td>1.36%</td>
</tr>
<tr>
<td><strong>Marijuana Use</strong></td>
<td>62.54%</td>
<td>27.42%</td>
<td>3.68%</td>
<td>2.34%</td>
<td>0.67%</td>
<td>3.34%</td>
</tr>
<tr>
<td><strong>Marijuana Intoxication</strong></td>
<td>62.75%</td>
<td>28.52%</td>
<td>2.35%</td>
<td>2.35%</td>
<td>0.67%</td>
<td>3.36%</td>
</tr>
<tr>
<td><strong>Amphetamine Use</strong></td>
<td>96.30%</td>
<td>2.36%</td>
<td>0.34%</td>
<td>0%</td>
<td>0.34%</td>
<td>0.67%</td>
</tr>
<tr>
<td><strong>Amphetamine Intoxication</strong></td>
<td>96.30%</td>
<td>2.36%</td>
<td>0.34%</td>
<td>0%</td>
<td>0.34%</td>
<td>0.67%</td>
</tr>
<tr>
<td><strong>Cocaine Use</strong></td>
<td>93.96%</td>
<td>3.36%</td>
<td>0.67%</td>
<td>2.01%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Cocaine Intoxication</strong></td>
<td>93.96%</td>
<td>3.36%</td>
<td>1.01%</td>
<td>1.68%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
A new variable was created to look at the prevalence of any substance abuse (all substances). Participants were included into this category if any of the DSM IV criteria questions were marked regardless of the substance used. Participants were then considered to have abused one of the four substances (alcohol, marijuana, amphetamines, cocaine). It was found that 23.16% of participants were found to be abusing at least one of the 4 substances listed. 4.89% of people were found to be abusing more than one substance. 15 participants were not included in this variable due the fact that the questions were left blank, (N=285).

Notice the discrepancies between the percent of participants who were categorized as abusing the substances based on the DSM IV criteria vs. the participants self reported substance abuse issues. The total number of participants who answered the question for the DSM IV criteria was N=281, and for Self Reported abuse N=289 (for all substances). See Table 13 below.

Table 13. Summary of Substance Abuse DSM IV Criteria and Self Report.

<table>
<thead>
<tr>
<th></th>
<th>% DSM IV Abuse Criteria</th>
<th>% Self Reported Abuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Abuse</td>
<td>19.24%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Marijuana Abuse</td>
<td>5.12%</td>
<td>1.34%</td>
</tr>
<tr>
<td>Amphetamine Abuse</td>
<td>1.68%</td>
<td>1.00%</td>
</tr>
<tr>
<td>Cocaine Abuse</td>
<td>2.01%</td>
<td>1.34%</td>
</tr>
<tr>
<td>Any Abuse</td>
<td>23.16%</td>
<td>NA</td>
</tr>
</tbody>
</table>
It is important also to look at the problems that are causing the "diagnosis" of abuse by substance being abused. Alcohol is the most commonly abused drug, followed by marijuana, cocaine, and lastly amphetamines (most rarely used and abused). As you can see on page 43, (Table 14) using substances when physically hazardous is the most commonly reported behavior in both alcohol and marijuana abuse. The second most commonly reported behavior in both alcohol and marijuana abuse is recurring problems at work, school or home. The third most commonly mentioned problem in regards to both alcohol and marijuana abuse was the continued use of substance (despite social or interpersonal problems).

Ironically, alcohol was the only substance that had any reports of legal problems due to its use. In regards to cocaine and amphetamine abuse three of the 4 categories have similar values reported and are recurring problems (at work, school, or home), using the drug when it is physically hazardous (driving under the influence), and continued use of substance (despite social or interpersonal problems). None of the illegal substance had any reports of problems dealing with legal issues regarding the use of the substance. The DSM IV problems reported by participants have a similar pattern in regards to alcohol and marijuana. Similarly, you can see that cocaine and amphetamine problems reported by participants are also similar. See Table 14 on page 43.
Table 14. Summary of DSM IV Related Problems by Substance

<table>
<thead>
<tr>
<th>DSM IV Reported Problems</th>
<th>Alcohol</th>
<th>Marijuana</th>
<th>Cocaine</th>
<th>Amphetamine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurring problems at work, school, or home</td>
<td>6.53%</td>
<td>2.73%</td>
<td>1.00%</td>
<td>1.68%</td>
</tr>
<tr>
<td>Using when physically hazardous (driving under the influence)</td>
<td>14.78%</td>
<td>3.07%</td>
<td>1.00%</td>
<td>1.01%</td>
</tr>
<tr>
<td>Legal problems due to substance</td>
<td>2.41%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Continued use of substance despite persistent social or interpersonal problems</td>
<td>3.44%</td>
<td>0.68%</td>
<td>1.00%</td>
<td>1.01%</td>
</tr>
<tr>
<td>None of the above</td>
<td>67.35%</td>
<td>31.06%</td>
<td>4.35%</td>
<td>2.35%</td>
</tr>
<tr>
<td>Question not applicable to the participant</td>
<td>13.40%</td>
<td>63.82%</td>
<td>93.65%</td>
<td>95.97%</td>
</tr>
</tbody>
</table>

**Sexually Transmitted Disease Testing**

45.92% of participants reported that they had been tested (in their lifetime) for at least one of the sexually transmitted diseases listed. The diseases listed were: AIDS (Acquired Immune Deficiency Syndrome), Chlamydia, Gonorrhea, Genital Herpes (HSV-Herpes Simplex Virus), Genital Warts (HPV-Human Papillomavirus), Syphilis, and Viral Hepatitis A,B,C, or D. 6 participants did not respond to this question (N=294).

**Sexually Transmitted Disease Positive Results**

10.49% of participants reported testing positive for at least one of the sexually transmitted diseases (STDs) listed. Participants reporting testing positive for between 1-4 STDs, with 4.2% of participants reporting testing positive for more than one STD.
55.59% of participants reported that they had never been tested for any of the STDs, and 33.92% of participants reported that they had never tested positive for any of the STDs listed. 14 people did not respond to this question (N=286). The specific diseases that participants reporting tested positive for are broken down as follows: Chlamydia (5.59%), Gonorrhea (1.75%), Genital Herpes (2.8%), Genital Warts (5.59%), Syphilis (0.35%), and Viral Hepatitis (0.35%). Figure 4 on page 44 shows the percent of sexually transmitted diseases that participants reported testing positive for. If the participant tested positive for more than one STD their answer will be counted in more than one category (% totals more than 10.49% who tested positive)

Figure 4. Percent of STDs participants reported testing positive for.
**Condom Use**

Participants were asked the questions "When you have sex, how often do you use a condom?" and they were to circle one of the following answers: never had sex, never, sometimes, most of the time, or all of the time. The responses were as follows: 25.08% of participants reported never having sex, 15.59% of participants reported that they never used a condom, 19.32% of the participants reported using a condom some of the time, 16.95% of the participants reported using a condom most of the time, and 23.05% of the participants reported that they used a condom all of the time. All of the categories were fairly even with the largest percent of sexually active participants reporting that they use a condom all of the time (23.05%). The smallest reported category was never with 15.59% of participants reports. See Figure 5 below.

![Graph showing condom use frequency](image)

**Figure 5.** Frequency of condom use as reported by participants
ASSOCIATIONS

Association between Different Kinds of Abuse and Alcohol Abuse

Associations were run using SAS statistical software. Cochran-Mantel-Haenszel Statistics were run to determine probability values (p-values), estimated prevalence ratios (PRs), and 95% confidence limits (95% CI) for the prevalence ratio. All p-values will be considered statistically significant at alpha level 0.05. In the reporting of the data the more inclusive results will be reported first followed by the more specific results. The association between having reported any emotional, physical, or sexual abuse associated with alcohol abuse was not significant (PR=1.09, 95% CI 0.67, 1.77, p=0.72). However, the association between having reported physical or sexual abuse associated with alcohol abuse was significant (PR=1.66, 95% CI 1.04, 2.64, p=0.0352). This prevalence ratio value indicates that the prevalence of reported alcohol abuse in people who reported physical, and or sexual abuse is 65.5% higher than those who did not report physical and or sexual abuse.

