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Research Seminar Proposal

Sexual Transmitted Disease Risk in Adolescent Women in Uptown

I. THE PROBLEM AND ITS SETTING

A. Statement of the Topic to be Explored

The theme of this research proposal is "Knowing Neighborhoods." The city that I will explore is Chicago; it is regarded as highly diverse and segregated. Chicago contains 77 distinct communities or neighborhoods ("City of Chicago Community Areas"). According to Walter Nugent for the *Encyclopedia of Chicago*, "Chicago has long been known as an ethnic city." Starting in 1910 many African Americans migrated from the south to Chicago. They were followed by immigrants from many different countries including people from Poland, Ireland, Germany, Britain, Scandinavia, Czechoslovakia**,** Lithuania, Serbia, Croatia, Greece, and China (Nugent). "Recently, Mexicans, Caribbeans, and a broad-sourced array of Central Americans and Asians, along with a new (and smaller) wave of Eastern Europeans" have established their homes in Chicago (Nugent).

According to the United States Census Bureau, Chicago is roughly 228 square miles and in 2010 there were about 2,700,000 people residing in Chicago. About 23 percent of the population was under the age of 18 and 51.5 percent were female (U.S. Census Bureau). Recently, Mayor Emanuel has laid out plans for a program called "Healthy Chicago", which addresses the health disparities among Chicago's neighborhoods. The areas that the plan addresses are: "tobacco use, obesity prevention, HIV prevention, adolescent health, cancer

disparities, heart disease and stroke, access to care, healthy mothers and babies, communicable disease control and prevention, healthy homes, violence prevention, and public health infrastructure" ("Public Health"). According to the "Healthy Chicago February 2012 Update" the city has made positive strides towards their goals in the areas of adolescent health, cancer disparities, communicable disease control and prevention, healthy mothers and babies, public health infrastructure, and obesity prevention ("Healthy Chicago").

The Chicago neighborhood I will be exploring is Uptown. Uptown is racially and ethnically diverse. It is about six miles north of the Loop and contains many entertainment venues and social service organizations (Seligman). According to the *Encyclopedia of Chicago*, in 2000 there were 63,551 residents (Seligman). The City of Chicago's Department of Public Health reported in their "2011 Special Surveillance Report: STI/HIV Surveillance Report" that rates of HIV and syphilis diagnoses in Uptown were among the highest in Chicago (8; 19).

B. Statement of the Problem and Sub problem within the Topic to be Explored

Adolescent health is the problem within the theme that I am exploring. Adolescence is a time of risk. Many young people are starting to identify who they are or what they want to become and this stage of development requires experimentation. With experimentation comes risk. One of the risks that adolescents may encounter as part of growing older is driving a car for the first time, while other risks don't necessarily have to take place, such as sexual risk behaviors or drug use.

There are many sub problems within the problem of adolescent health. Some of these sub problems are: sexually transmitted disease risk behavior, teen pregnancy, alcohol and other drug use, abuse, and dependence, violence, and mental illness.

The sub problem I will be exploring in this research proposal is female adolescents' sexually transmitted disease risk. Females are unique, in the sense that they are different than males when it comes to sexually transmitted diseases, because they are prone to sexually transmitted diseases that will continue to plague them throughout their lives. According to the United States Department of Health and Human Service's "2009 Youth Risk Behavior Survey," although sexual activity among adolescents has decreased since 1991, 46 percent of teenagers were having sex. Of the teenagers that were having sex, 62.8 percent of them used condoms (Johnson and Malow-Iroff 54). These are encouraging statistics; however, of the 46 percent of teenagers that were having sex, 35 percent have used contraceptives inconsistently (Scott et al. 114). Although no data was found on youth in Uptown specifically, in Chicago's "2007 Youth Risk Behavior Survey," 53 percent of female adolescents in Chicago had had sexual intercourse and eight point seven percent of female adolescents had used alcohol or other drugs the last time they had had sex (Children's Memorial Research Center 53; 57). Additionally, 63.5 percent of female adolescents in Chicago had used a condom during there last sexual encounter (58).

Some women rely on condoms to protect themselves from sexually transmitted infections. According to the Guttmacher Institute, 6,200,000 people rely on condoms to protect themselves. Also, 23 percent of teenage women rely on condoms as their primary method of birth control and condom use is high in women ages 20-24 and teenagers (Guttmacher Institute 2).