Emotional abuse associated with alcohol abuse was analyzed and the results were not significant (PR=0.93, 95% CI 0.58, 1.49, p=0.77). The association between reported physical abuse and reported alcohol abuse was also not significant (PR=1.24, 95% CI 0.71, 2.14, p=0.46). However, the association between reported sexual abuse and reported alcohol abuse was statistically significant (PR=2.15, 95% CI 1.34, 3.43, p=0.0021). This prevalence ratio value indicates that the prevalence of reporting behaviors consistent with alcohol abuse in people who reported sexual abuse is 2.15 times greater than those who did not report sexual abuse.
The combined category of physical and or sexual abuse is seen to be somewhat misleading. It is actually the sexual abuse category that is significant not the physical abuse category. These results illustrate why lumping categories together is not a good idea and can be misleading. See Table 15 below (results in purple are significant)

Table 15. All Abuse Associated with Alcohol Abuse.

<table>
<thead>
<tr>
<th></th>
<th>Prevalence Ratio</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>E,P,S Abuse with Alcohol Abuse</td>
<td>1.09</td>
<td>0.67, 1.77</td>
<td>0.72</td>
</tr>
<tr>
<td>P,S Abuse with Alcohol Abuse</td>
<td>1.66</td>
<td>1.04, 2.64</td>
<td>0.0352</td>
</tr>
<tr>
<td>Emotional Abuse with Alcohol Abuse</td>
<td>0.93</td>
<td>0.58, 1.49</td>
<td>0.77</td>
</tr>
<tr>
<td>Physical Abuse with Alcohol Abuse</td>
<td>1.24</td>
<td>0.71, 2.14</td>
<td>0.46</td>
</tr>
<tr>
<td>Sexual Abuse with Alcohol Abuse</td>
<td>2.15</td>
<td>1.34, 3.43</td>
<td>0.0021</td>
</tr>
</tbody>
</table>

* E=Emotional, P=Physical, S=Sexual, highlighted values are significant

**Association between different kinds of abuse and Marijuana Abuse**

Associations were run using SAS statistical software. Cochran-Mantel-Haenszel Statistics were run to determine probability values (p-values), estimated prevalence ratios (PRs), and 95% confidence limits (95% CI) for the prevalence ratio. Due to the small cell size (<5) of some of the associations, a Fisher’s Exact Test was done and a p-value was obtained to determine significance of the association. All p-values will be
considered statistically significant at alpha level 0.05. In reporting the data the inclusive results will be reported first, followed by the more specific results. The association between having reported any emotional, physical, or sexual abuse associated with marijuana abuse was not significant (PR=2.83, 95% CI 0.82, 9.81, p=0.08). However, the association between having reported physical, and or sexual abuse associated with marijuana abuse was significant (PR=4.08, 95% CI 1.44, 11.61, p=0.0043). Due to the small cell size a Fisher’s Exact Test was run, and the p-value was again found to be statistically significant (F.E.T. p=0.0084). This prevalence ratio value indicates that the prevalence of reported marijuana abuse in people who reported physical, and or sexual abuse is 300% greater than those who did not report physical and or sexual abuse.

Emotional abuse associated with marijuana abuse was analyzed and the results were not significant (PR=1.89, 95% CI 0.66, 5.4, p=0.22). The association between reported physical abuse and reported marijuana abuse was also marginally not significant (PR=2.63, 95% CI 0.97, 7.10, p=0.0504). It is important to note that even though the p-value was not statistically significant the data are consistent with there being an association between physical abuse and marijuana abuse. It is also interesting to note that the confidence interval for this value includes the number one which can be attributed to the small cell size.

The association between reported sexual abuse and reported marijuana abuse was statistically significant (PR=3.77, 95% CI 1.43, 9.96, p=0.0047). Due to the small cell size a Fisher’s Exact Test was done, and the p-value was found to be statistically significant (F.E.T. p =0.0109). This prevalence ratio indicates that the prevalence of reporting behaviors consistent with marijuana abuse in participants who reported sexual
abuse is 3.77 times greater than those participants who did not report sexual abuse. See Table 16 on page 49 (results that are statistically significant are in purple)

Table 16. All Abuse Associated with Marijuana Abuse.

<table>
<thead>
<tr>
<th>Abuses</th>
<th>PR</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>E,P,S</td>
<td>2.83</td>
<td>0.82, 9.81</td>
<td>0.08</td>
</tr>
<tr>
<td>P,S</td>
<td>4.08</td>
<td>1.44, 11.61</td>
<td>0.0043</td>
</tr>
<tr>
<td>E</td>
<td>1.89</td>
<td>0.66, 5.4</td>
<td>0.22</td>
</tr>
<tr>
<td>P</td>
<td>2.63</td>
<td>0.97, 7.10</td>
<td>0.0504</td>
</tr>
<tr>
<td>S</td>
<td>3.77</td>
<td>1.43, 9.96</td>
<td>0.0047</td>
</tr>
</tbody>
</table>

* E=Emotional, P=Physical, S=Sexual, highlighted values are significant
**P-value obtained from Fisher’s Exact Test

Association between different kinds of abuse and Amphetamine Abuse

Associations were run using SAS statistical software. Cochran-Mantel-Haenszel Statistics were run to determine probability values (p-values), estimated prevalence ratios (PRs), and 95% confidence limits (95% CI) for the prevalence ratio. Due to the small cell size (<5) in one of the associations, a Fisher’s Exact Test was done and a p-value was obtained to determine significance. All p-values will be considered statistically significant at alpha level 0.05. In the reporting of the data the inclusive results will be reported first followed by the more specific results. The association between having reported any emotional, physical, or sexual abuse associated with amphetamine abuse was not significant (PR=2.95, 95% CI 0.33, 26.04, p=.30). The association between
having reported physical and or sexual abuse associated with amphetamine abuse was also not significant (PR=3.14, 95% CI 0.53, 18.48, p=0.183).

   Emotional abuse associated with amphetamine abuse was analyzed and the results were not significant (PR=1.47, 95% CI 0.25, 8.67, p=0.67). The association between reported physical abuse and reported amphetamine abuse were also not significant (PR=2.75, 95% CI 0.47, 16.08, p=0.25,). However, the association between reported sexual abuse and reported amphetamine abuse was statistically significant (PR=6.6, 95% CI 1.13, 38.61, p=0.0162). Due to the small cell size a Fisher's Exact Test was done, and the p-value was found to be statistically significant (p =0.0457).

   This prevalence ratio value indicates that the prevalence of reporting behaviors consistent with amphetamine abuse in people who reported sexual abuse is 6.6 times greater than those participants who did not report sexual abuse. It is important to keep in mind that the confidence interval is wide and the cell size for the association is small. If there is any systematic error present in this association it could completely change the results because it is not accounted for in the analysis. See Table 17 on page 51 (results that are colored purple are significant).
Table 17. All Abuse Associated with Amphetamine Abuse.

<table>
<thead>
<tr>
<th></th>
<th>PR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>E,P,S Abuse with</td>
<td>2.95</td>
<td>0.33, 26.04</td>
<td>0.30</td>
</tr>
<tr>
<td>Amphetamine Abuse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P,S Abuse with Amphetamine Abuse</td>
<td>3.14</td>
<td>0.53, 18.48</td>
<td>0.183</td>
</tr>
<tr>
<td>Emotional Abuse with</td>
<td>1.47</td>
<td>0.25, 8.67</td>
<td>0.67</td>
</tr>
<tr>
<td>Amphetamine Abuse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Abuse with</td>
<td>2.75</td>
<td>0.47, 16.08</td>
<td>0.25</td>
</tr>
<tr>
<td>Amphetamine Abuse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Abuse with</td>
<td>6.60</td>
<td>1.13, 38.61</td>
<td><strong>0.0162</strong></td>
</tr>
<tr>
<td>Amphetamine Abuse</td>
<td></td>
<td></td>
<td><strong>0.0457</strong></td>
</tr>
</tbody>
</table>

* E=Emotional, P=Physical, S=Sexual, highlighted values are significant

**P-value obtained from Fisher’s Exact Test

Association between different kinds of abuse and Cocaine Abuse

Associations were run using SAS statistical software. Cochran-Mantel-Haenszel Statistics were run to determine probability values (p-values), estimated prevalence ratios (PRs), and 95% confidence limits (95% CI) for the prevalence ratio. Due to the small cell size (<5) in some of the associations, a Fisher’s Exact Test was done and a p-value was obtained to determine significance. All p-values will be considered statistically significant at alpha level 0.05. In the reporting of the data the inclusive results will be reported first and the more specific results will follow. The association between having reported any emotional, physical, or sexual abuse associated with cocaine abuse was not
significant (PR=3.66, 95% CI 0.43, 30.96, p=0.20). The association between having reported physical and or sexual abuse associated with cocaine abuse was significant (PR=10.36, 95% CI 1.23, 87.72, p=0.0074). Due to the small cell size a Fisher’s Exact Test was done with the result still being significant (p=0.0151). This prevalence ratio value indicates that the prevalence of reporting behaviors consistent with cocaine abuse in people who reported physical, and or sexual abuse is 10.36 times greater than those who did not report physical and or sexual abuse.