With the low number of women relying on condoms as their primary method of protection, there seems to be a correlation between this and the fact that the City of Chicago's Department of Public Health's "STI/HIV Surveillance Report" found that in "2009 one out of every four persons diagnosed with AIDS was under the age of 20." Additionally, they found that diagnoses for people ages 13-18 went up 50 percent between 2003 and 2009 with adolescents and young adults representing 39 percent of the diagnoses in Chicago in 2009 ("Special Surveillance Report: STI/HIV Surveillance Report").

Along with AIDS and HIV, the lack of condom use can be attributed to other diseases such as chlamydia, syphilis, and gonorrhea. According to McCree and Pampalo, "untreated gonococcal and chlamydial infections can produce significant and disproportionate reproductive system morbidity in women, including pelvic inflammatory disease, infertility, ectopic pregnancy, and chronic pelvic pain" (310). In 2007, women accounted for three times the rate of chlamydia over men with 70 percent of the cases occurring in people under the age of 25 (Guttmacher Institute; "Special Surveillance Report: STI/HIV Surveillance Report"). Thirty-five percent of chlamydia cases and 27 percent of gonorrhea cases were reported in adolescent ages 15-19 (Either and Orr 279). Women ages 15-24 were the hardest hit by chlamydia (Guttmacher Institute). According to the City of Chicago's Department of Public Health's "STI/HIV Surveillance Report" three-quarters of the chlamydia that is reported is among females. Between 2009 and 2012, the rate of syphilis among women in Chicago grew by 171 percent; most cases were diagnosed in people ages 20-29 ("Special Surveillance Report: STI/HIV Surveillance Report").

C. Statement of the Question about the Problem that Research will Address

The question I will be addressing in this research proposal is: "What causes sexually transmitted disease risk in adolescent females in the Chicago neighborhood of Uptown?"

D. Statement of the Hypothesis that the Research Will Test

The hypothesis that I will test in my proposed research is: "Substance use causes sexually transmitted disease risk in adolescent females in the Chicago neighborhood of Uptown."

E. Delimitations

- The study will not include female adolescents outside the Chicago neighborhood of Uptown.
- The study will not include male adolescents.
- The study will not include females under the age of 13 and over the age of 18.

F. Definition of Terms

For the purpose of this research project, terms are defined as follows:

Adolescent:

According to Medline Plus Merriam-Webster online dictionary, adolescence is defined as, "the period of life from puberty to maturity terminating legally at the age of majority." To clarify further and for the purposes of this study adolescence is defined as females ages 13-18. The female adolescents in this study will be included regardless of race, sexual orientation, ethnicity, and income background.

Substance Use:

Substance use will be defined as using alcohol or other drugs, legal or illegal, to alter mood. Because people can feel the effects of alcohol before being legally drunk, for this study, the amount of alcohol that will constituted substance use is one or more drinks. Any amount of drugs (besides alcohol) taken will be considered substance use for this study.

Sexually Transmitted Disease:

According to MedNet.com a sexually transmitted disease is "any disease transmitted by sexual contact; caused by microorganisms that survive on the skin or mucus membranes of the genital area; or transmitted via semen, vaginal secretions, or blood during intercourse. They include AIDS, chlamydia, genital herpes, genital warts, gonorrhea, syphilis, yeast infections, and some forms of hepatitis." Another sexually transmitted disease that will be included in this study is Human Papilloma Virus (HPV).

Sexually Transmitted Disease Risk:

Engaging in sexual activity without a barrier method of birth control (i.e. male or female condoms) or engaging in sexual activity without knowing their partner's sexually transmitted disease status.

Chicago Neighborhood of Uptown:

The neighborhood of Uptown includes the areas between Foster Avenue in the north and Ravenswood Avenue to the west to Montrose Avenue. From Montrose Avenue the border continues from Clark Street south to Irving Park Road which makes up the south border. Lake Michigan makes up the eastern border ("City of Chicago Community Areas").

G. Assumptions

For the purpose of this research:

- I assume that female adolescents take sexual risks and will continue to do so.
- I assume that sexually transmitted diseases will continue to be a medical problem.
- I assume that the boundaries of the neighborhood of Uptown will not change.