Emotional abuse associated with cocaine abuse was analyzed and the results were not significant (PR=1.95, 95% CI 0.36, 10.47, p=0.43). However, the association between reported physical abuse and reported cocaine abuse was found to be significant (PR=20.24, 95% CI 2.41, 169.49, p<0.0001). Due to the small cell size a Fisher’s Exact Test was run, and the p-value was found to be statistically significant (p =0.0013). This prevalence ratio value indicates that the prevalence of reporting behaviors consistent with cocaine abuse in participants who reported physical abuse is 20.24 times greater than those participants who did not report physical abuse. It is important to note that the cell size was very small and the confidence interval is very wide. The width of the confidence interval shows that the estimate is more imprecise than an estimate with a narrower confidence interval. It does however look as though there is a positive association between physical abuse and marijuana abuse but the magnitude of the association can not be determined.

The association between reported sexual abuse and reported cocaine abuse was also statistically significant (PR=4.32, 95% CI 0.90, 20.3, p=0.0484). Due to the small cell size a Fisher’s Exact Test was done, and the p-value was not found to be statistically
significant (p-value=0.0826). See Table 18 below (results in purple were found to be statistically significant).

Table 18. All Abuse Associated with Cocaine Abuse.

<table>
<thead>
<tr>
<th>Type of Abuse</th>
<th>PR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>E,P,S Abuse with Cocaine Abuse</td>
<td>3.66</td>
<td>0.43, 30.96</td>
<td>0.20</td>
</tr>
<tr>
<td>P,S Abuse with Cocaine Abuse</td>
<td>10.36</td>
<td>1.23, 87.72</td>
<td>0.0074</td>
</tr>
<tr>
<td>Emotional Abuse with Cocaine Abuse</td>
<td>1.95</td>
<td>0.36, 10.47</td>
<td>0.43</td>
</tr>
<tr>
<td>Physical Abuse with Cocaine Abuse</td>
<td>20.24</td>
<td>2.41, 169.49</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Sexual Abuse with Cocaine Abuse</td>
<td>4.32</td>
<td>0.90, 20.30</td>
<td>0.0484</td>
</tr>
</tbody>
</table>

* E=Emotional, P=Physical, S=Sexual, highlighted values are significant
**P-value obtained from Fisher's Exact Test

Association between different kinds of abuse and Smoking 100 Cigarettes in Life

Associations were run using SAS statistical software. Cochran-Mantel-Haenszel Statistics were run to determine probability values (p-values), estimated prevalence ratios (PRs), and 95% confidence limits (95% CI) for the prevalence ratio. All p-values will be considered statistically significant at alpha level 0.05. In the reporting of the data the inclusive results will be reported first followed by the more specific results. The association between having reported any emotional, physical, or sexual abuse associated with reporting smoking 100 cigarettes in the participants lifetime was significant (PR=2.02, 95% CI 1.16, 3.45, p=0.0093). This prevalence ratio value indicates that the
prevalence of reporting smoking 100 cigarettes in the participant’s lifetime in people who reported emotional, physical, and or sexual abuse is 2.02 times greater than those who did not report any emotional, physical, and or sexual abuse. The association between having reported physical and or sexual abuse associated with reporting smoking 100 cigarettes in the participants lifetime was not significant (PR=1.36, 95% CI 0.84, 2.20, p=0.2097).

Reporting emotional abuse associated with reporting smoking 100 cigarettes in the participants lifetime was found to be significant (PR=1.75, 95% CI 1.065, 2.88, p=0.0240). This prevalence ratio value indicates that the prevalence of reporting behaviors consistent with smoking 100 cigarettes in the participant’s lifetime in people who reported emotional abuse is 75% greater than those participants who did not report emotional abuse. The association between reported physical abuse and reported smoking 100 cigarettes in the participants lifetime was found to be not significant (PR=1.62, 95% CI 0.98, 2.68, p-value=0.0680). The association between reported sexual abuse and reported smoking 100 cigarettes in the participants lifetime was not statistically significant (PR=1.20, 95% CI 0.68, 2.12, p=0.5253). It is seen that reporting emotional abuse had the strongest effect on the association between abuse and smoking 100 cigarettes in participant’s lifetime. See Table 19 on page 55 (statistically significant results are highlighted in purple).
Table 19. All Abuse Associated with Smoking 100 Cigarettes in Lifetime.

<table>
<thead>
<tr>
<th>Abuse Type</th>
<th>PR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>E,P,S Abuse with Smoking 100</td>
<td>2.02</td>
<td>1.16, 3.45</td>
<td>0.0093</td>
</tr>
<tr>
<td>Cigarettes in Lifetime</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P,S Abuse with Smoking 100</td>
<td>1.36</td>
<td>0.84, 2.20</td>
<td>0.2097</td>
</tr>
<tr>
<td>Cigarettes in Lifetime</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Abuse with Smoking 100</td>
<td>1.75</td>
<td>1.065, 2.88</td>
<td>0.0240</td>
</tr>
<tr>
<td>Cigarettes in Lifetime</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Abuse with Smoking 100</td>
<td>1.62</td>
<td>0.98, 2.68</td>
<td>0.0680</td>
</tr>
<tr>
<td>Cigarettes in Lifetime</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Abuse with Smoking 100</td>
<td>1.2</td>
<td>0.68, 2.12</td>
<td>0.5253</td>
</tr>
<tr>
<td>Cigarettes in Lifetime</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* E=Emotional, P=Physical, S=Sexual, highlighted values are significant

**Association between Smoking 100 Cigarettes in Life and Testing Positive for an STD**

Associations were run using SAS statistical software. Cochran-Mantel-Haenszel Statistics were run to determine probability values (p-values), estimated prevalence ratios (PRs), and 95% confidence limits (95% CI) for the prevalence ratio. All p-values will be considered statistically significant at alpha level 0.05.

The association between reporting smoking 100 cigarettes in the participants lifetime associated with reporting testing positive for at least one sexually transmitted disease was significant (PR=2.09, 95% CI 1.04, 4.21, p=0.0398). This estimated prevalence ratio value indicates that the prevalence of reporting testing positive for at
least one STD in participants who reported smoking 100 cigarettes in their lifetime is 2.09 times greater than those who did not report smoking 100 cigarettes in their lifetime.

**Association between Abusing a Substance and Testing Positive for an STD**

Associations were run using SAS statistical software. Cochran-Mantel-Haenszel Statistics were run to determine probability values (p-values), estimated prevalence ratios (PRs), and 95% confidence limits (95% CI) for the prevalence ratio. All p-values will be considered statistically significant at alpha level 0.05. In the reporting of the data the inclusive results will be reported first and then the more specific results. The association between having reported abusing at least one substance associated with reporting testing positive for an STD in the participants lifetime was significant (PR=2.26, 95% CI 1.15, 4.43, p=0.0174). This prevalence ratio value indicates that the prevalence of reporting testing positive for at least one STD in participants who reported abusing at least one substance is 2.26 times greater than those who did not report abusing at least one substance.

The association between having reported alcohol abuse associated with reporting testing positive for at least one STD was significant (PR=2.46, 95% CI 1.25, 4.85, p=0.0095). This prevalence ratio value indicates that the prevalence of reporting testing positive for at least one STD in participants who reported abusing alcohol is 2.46 times greater than those who did not report abusing alcohol.

The association between having reported marijuana abuse associated with reporting testing positive for at least one STD was significant (PR=4.64, 95% CI 2.15, 10.02, p=0.0003). This prevalence ratio value indicates that the prevalence of reporting
testing positive for at least one STD in participants who reported abusing marijuana is 4.64 times greater than those who did not report abusing marijuana.

The association between having reported amphetamine abuse associated with reporting testing positive for at least one STD was significant (PR=4.13, 95% CI 1.33, 12.82, p=0.0267). This prevalence ratio value indicates that the prevalence of reporting testing positive for at least one STD in those participants who reported abusing amphetamines is 4.13 times greater than those who did not report abusing amphetamines.

The association between having reported cocaine abuse associated with reporting testing positive for at least one STD was significant (PR=5.17, 95% CI 2.15, 12.42, p=0.0015). This prevalence ratio value indicates that the prevalence of reporting testing positive for at least one STD in those participants who reported behaviors consistent with cocaine abuse is 5.17 times greater than those who did not report behaviors consistent with cocaine abuse. All of the associations were found to be significant with the highest lifetime prevalence ratio being the association between cocaine abuse and testing positive for an STD in participant’s lifetime. See Table 20 on page 58.
Table 20. All Substance Abuse Associated with Testing Positive for STDs.

<table>
<thead>
<tr>
<th>Abuse Type</th>
<th>PR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A,M,Am,C Abuse with Testing</td>
<td>2.26</td>
<td>1.15, 4.43</td>
<td>0.0174</td>
</tr>
<tr>
<td>positive for STD in Life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol Abuse with Testing</td>
<td>2.46</td>
<td>1.25, 4.85</td>
<td>0.0095</td>
</tr>
<tr>
<td>positive for STD in Life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marijuana Abuse with Testing</td>
<td>4.64</td>
<td>2.15, 10.02</td>
<td>0.0003</td>
</tr>
<tr>
<td>positive for STD in Life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amphetamine Abuse with Testing</td>
<td>4.13</td>
<td>1.33, 12.82</td>
<td>0.0267</td>
</tr>
<tr>
<td>positive for STD in Life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocaine Abuse with Testing</td>
<td>5.17</td>
<td>2.15, 12.42</td>
<td>0.0015</td>
</tr>
<tr>
<td>positive for STD in Life</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* A=Alcohol, M=Marijuana, Am=Amphetamines, C=Cocaine highlighted values are significant

Association between Different Kinds of Abuse and Testing Positive for STD

Associations were run using SAS statistical software. Cochran-Mantel-Haenszel Statistics were run to determine probability values (p-values), estimated prevalence ratios (PRs), and 95% confidence limits (95% CI) for the prevalence ratio. All p-values will be considered statistically significant at alpha level 0.05. In some cases the cell size was small (<5) in which case a Fisher’s Exact Test was done and a p-value will be reported to test significance. In the reporting of the data the inclusive results will be reported first followed by the more specific results. The association between having reported any emotional, physical, or sexual abuse associated with reporting testing positive for any
STD in the participants lifetime was significant (PR=4.73, 95% CI 1.69, 13.19, p=0.0008). A Fisher’s Exact Test was done and the value was significant (F.E.T. p-value=0.0006). This prevalence ratio value indicates that the prevalence of reported testing positive for any STD in the participants lifetime in people who reported emotional, physical, and or sexual abuse is 4.73 times greater than those who did not report any emotional, physical, and or sexual abuse. The association between having reported physical or sexual abuse associated with testing positive for any STD in the participants lifetime was significant (PR=4.20, 95% CI 2.05, 8.60, p<0.0001). This prevalence ratio value indicates that the prevalence of reported testing positive for any STD in the participant’s lifetime in people who reported physical, and or sexual abuse is 4.20 times greater than those who did not report any physical, and or sexual abuse.

Emotional abuse associated with testing positive for any STD in the participants lifetime was found to be significant (PR=4.69, 95% CI 1.85, 11.92, p=0.0002). Due to the small cell size a Fisher’s Exact test was done which was also found to be significant (F.E.T. p-value=0.00019). This prevalence ratio value indicates that the prevalence of reporting testing positive for any STD in the participant’s lifetime in people who reported emotional abuse is 369% higher than those who did not report emotional abuse. The association between reported physical abuse and reporting testing positive for any STD in the participants lifetime was found to be significant (PR=4.0, 95% CI 2.08, 7.69, p-value<0.0001). This prevalence ratio value indicates that the prevalence of reporting testing positive for any STD in the participant’s lifetime in people who reported physical abuse is 300% higher than those who did not report physical abuse.
The association between reporting sexual abuse and reporting testing positive for any STD in the participants lifetime was statistically significant (PR=3.92, 95% CI 2.04, 7.52, p<0.0001). This prevalence ratio value indicates that the prevalence of reporting testing positive for any STD in the participant’s lifetime in people who reported sexual abuse is 292% higher than those who did not report sexual abuse. All associations were found to be significant. All of the lifetime prevalence ratios were found to be fairly high, with the confidence intervals being of decent width. See Table 21 below.

Table 21. All Abuse Associated with Testing Positive for an STD in Lifetime.

<table>
<thead>
<tr>
<th>Abuse Type</th>
<th>PR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>E,P,S Abuse with Testing Positive for an STD in Lifetime</td>
<td>4.73</td>
<td>1.69, 13.19</td>
<td>0.0008</td>
</tr>
<tr>
<td>P,S Abuse with Testing Positive for an STD in Lifetime</td>
<td>4.20</td>
<td>2.05, 8.60</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Emotional Abuse with Testing Positive for an STD in Lifetime</td>
<td>4.69</td>
<td>1.85, 11.92</td>
<td>0.0002</td>
</tr>
<tr>
<td>Physical Abuse with Testing Positive for an STD in Lifetime</td>
<td>4.0</td>
<td>2.08, 7.69</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Sexual Abuse with Testing Positive for an STD in Lifetime</td>
<td>3.92</td>
<td>2.04, 7.52</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

* E=Emotional, P=Physical, S=Sexual, highlighted values are significant
**P-Value from Fisher’s Exact Test
CHAPTER 4
DISCUSSION

**Methods**

*Research Design and Implementation*

In designing the study there would be some changes that could be made in hindsight as far as the survey instrument is concerned. Using 8th grade level wording in the survey would have been a good idea considering that there are a lot of non-English speakers at U.H. Manoa. In the survey design words like “intoxication” would have been changed to “drunk”. One thing gained from this experience was finding out that no matter what the education level is of the population you are studying you should always use maximum 8th grade verbiage.

Another change that would have been made to the survey would have been to the smoking questions to make them more concise. It would have been good to add “at heaviest use” on those questions as well to get rid of the current smoker/past smoker confusion. On the condom use question I would have listed never had sex as the first option instead of last option because some people had trouble finding that answer for the question.

In regards to the amphetamine question, I would have changed amphetamine to methamphetamine. The terminology actually should have been methamphetamine to refer to “meth” and “ice” as listed in the question. “Speed” is a more commonly used term in regards to amphetamines. I do not feel that this affected the results obtained as I did not get any questions asking about this discrepancy.
Data collection went fairly well with the only issue being having uneven amounts of collection times on Thursday and Friday. This was due to the fact that data collection was supposed to have been finished on Wednesday September 13, 2006. However, during Wednesday’s collection there were a lot more incomplete and ineligible survey’s than were expected, so I had to finish enrollment on Thursday. If enrollment had been completed on Wednesday as planned than 3 collection locations and times would have been used Monday through Thursday with 2 collection locations and times on Friday.

**Limitations**

The major limitation of this study was the fact that all of the participants used self report in filling out the surveys. This means that if they remembered the answer to the question wrong, read the question wrong, put the answer down to the wrong question, or any other similar problem, the data could have been drastically affected. Measurement issues of this nature are of special concern in regards to the associations that were run that had extremely small cell sizes. If even one participant answered these questions incorrectly it could have had a major effect on the data.

The small cell size also affected the width of the confidence intervals (made them wider than ideal). The large width of some of the confidence intervals meant that the values were more imprecise than if the confidence intervals had been narrower. This made it nearly impossible to determine the magnitude of some of the associations, even though it looked as though there was a positive association with some of the data, including data that was not found to be significant.

Another limitation to this study was the inability to make causal inferences about the data. It would have been of great interest to be able to state that the associations
found in the study are actually causally related, but unfortunately that is not the case. The only exception to this could be in regards to participants who reported abuse at a very early age. For example if a participant reported being sexually abused at age 1 and then went on to abuse certain substances, that could be viewed as a possible causal relationship. However due to the cross-sectional study design and purpose, no causal inferences will be made.

**Potential Confounders**

Potential confounders are the last issue that will be discussed in this section. For abuse (emotional, physical, and sexual) external factors may be causally linked to these issues and hence would not be considered confounding variables. In regards to substance use/abuse there can be many different factors that will enhance this behavior including abuse (emotional, physical, and sexual), psychological disorders such as anxiety and depression, as well as genetic predisposition. The likelihood of contracting a sexually transmitted disease can be increased due to risky sexual practices as well as unsafe sex. Both of these factors can be in part due to being intoxicated from a substance. In regards to the associations of abuse (emotional, physical, and sexual) associated with substance abuse, it is difficult to readily identify potential confounders that can be related to both exposure and outcome.