II. REVIEW OF RELATED LITERATURE

A. Major Issues Explored by Scholars who have Researched this Topic and Sub problem

Some hypotheses about why adolescents take risk regarding their sexual health have been identified through research. In this literature review some of the main risk factors for adolescent sexual risk behavior are explored with an emphasis on female adolescents in the Chicago area. I chose to propose this research because I did not find any research that specifically targeted adolescent females in the Chicago area who were not detained in a juvenile detention center. Additionally, I did not find any research that specifically targeted the Uptown area. I think that my proposed research will help to fill in gaps regarding the sexual health of female adolescents in Chicago. The most researched risk factors are: alcohol and substance use, juvenile delinquency and mental health. Other factors that have been explored but are less prominent are: parental involvement, friends' influence, multiple partners, poverty, gender roles, and childhood sexual abuse.

One of the most prevalent hypotheses regarding adolescent sexual risk behavior is substance use. According to The Henry J. Kaiser Family Foundation, "Substance use increases the probability that an adolescent will initiate sexual activity, and relatedly, sexually experienced adolescents are more likely to initiate substance use." This suggests a very strong relationship between sexual behavior and substance use. Additionally, The Kaiser Family

Foundation reported that approximately 23 percent of adolescents, ages 15-24, do not use protection when they are using substances. One study followed 9,519 adolescents in substance abuse treatment between 2002 and 2006. The researchers of the study, Chan and colleagues, found that females were more likely than males to have had sex while drunk or high and were more likely to have had unprotected sex (117). Another study found that the amount of alcohol consumed was directly related to a decrease in condom use. The study, conducted on college aged men, found that alcohol use increased when the participants in the study knew less about the person they were having sex with; however, they were more likely to use condoms with a new partner (LaBrie et al. 264). Furthermore, about 90% of adolescents say that their friends and people in their peer group use drugs or alcohol during sex "at least some of the time" and condoms are not used as often when drinking or using drugs (The Henry J. Kaiser Family Foundation).

The majority of studies reported on alcohol use among adolescents. Hendershot and colleagues wanted to study the relationship between marijuana use and risky sexual behavior. Their longitudinal study, which interviewed participants at six month intervals for two years, was conducted with adolescents who had been enlisted from juvenile probation offices. They found that 49.4 percent of the participants had used marijuana before sex during the six month to 12 month period and only 34.3 percent had always used condoms (407). Subsequently, four point nine percent of the participants had been diagnosed with an STD at the 12 month assessment (407).

Juvenile delinquency has been identified as a factor for sexual risk and there have been several studies that have taken place in juvenile detention centers. One study, conducted by

Romero and associates, hypothesized that gender, race, ethnicity, and age were a factor when determining sex risk with incarcerated youth. Their longitudinal study assessed 800 juvenile delinquents over a three year period. It concluded that there were few differences in the racial and ethnic category; however, another study conducted on juvenile delinquents by Mason and colleagues discovered that youth from low-income families had an earlier onset of sexual risk behaviors (Romero et al. 1136; Mason et al. 1379). Their longitudinal study found a correlation between alcohol use in adolescents and the likelihood of risky sexual behavior and alcoholism in young adulthood (Mason et al. 1381).

There were some disparities among which gender was engaging in risky behavior. A study that followed delinquent youth for three years found that males are more likely to engage in more high risk behaviors but, the behaviors that were most likely to increase in females as they grew older were: “vaginal sex, unprotected vaginal sex, oral sex, recent unprotected oral sex, unprotected sex while drunk or high, and trading sex and drugs” (Romero et al. 1129).

According to one study, in which researchers interviewed 280 sexually active female youth who were being detained in a juvenile detention center, seven factors that have an effect on higher levels of STIs include: “risk taking attitude, substance use, perceived risky peer norms, gender norms favoring male dominance, parental monitoring, familial support, and student teacher connectedness” (Voisin et. al 76). Eighty-nine percent of the participants in the study had used more than one mood altering chemical in the past year, while 37 percent had used four or more drugs during the same time span (75). According to another study by Elkington et al., in which juvenile detainees ages 10-18 had been interviewed, 98.3 percent who had

substance use disorders were sexually active and 82.5% had engaged in unprotected sex while they were high or drunk ("HIV/Sexually Transmitted Infection" 907). The same study concluded that the behaviors most likely to increase HIV/STI risk were "having vaginal sex, engaging in sex while high or drunk, and having unprotected sex while high or drunk" (908). While these studies were conducted on adolescents who were being detained it can be assumed that these risk behaviors will affect most adolescents who engage in sexual activity while using substances.