The associations between substance abuse and STDs could have a potential indirect confounder such as a mental disorder like depression. For depression to be a confounder it would have to cause substance abuse and also cause unsafe sex which would lead to getting an STD. It is also important to keep in mind that a mental disorder such as depression could also potentially just be an intermediate or not be a confounder at
all. Due to the fact that no data was collected on any type of mental disorder nothing could be adjusted for in regards to confounders. This means that the crude prevalence ratios presented in this study are the best estimates of the association between substance abuse and STDs.

**Potential Selection Bias**

When recruiting for the study there were a few factors that played into the enrollment process. People who were on cell phones having conversations or were walking in groups immersed in conversation were usually not approached. Potential participants riding bikes, scooters, skate boards etc. were also not usually approached. These two issues may have systematically biased the selection process. These occurrences were relatively rare and these biases should have not affected the data. For example there should be no difference between someone’s abuse history and the speed at which they are riding a bicycle.

There were also multiple times when a choice was made on whom to approach for the study. If more than one person could have been approached at the same time, no system was used to determine the correct person to approach. In retrospect, it would have been a good idea to standardize the way certain situations are handled, for example when there are two people to choose from the closest person to the principal investigator should be approached. There may have been some bias in this type of selection due to subconscious preconceptions about “who might be the most likely to complete the survey”. This could have directed the selection of participants one way or another. It is not likely that any of the biases mentioned biased the data because there should be no difference in the reporting of the variables that were used in the analysis.
Data Cleaning

There also could have been bias in the data cleaning portion of the study, in regards to ambiguous responses (usually written in). In regards to this issue all similar instances were handled consistently, and to the best of the ability of the PI with the answer given. To help alleviate this problem on future surveys it may be beneficial to make a note in the instructions deterring participants to write in responses unless specifically asked to. It may also be helpful to be a lot more specific in the kind of write in answer you are looking for, so that the answers to questions are more straightforward for the analysis.

Results

Response Rates

Overall the response rate for the study was as good at 97.24%. If the people who were approached but did not hear about the study would have been included in this calculation, it would not have been an accurate representation of the response rate. This is due to the fact that on more that one occasion, someone would say they were late and be marked as such and then come back later that day to hear about the study and end up completing it. When the person came back on the same day they were usually taken out of the count but this was not always the case and was dependent on how many people currently had surveys at the time, questions being asked etc.

There were also a few times when a person would not have time to hear about the study on a specific day and time during recruitment, and then pass by again on another day and complete the survey. In this case these people were counted as not hearing about the study initially and then counted as completing the study. The only potential bias
would be if "people in a rush" are more likely than those people "not in a rush" to answer the questions differently. This is not the case due to the fact that people completed the study on other days when they were not in a rush. For the most part, the people who were in a rush were extremely apologetic that they did not have enough time to complete the survey.

**Demographic Data**

The mean age of participants in the study was 23.35, with an age range from 18-61 years old. The majority of students were aged 18-25 (81.29%) which is expected in a college population. The three semesters of eligible enrollment were all represented fairly equally Spring 2006 (58.0% enrolled), Summer 2006 (65.67% enrolled), Fall 2006 (77.00% enrolled). 58.33% of participants were enrolled in more than one semester mentioned. Most of the participants enrolled reported that they were non-Hispanic 93.03%, while only 6.97% reported that they were of Hispanic ethnicity. 62.63% of participants reported being of Asian or Pacific Islander Ancestry which is fairly consistent with the U.H. website demographic data stating 57% of students are of this ancestry.

**Abuse Data**

Emotional abuse was the most prevalent in that 50.84% of participants reported experiencing it in their lifetime (mean=12.68, median=12, mode=10, st.dev.=6.94). Defining emotional abuse can be very subjective and therefore can be hard to define. It was also noticed that the Addiction Severity Index definition for emotional abuse seemed to be more "loose" than the definitions for physical and sexual abuse. It is also important to understand that over 50% of the people surveyed felt that they had been emotionally
abused. One interesting thing about the reporting of results was that a lot of participants reported a specific age when they felt they had been emotionally abused. This is somewhat unexpected as it would be thought that an age range would be a more common response since the question is so subjective. It was also common for the age listed for emotional abuse to correspond to the physical and or sexual abuse age(s) reported. This observation shows that perhaps one event took place were the person experienced more than one type of abuse, which would seem to make the reporting less subjective.

Regardless of the subjectivity surrounding emotional abuse, this type of abuse should not be disregarded or overlooked. It has been shown that emotional abuse can have a negative effect on the person's life as shown in Hillis et al. with an increase in risky sexual behavior.

Physical abuse was the second most reported of the three types of abuse found in the survey. 19.73% of participants reported experiencing some sort of physical abuse in their lifetime (mean=13.27, median=12, mode=7, st.dev.=7.97). In retrospect, it would have been interesting to go into more detail as to what type of physical abuse they experienced (parental, domestic, etc.). Due to the fact that the mode age was found to be 7 it seems as though parental “discipline” may have been a large part of the abuse reported. Regardless of the source of abuse, having this high a prevalence of physical abuse is astounding.

Sexual abuse (although the lowest reported prevalence) was still found to be surprisingly high. 18.73% of participants reported experiencing it in their lifetime (mean=13.54, median=14, mode=17, st.dev.=5.82). It was found that the majority of ages reported under this category of abuse, happened either at earlier ages (ages 3-7
account for 25%), or around college age (ages 17-19 account for 32.14%). This was also seen in the mode age being 17. This is of interest considering that the majority of abuse data looks at "childhood abuse", not lifetime abuse. By not taking sexual abuse at older ages into account the picture of abuse is not being accurately portrayed in the literature.

**Cigarette Smoking Data**

19.06% of participants reported that they had smoked 100 cigarettes in their lifetime where as 80.94% of participants reported that they had not. The literature found on this topic was not dealing with lifetime cigarette smoking. It was looking at smoking habits during the past week, 30 days, or a year. This makes it impossible to compare this prevalence data due to the fact that the same time frame is not being used as was used here.

**Substance Use and Abuse**

Not surprisingly Alcohol is the most commonly used drug with 86.69% of participants reporting using it, however only 68.15% reported using it to the point of intoxication. Of those that drink it 40.96% do so less than weekly, 20.48% 1-2 days per week, 14.68% 3-4 days per week, 6.14% 5-6 days per week, and 4.44% 7 days a week. Alcohol to intoxication values are much lower overall as 40.68% drink alcohol to intoxication less than weekly, 17.97% 1-2 days per week, 6.78% 3-4 days per week, 1.36% 5-6 days per week, and 1.36% 7 days a week. You would expect to find less drinking to intoxication than drinking alcohol in this population of college students. This would be expected due to the high level of performance that college students must maintain as well as the college culture of "social drinking".
Marijuana is the next most prevalent drug with 37.46% of participants reporting that they have used this drug. 27.42% do so less than weekly, 3.68% 1-2 days per week, 2.34% 3-4 days per week, 0.67% 5-6 days per week, and 3.34% 7 days a week. It is somewhat surprising to see such a high number of people reporting using this drug considering that it is illegal. Not surprisingly everyone who reported smoking marijuana also reported getting high from marijuana (with the exception of the participant who did not answer the intoxication question). This is due to the fact that most illegal drugs are not done “socially” and the purpose of doing the drug is to get intoxicated from using it. 37.25% of participants reported using marijuana to intoxication. The values for marijuana use to intoxication are as follows 28.52% do so less than weekly, 2.35% 1-2 days per week, 2.35% 3-4 days per week, 0.67% 5-6 days per week, and 3.36% 7 days a week.

6.04% of participants reported using and getting “high” from using cocaine. Again 100% of participants who reported using the drug also reported getting “high” from using it. It is the next most reported drug being used by participants, and it was interesting that no one reported using it 5 or more days a week. 3.36% of participants reported using and getting intoxicated from the drug less than weekly.

Amphetamines were the least reported drug used as only 3.7% of participants reported using and or getting “high” from using it. 100% of participants who reported using the drug also reported getting “high” from using it. All of the values reported for both use and intoxication are the same and are as follows 2.36% do so less than weekly, 0.34% 1-2 days per week, 0% 3-4 days per week, 0.34% 5-6 days per week, and 0.67% 7 days a week. It is somewhat surprising that amphetamine use is lower than cocaine use.
due to the exposure that amphetamine use gets in the media here in Hawai‘i. It is shocking that the percent of people using this drug in the college population is substantial.