Elkington, Bauermiester, and Zimmerman looked at a sample over an eight year time period that studied youth from mid- adolescence to young adulthood. They found that in early adolescence, females have fewer partners than males while males have fewer partners over the period of adolescence. Similarly, African Americans reported more partners than Caucasian youth during early adolescence, while Caucasian youth have more partners across adolescence (521). These same youth reported more partners when their level of "psychological distress" increased (521). The study also found that "substance use partially mediated the relationship between psychological distress and sexual intercourse frequency" (522). In other words, sexual frequency was partially dependent on substance use in adolescents who had suffered from psychological distress.

Another area that has been studied regarding sexual risk is mental health. Several studies have been conducted in substance abuse and mental health treatment facilities. One study, conducted by Chan and colleagues, with 9,519 adolescents in substance abuse facilities between 2002 and 2006 found that "adolescents with anxiety disorders endorsed the highest risk of having sex while drunk or high" (121). This study found that adolescents who had histories of trauma were more likely to have riskier attitudes and behaviors in general. They

also found that 39 percent of the patients had intentionally cut themselves and this was a high predictor of sexual risk along with other self-harm behaviors (Chan et al. 333). In the same study they found that females were more likely to be sexually active, have abuse or self-harm behaviors, and acting out behaviors (331).

Elkington, Bauermeister, and Zimmerman also found that mental health was associated with an increase in substance use, increase in number of sexual partners, and a decrease in condom use during adolescence (519; 521). They found that, "psychological distress is associated with sexual risk because youth with greater psychological distress are more likely to use substances" (514). Psychiatric disorders that were studied were "four mutually exclusive diagnostic groups" that included "major mental disorder, substance use disorder, comorbid major mental disorder and substance use disorder, and neither disorder" (901).

Daneen, Henry, and Schoeny found a correlation between parent-child relationships and risky sexual behavior. The factors they studied were "parent-adolescent relationship," "parental involvement," "educational aspirations," "allowed independence," "sexual communication attitudes," "discussions of sexual cost," and "parental disapproval" (734). The researchers found that the better the relationship the parents had with their adolescents the more likely the adolescents will use condoms and have sex later in life (736). They also found that the adolescents who had better relationships with their parents had a lower rate of STDs (736). Similarly, Voison et al. found that a decrease of parent and family support yielded a higher STD rate for detained female adolescents (74). In the book *Behavioral Interventions for Prevention and Control of Sexually Transmitted Diseases,* authors Katherine Either and Donald Orr mention in their section entitled "Behavioral Interventions for Prevention and Control of STDs Among

Adolescents" found that better family relationships are associated with "delayed coital debut and greater contraceptive use" among adolescents (290).

In the books I reviewed a number of influences were given for risky adolescent sexual behaviors, however original research was not conducted by these authors. In the book *Behavioral Interventions for Prevention and Control of Sexually Transmitted Diseases* two sections were of particular interest to my subject area, "Behavioral Interventions for Prevention and Control of STDs Among Adolescents" and "Biological and Behavioral Risk Factors Associated with STDs/HIV in Women: Implications for Behavioral Intervention." Either and Orr, authors of the section entitled, "Behavioral Interventions for Prevention and Control of STDs Among Adolescents," identified the following factors associated with adolescent sexually transmitted disease risk: early initiation of sex, multiple partners, unprotected sex, and influence of partner and media. McCree and Rompalo, authors of the section entitled "Biological and Behavioral Risk Factors Associated with STDs/HIV in Women: Implications for Behavioral Intervention," discussed factors that influence risky sexual behavior in women which include alcohol and drug use, poverty, gender roles favoring male dominance, and a history of sexual abuse. Additionally, in the book *Adolescents and Risk*, Johnson and Malow-Iroff emphasized the roles that media, friends and alcohol and other drug use play in risky adolescent behaviors.

Valuable research has been conducted regarding the sexual health of adolescents; however, none of the research has focused on female adolescents in the Uptown neighborhood of Chicago. My proposed research will fill in the gaps from prior research.

B. Methodologies Utilized by Scholars to Research the Topic and Problem

There were several methodologies used by the authors whose work I reviewed to report on adolescent sexual risk behavior. The most popular method for research was face-to-face structured interviews, followed by audio-computer assisted self-interviewing, and paper and pencil questionnaires. Other methods that were used were self-administered questionnaires, motivational interviewing, self-reporting, and self-report using the Global Appraisal of Individual Needs (GAIN) assessment. GAIN is a "standardized biopsychosocial assessment developed for use in clinical and research settings with youth and adults presenting to substance abuse and other behavioral health treatment" and assesses eight areas: "background, substance use, physical health, risk behaviors, mental health, environment, legal, and vocational" (Chan et al. 115).