It was found that 23.16% of participants were found to be abusing at least one of the 4 drugs listed (alcohol, marijuana, cocaine, amphetamines). There is less use to intoxication seen in alcohol versus the other three drugs. According to the DSM IV criteria 19.24% of participants are abusing alcohol and the most reported behavior was operating machinery under the influence (14.78%). This is a huge problem due to the risk for the substance user’s personal safety as well as the innocent bystanders that may be injured or killed due to this behavior. Alcohol was the only substance that had any report of legal problems stemming from the substance use.

5.12% of participants were found to be abusing marijuana, and again operating machinery under the influence was the most reported behavior. The second most commonly reported behavior in regards to marijuana abuse is recurring problems at work, school or home. The third most commonly mentioned problem in regards to marijuana use was the continued use of substance (despite social or interpersonal problems). There was no mention of any legal problems with this substance.

In regards to cocaine (2.01% prevalence) and amphetamine abuse (1.68% prevalence) three of the 4 categories have similar values reported and are recurring problems (at work, school, or home), using the drug when it is physically hazardous (driving under the influence), and continued use of substance (despite social or interpersonal problems).

70
None of the participants who reported using illegal drugs noted any type of legal trouble regarding their drug use. It seems as though the legal system is not effectively dealing with these issues due to the fact that only substance reported having legal problems due to its use was alcohol (2.41%). The findings in regards to alcohol, marijuana, and cocaine use are consistent with those found by the American College Health Association at Michigan State University in the Spring of 2006.

**Substance Abuse DSM IV Criteria vs. Self Report**

There were major discrepancies found in DSM IV classification of substance abuse versus self perception of abuse issues with the substances asked about. Only 17.67% of participants who have a substance abuse issue with alcohol recognize that they do. 26.12% of participants who have an abuse issue with marijuana recognize that they do. 66.67% of participants who have abuse issues with cocaine recognize that they do. There are 59.52% of amphetamine users who have abuse issues that recognize that they do. Surprisingly the lowest percent of recognition is with alcohol abuse. This may be due to the fact that it is legal and therefore not seen as being as big a problem as illegal drugs. All of the values are low in regards to awareness which could be due to a lack of knowledge and or education as to what the definition of substance abuse is. It could also be due to denial on the part of the substance user.

**Sexually Transmitted Diseases**

45.92% of participants reported that they had been tested (in their lifetime) for at least one of the sexually transmitted diseases listed. 10.49% of participants reported testing positive for at least one of the sexually transmitted diseases (STDs) listed. 55.59% of participants reported that they had never been tested for any of the STDs, and
33.92% of participants reported that they had never tested positive for any of the STDs listed. The specific diseases that participants reporting tested positive for are broken down as follows: Chlamydia (5.59%), Gonorrhea (1.75%), Genital Herpes (2.8%), Genital Warts (5.59%), Syphilis (0.35%), and Viral Hepatitis (0.35%). This means that 4.19% of participants tested positive for more than one STD. The most prevalent STDs found in the study were Chlamydia and Genital Warts (HPV) which are consistent with the data found on the CDC website (Chlamydia is the most frequently reported STD).

It has been noted that Genital Warts and HPV should not be used interchangeably (which they were on the questionnaire). Although HPV does cause genital warts, there are also other strains of HPV that do not. On the CDC website it states that 50% of sexually active people contract HPV in their lifetime, but this is not referring specifically to genital warts. A lot of the STDs listed in this survey are asymptomatic but can cause permanent damage if left untreated. This potential problem shows the need for more education and promotion of getting tested for STDs. It is also important to note that while 6 participants left the STD tested question blank, 14 participants left the STD tested positive question blank. This could show that the STDs tested positive for were actually under reported.

**Condom Use**

The responses were as follows: 25.08% of participants reported never having sex, 15.59% of participants reported that they never used a condom, 19.32% of the participants reported using a condom some of the time, 16.95% of the participants reported using a condom most of the time, and 23.05% of the participants reported that they used a condom all of the time. Some of the participants that had noted their condom
use as never wrote in on the survey that they were either married, in a monogamous relationship etc. The analysis does not take this into account, however just because someone is in a monogamous relationship it does not meant that they are safe from potentially contracting a disease, so this issue is somewhat negligible among the data collected here. All of the values of the responses were found to be similarly distributed among the different categories. These findings do show that condom use can definitely be increased on campus through educational programs.

**Abuse and Substance Abuse**

Physical and or sexual abuse associated with alcohol abuse was found to be significant (PR=1.66, 95% CI 1.04, 2.64, p=0.0352). Participants were 66% more likely to report alcohol abuse if they had also reported physical and or sexual abuse compared to participants who did not report physical and or sexual abuse. Sexual abuse associated with alcohol abuse was also significant (PR=2.15, 95% CI 1.34, 3.43, p=0.0021). The prevalence of reporting alcohol abuse in participants who reported sexual abuse was 2.15 times greater than those participants who did not report sexual abuse. This is a good example of how lumping different kinds of abuse together can be misleading. In this case it is actually the sexual abuse that has the association with the alcohol abuse but it is strong enough to make the physical and sexual abuse category significant also.

Physical and or sexual abuse associated with marijuana abuse was found to be significant (PR=4.08, 95% CI 1.44, 11.61, p=0.0043, F.E.T. p=0.0084). The prevalence of reporting marijuana abuse in participants who reported physical and or sexual abuse was 4.08 times greater compared to participants who did not report physical and or sexual abuse. Sexual abuse associated with marijuana abuse was significant as well (PR=3.77,
95% CI 1.43, 9.96, p=0.0047, F.E.T. p=0.0109). The prevalence of reporting marijuana abuse in participants who reported sexual abuse was 3.77 times greater than participants who did not report sexual abuse. This is the same pattern seen in the alcohol abuse association analysis except the marijuana analysis had smaller cell sizes (less than 5) which called for a Fisher’s Exact Test to be performed. The values were still significant, but the confidence intervals were larger that they would have been if the cell sizes had been larger (more precise estimate).

Sexual abuse associated with amphetamine abuse was found to be significant (PR=6.60, 95% CI 1.13, 38.61, p=0.0162, F.E.T. p=0.0457). The prevalence of reporting amphetamine abuse in people who had reported sexual abuse was 6.60 times greater than participants who had not reported sexual abuse. The cell size was small but the Fisher’s Exact Test was still significant. The confidence intervals were fairly large which shows that the estimates were not as precise as they could have been if the cell size was larger.

Physical and or sexual abuse associated with cocaine abuse was found to be significant (PR=10.36, 95% CI 1.23, 87.72, p=0.0074, F.E.T. p=0.0151). The prevalence of reporting cocaine abuse in people who reported physical and or sexual abuse was 10.36 times greater than those people who did not report physical and or sexual abuse. This estimate is imprecise as seen with the wide confidence interval.

In regards to physical abuse associated with cocaine abuse it was significant as well (PR=20.24, 95% CI 2.41, 169.49, p<0.0001, F.E.T. p=0.0013). Participants were 20.24 times more likely to have reported behaviors consistent with cocaine abuse if they had reported physical abuse compared to participants who had not reported physical
abuse. The cell sizes were small and the confidence intervals were wide which shows that these estimates lack precision.

**Abuse and Smoking 100 Cigarettes in Lifetime**

In regards to emotional, physical and or sexual abuse associated with smoking 100 cigarettes in participants lifetime it was significant (PR=2.02, 95% CI 1.16, 3.45, p=0.0093). The prevalence of reporting smoking 100 cigarettes in lifetime in people who reported emotional, physical, and or sexual abuse is 2.02 times greater than participants who did not report any of these types of abuse. Emotional abuse associated with smoking 100 cigarettes in participants lifetime it was significant (PR=1.75, 95% CI 1.07, 2.88, p=0.0240). Participants were 75% more likely to report smoking 100 cigarettes in their lifetime if they had reported emotional abuse compared to those who did not report emotional abuse.

In this case it was actually emotional abuse that has the association with the smoking 100 cigarettes in participant’s lifetime but it is strong enough to make the emotional, physical, and or sexual abuse category significant also. This finding is somewhat unexpected considering that it would be assumed that more severe forms of abuse would have a greater effect on you use of substances. Other studies have shown that physical and sexual abuse can increase the risk for regular smoking in girls (Simatov et. al). Emotional abuse was not evaluated in the referenced study.

**Smoking 100 cigarettes in Lifetime and Testing Positive for an STD**

The association between reporting smoking 100 cigarettes in the participants lifetime associated with reporting testing positive for at least one sexually transmitted disease was significant (PR.=2.09, 95% CI 1.04, 4.21, p=0.0398). This prevalence ratio
value indicates that the prevalence of reporting testing positive for at least one STD in people who reported reporting smoking 100 cigarettes in lifetime is 2.09 times greater than those who did not report smoking 100 cigarettes in lifetime. This is also a somewhat surprising finding especially given that the only significant association was found between emotional abuse and smoking 100 cigarettes in the participant’s lifetime. It is possible that there is a potential confounder for this association that is not looked at in this study which could negate this association.

**Substance Abuse and Testing Positive for STDs**

All of the associations done dealing with substance use and testing positive for STDs were statistically significant. Looking at Any Substance abuse associated with testing positive for any STD were found to have a values of (PR=2.26, 95% CI 1.15, 4.43, p=0.0174). If the participant reported abuse of any substance they were significantly more likely than someone who does not report abuse of any substance to report testing positive for an STD in their lifetime. With Alcohol abuse associated with testing positive for any STD were found to have a values of (PR=2.46, 95% CI 1.25, 4.85, p=0.0095). Both Any Substance and Alcohol have values that are similar. Marijuana abuse associated with testing positive for any STD were found to have a values of (PR=4.64, 95% CI 2.15, 10.02, p=0.0003). Amphetamine abuse associated with testing positive for any STD were found to have a values of (PR=4.13, 95% CI 1.33, 12.82, p=0.0267). Cocaine abuse associated with testing positive for any STD were found to have a values of (PR=5.17, 95% CI 2.15, 12.42, p=0.0015). All of this data shows that if you abuse any substance you are significantly more likely than someone who does not abuse substances to test positive for an STD in your lifetime.
Abuse and Testing Positive for an STD in Lifetime

All of the associations done dealing with abuse (emotional, physical, and or sexual) and testing positive for STDs were statistically significant. Looking at emotional, physical, and or sexual abuse associated with testing positive for any STD were found to have a values of (PR=4.73, 95% CI 1.69, 13.19, p=0.0008, F.E.T. p=0.0006). With physical, and or sexual abuse associated with testing positive for any STD were found to have values of (PR=4.20, 95% CI 2.05, 8.60, p<0.0001). Emotional abuse associated with testing positive for any STD were found to have a values of (PR=4.69, 95% CI 1.85, 11.92, p=0.0002, F.E.T. p=0.00019). Physical abuse associated with testing positive for any STD were found to have a values of (PR=4.00, 95% CI 2.08, 7.69, p<0.0001). Sexual abuse associated with testing positive for any STD were found to have a values of (PR=3.92, 95% CI 2.04, 7.52, p<0.0001). Both Physical and Sexual abuse associated (separately) with testing positive for any STD are extremely similar in all values which is interesting. All of this data shows that if the participant reported abuse (emotional, physical, or sexual) they were significantly more likely than someone who did not report abuse to report testing positive for an STD in their lifetime.

Participant Reporting

Participant’s honesty in answering the survey questions are believed to be due to a few different reasons. The first reason is that the survey was anonymous and that no name was required. The participants were able to seal their completed survey in an unmarked envelope before handing the survey in. The principal investigator of the study was female and was the one administering the survey. This also is believed to have created a more open dialogue as far as questions being asked by participants are
concerned. For example it is highly unlikely that participants would have been willing to discuss the STDs that they had been tested for at their gynecologist appointment with a male administrator. The fact that the survey was being done for a thesis project also seemed to be helpful in the recruitment process. Since all of the participants were also students they could relate with the importance of the project.

Summary

This is the first known study to be done in this population looking at lifetime abuse (emotional, physical, sexual), lifetime substance use/abuse (cigarettes, alcohol, marijuana, cocaine, amphetamines), lifetime STDs (tested and tested positive for), and condom use. The prevalence of abuse and substance abuse were found to be high in this population. The associations found were also alarming and show the urgent need for more studies dealing with causal relationships to be done. It is also apparent that more education needs to take place in regards to abuse, substance use/abuse, STDs, and condom use.

By doing this research we were be able to answer some of the questions pertaining to the “age and education gap” left by the other literature. It is important that there are more studies that look at lifetime abuse in every population that will help to more clearly illustrate the need for more funding and better programs to help stop the vicious cycle of abuse. Future studies need to be done in this and other populations to help tease out the causal relationships that exist in regards to these topics. If it is found that abuse histories are precursors to substance abuse and sexually transmitted disease, then there is great cause for an increase in funding for programs dealing with these abuse issues.
Data Collection

8:00am-10:00am = Collection time #1
10:00am-12:00pm = Collection time #2
12:00pm-2:00pm = Collection time #3
2:00pm-4:00pm = Collection time #4

For each day there will be 8 geographic sections chosen based on the list of random numbers:

- The 1st & 5th locations chosen for each day will have Collection Time #1
- The 2nd and 6th locations chosen for each day will have Collection Time #2
- The 3rd and 7th locations chosen for each day will have Collection Time #3
- The 4th and 8th locations chosen for each day will have Collection time #4

I will try to collect data a minimum of 2 days per week and will go to each location chosen in sequential order. For example the first time I collect on Tuesday it will be at location 16 collection time #1, the second time I collect on a Tuesday it will be at location 1 collection time #2, and so on. I will also make sure to collect on all days of the week equally.
I generated 208 random integers from 1 to 16 using random.org

Wednesday locations chosen
6, 12, 13, 7, 10, 15, 3, 8

Thursday locations chosen
8, 2, 4, 1, 15, 9, 10, 12
I generated 200 random integers from 1 to 16 using random.org

Friday
locations chosen

16, 3, 14, 7, 6, 5, 8, 13

1st
Please read the following questions and circle or fill in the appropriate answer or answers. The following questions are dealing with some basic background information.

1. I am over 18 years old: No (Stop! not eligible please tell researcher) Yes and my age is _______.

2. Please circle the semesters you have been enrolled at UH Manoa:
   Spring '06 Summer '06 Fall '06 Not enrolled at UH Manoa (Stop! not eligible please tell researcher)

3. My ethnicity is: Hispanic Non Hispanic

4. My race is (circle all that apply):
   a. American Indian or Alaskan Native
   b. Asian Indian
   c. Black or African American
   d. Chinese
   e. Filipino
   f. Guamanian or Chamorro
   g. Hawaiian (Native)
   h. Japanese
   i. Korean
   j. Marshallese
   k. Micronesian
   l. Palauan
   m. Samoan
   n. Vietnamese
   o. White (origins in Europe, the Middle East, or North Africa)
   p. Decline to Answer

The next questions are pertaining to any abuse that you may have received during your lifetime.

5. In your opinion, have you ever had someone emotionally abuse you (make you feel bad through harsh words)?
   No Yes If yes, how old were you when this abuse took place: __________

6. In your opinion, have you ever had someone physically abuse you (cause you physical harm)?
   No Yes If yes, how old were you when this abuse took place: __________

7. In your opinion, have you ever had someone sexually abuse you (rape, forced sexual advances, or non-consensual sexual acts)?
   No Yes If yes, how old were you when this abuse took place: __________

You will now be asked some questions about your smoking history.

8. Have you smoked at least 100 cigarettes in your life? Yes No (Skip to #10)
   If yes, How many cigarettes do you smoke daily? __________
9. If you do not smoke cigarettes daily, how often would you say you smoke cigarettes?

Never   Less than once a month   1-3 times a month   1-2 times a week   3-6 times a week

The next questions are asking about the heaviest period of substance use in your lifetime. Please remember that this period could include your current use.

10. At heaviest use, on average, how often do/did you drink alcohol per week?

Never tried alcohol (Skip to #15)   Less than weekly   1-2 days   3-4 days   5-6 days   7 days

11. In your lifetime, have you ever gotten intoxicated from using alcohol?   No   Yes

12. How often do/did you get intoxicated from alcohol per week?

Less than weekly   1-2 days   3-4 days   5-6 days   7 days

13. In regards to your alcohol use, in a 12 month period did you ever (circle all that apply):

a. Have recurring problems at work, school, or home related to alcohol use (repeated absences, poor performance, expulsion from school, neglect of children or household).
b. Use alcohol more than once when it was physically hazardous (driving or operating machinery under the influence).
c. Have alcohol related legal problems on more than one occasion (arrests for alcohol related reasons).
d. Continue to use alcohol despite having persistent social or interpersonal problems caused or made worse by your alcohol use (arguments about alcohol use, physical fights over alcohol use).
e. None of the above

14. In your opinion, do/did you have a substance abuse issue with alcohol?   No   Yes

15. On average, how often do/did you smoke marijuana per week?

Never tried marijuana (Skip to #19)   Less than weekly   1-2 days   3-4 days   5-6 days   7 days

16. How many days a week do/did you get “stoned” or “high”?

Less than weekly   1-2 days   3-4 days   5-6 days   7 days

17. In regards to your marijuana use, in a 12 month period did you ever (circle all that apply):

a. Have recurring problems at work, school, or home related to marijuana use (repeated absences, poor performance, expulsion from school, neglect of children or household).
b. Use marijuana more than once when it was physically hazardous (driving or operating machinery under the influence).
c. Have marijuana related legal problems on more than one occasion (arrests for marijuana related reasons).
d. Continue to use marijuana despite having persistent social or interpersonal problems caused or made worse by your marijuana use (arguments about marijuana use, physical fights over marijuana use).
e. None of the above

18. In your opinion, do/did you have a substance abuse issue with marijuana?   No   Yes

19. How often do/did you use amphetamines (“ice” or “meth”) per week?

Never tried amphetamines (Skip to #23)   Less than weekly   1-2 days   3-4 days   5-6 days   7 days

2
20. How many days a week do/did you get “high” from using amphetamines?

Less than weekly  1-2 days  3-4 days  5-6 days  7 days

21. In regards to your amphetamine use, in a 12 month period did you ever (circle all that apply):
   a. Have recurring problems at work, school, or home related to amphetamine use (repeated absences, poor
      performance, expulsion from school, neglect of children or household).
   b. Use amphetamines more than once when it was physically hazardous (driving or operating machinery under
      the influence).
   c. Have amphetamine related legal problems on more than one occasion (arrests for amphetamine related
      reasons).
   d. Continue to use amphetamines despite having persistent social or interpersonal problems caused or made
      worse by your amphetamine use (arguments about amphetamine use, physical fights over amphetamine use).
   e. None of the above

22. In your opinion, do/did you have a substance abuse issue with amphetamines?  No  Yes

23. On average, how often do/did you use cocaine (“coke” or “crack”) per week?

Never tried cocaine (Skip to #27)  Less than weekly  1-2 days  3-4 days  5-6 days  7 days

24. How many days a week do/did you get “high” from using cocaine?

Less than weekly  1-2 days  3-4 days  5-6 days  7 days

25. In regards to your cocaine use, in a 12 month period did you ever (circle all that apply):

   a. Have recurring problems at work, school, or home related to cocaine use (repeated absences, poor
      performance, expulsion from school, neglect of children or household).
   b. Use cocaine more than once when it was physically hazardous (driving or operating machinery under
      the influence).
   c. Have cocaine related legal problems on more than one occasion (arrests for cocaine related reasons).
   d. Continue to use cocaine despite having persistent social or interpersonal problems caused or made
      worse by your cocaine use (arguments about cocaine use, physical fights over cocaine use).
   e. None of the above

26. In your opinion, do/did you have a substance abuse issue with cocaine?  No  Yes

27. Lastly, you will be asked some questions dealing with sexually transmitted diseases.

   Circle all of the following sexually transmitted diseases that you have been tested for in your lifetime:

   a. AIDS (Acquired Immune Deficiency Syndrome)
   b. Chlamydia
   c. Gonorrhea
   d. Genital Herpes (HSV-Herpes Simplex Virus)
   e. Genital Warts (HPV-Human Papillomavirus)
   f. Syphilis
   g. Viral Hepatitis A, B, C, or D
   h. Never been tested for STDs listed
28. Circle all of the following sexually transmitted diseases that you have tested positive for in your lifetime:
   a. AIDS (Acquired Immune Deficiency Syndrome)
   b. Chlamydia
   c. Gonorrhea
   d. Genital Herpes (HSV-Herpes Simplex Virus)
   e. Genital Warts (HPV-Human Papillomavirus)
   f. Syphilis
   g. Viral Hepatitis A, B, C, or D
   h. Never been tested for STDs listed
   i. Never tested positive for STDs listed

29. When you have sex, how often do you use a condom?
   Never   Sometimes    Most of the time   All of the time   Never had sex

You have finished taking the survey! Thank you for your time and input, it is valued. Please place this survey in the blank envelope provided, seal it and place it into the container provided by the person who gave you the survey. If you would like to be given any information on counseling services at UH Manoa just ask the researcher. Thanks again, and have a great day!
Appendix E

Thesis Survey

Taking this survey is completely voluntary and you can choose to stop taking this survey at anytime with no questions asked. This survey is completely confidential and the only identifying information you will be asked is your age, ethnicity, and race. You must be 18 years old, be enrolled in Spring '06, Summer '06 or Fall '06 semesters at UH Manoa, and not have filled this survey out previously to participate. This survey is being done as a thesis project to look at the occurrence of different kinds of abuse, substance use, and sexually transmitted diseases (STDs) in Females at UH Manoa. More specifically, we want to know if there is a relationship between different kinds of abuse, substance use, and STDs.

In this survey you will be asked about your past and/or current histories of abuse, substance use, and STDs. Sensitive topics will be discussed in this survey, and you do not have to answer any questions that you don’t feel comfortable with. The survey is a little bit over 3 pages long (29 questions) and will take approximately 15 minutes to complete. You will not be compensated for your participation, but you will be helping to further the understanding of these topics by participating in this research.

Please keep this form for your records. If you have any questions please contact Tara Nash at chahl@hawaii.edu. If you have any questions regarding your rights as a research participant, please contact the UH Committee on Human Studies at (808) 956-5007. Thank you for your participation it is greatly appreciated!
Appendix F

Please call The Counseling and Student Development Center (CSDC) at
(808) 956-7927

CSDC office hours are 8:00 a.m. to 4:30 p.m., Mondays through Fridays.

CSDC is located on the third floor of the Queen Lili'uokalani Center for Student Services, at the heart of the Manoa campus.

If you are living on-campus and need to reach a counselor after office hours, contact the counselor-in-residence.

For off-campus residents who want to talk to someone on an emergency and crisis basis, call 911, "0", or the Suicide and Crisis Center (available 24 hours/7 days) at (808) 832-3100

The services are confidential and free of charge for Manoa students.

**UH Manoa Resources**

University Health Center...................................................(808) 956-8965
Women's Center.................................................................(808) 956-8059

**Community Resources**

STD/HIV (Free)
Diamond Head STD Clinic.............................................(808) 733-9280

Sex Abuse
Sex Abuse Center (24 hours).............................................(808) 524-7273

Intimate Partner Violence
Domestic Violence Hotline (24 hours).................................(808) 531-3771
Pa'uhonua.................................................................(808) 532-5535
Options to Violence...........................................................(808) 532-5100
Family Peace Center.........................................................(808) 832-0855
Gay/Lesbian Community Center......................................(808) 951-7000

Domestic Violence Shelters
Honoulu/Leeward.............................................................(808) 841-0822
Windward.................................................................(808) 528-0606
Military.................................................................(808) 539-7125

Substance Use
CHOW Project (Needle Exchange).................................(808) 848-2469
Salvation Army Treatment Center.................................(808) 595-6371
Drug Addiction Services Hawaii (DASH).........................(808) 533-0704
Sand Island Treatment Center........................................(808) 841-2319
Family Center..............................................................(808) 732-2802

Self-Help/12-Step Groups
Alanon.................................................................(808) 593-3977
Naranon.................................................................(808) 247-3191
Alcoholics Anonymous (AA)...........................................(808) 946-1436
Narcotics Anonymous (NA)..........................................(808) 734-4357

For a referral to other community resources, you may choose to call
ASK-2000 (275-2000)

89
Appendix G

30 random numbers for 10% triple check thesis

#94 enrollment was wrong YNY when should have been NYN

#208 was chosen 2x

http://random.org/cgi-bin/randnum?num=30&min=1&max=300&col=5 9/14/2006
Appendix H

30 random #s for 10% quad WA check thesis

Nothing wrong

http://random.org/cgi-bin/randnum?sum=30&min=1&max=300&col=5
9/14/2006
References


Bopp, J. University of Hawai’i at Manoa Women’s Center. Program Against Violence to Women Sexual Relationship Violence at UHM Findings & Recommendations for the University of Hawai’i. 2005 (online).