The majority of the research I looked at contained quantitative research; however, two studies contained qualitative research. One of the studies that used qualitative research was conducted with 280 sexually active youth in the juvenile justice system using a cross-sectional approach. They were assessed for STD risk behavior using "computer assisted self-interviewing procedure" (Voison et al. 71). The researcher hypothesized that 10 factors would indicate higher STD risk; however, only seven of the 10 factors proved to be indicators. Because the researchers of this study knew what variables would be relevant, this research study can be designated as descriptive research. This study contained cross-sectional analysis which will be important for my study; however, it used a qualitative approach. I will not be replicating this study because I want to know the amount of women who use substances prior to engaging in sexual activity.

The other study that contained qualitative research, conducted by Elkington, Bauermiester, and Zimmerman, was a study that looked at adolescents during an eight year longitudinal study. They used two methods for collecting data: structured, close ended face-to face-interviews and self-administered questionnaires (517). This research followed youth from mid-adolescence to young adulthood (516). This study can be described as explanatory research because they had two hypotheses and they were trying to understand the reason substance use occurred with adolescents who had "psychological distress" and "HIV/STD sexual risk behavior" (515). The method of using questionnaires with this study is important and I will be replicating it in my study, but I will not be using face-to-face interviews. Face-to-face interviewing can be intrusive and it will not yield honest answers from the young women. I think using questionnaires will increase the reliability of the females' answers, so I intend to use this method.

Two studies that were similar involved adolescents at the Cook County Juvenile Temporary Detention Center. Both of the studies used face-to-face structured interviews in their longitudinal study. Each study included 800 participants; however, one study wanted to see if gender, race/ethnicity, and age were a factor when determining sexual risk (Romero 1127). The other wanted to determine if youth with psychiatric disorders had a higher level of sexual risk ("HIV/Sexually Transmitted Infection" 901). The data and variables that were prevalent in both studies were gender, race/ethnicity, and age, along with incarceration status. Again, I don't think that interviewing young adults can yield truthful data so I will not be interviewing the young women in my proposed study. Also, a longitudinal study would not be appropriate for my study because I only want a snap-shot of what is happening in Uptown.

The majority of scholarly articles I reviewed contained longitudinal studies which can be useful to determine and predict sexual risk behavior. The longitudinal studies had initial contact with the participants and then different time periods when they contacted them again. A study conducted by Hendershot and associates interviewed participants at six, twelve, eighteen, and twenty-four months after the initial interview (406). At the 12 month point they did a cross-sectional analysis on some of the behaviors that were reported (408). The data they collected was on "sex related marijuana expectancies, marijuana-related problems, marijuana dependence, and behavioral intentions" (406-407). This can be termed as descriptive research because the researchers knew the variables before they began the research. Descriptive research is the method that I will be replicating because I want to accurately describe what is happening in Uptown. However, I will not be using a longitudinal approach because I am not looking for that type of data.

Hendershot and colleagues conducted a longitudinal study which used audio computer assisted self-interviews for that study. This may be an excellent way of collecting data on adolescents because adolescents change quickly and interviewing them at six month intervals would provide important data. But, reports among adolescents may not be as accurate when reporting sexual and substance use behavior because they may not feel that they will retain their anonymity (Johnson and Maslow-Iroff 48). However, according to Tourangeau and Smith, when talking about reported gender discrepancies among girls and boys, "when sexual behaviors, such as those related to number of sexual partners, were assessed using an audio computer-assisted self-report, a more anonymous method of obtaining self-reports than paper

and pencil self-interviews or face-to-face interviews, gender discrepancy was sharply reduced" (qtd. in Johnson and Malow-Iroff 49).

Cross-sectional analysis will be important for my study because, for this project, I only want a snapshot of what the problem is so that subsequent studies can build upon it. One article that contained cross-sectional data collection used audio computer assisted self-interviewing and another used a paper and pencil questionnaire. Lescano and colleagues conducted the study that used paper and pencil questionnaires (325). They were actually trying to test the efficiency of a shorter "adolescent risk inventory" than had been previously used (325). An Adolescent Risk Inventory is a test that is "designed to assess adolescent risk behaviors and attitudes" in a psychiatric setting (325). Although the shorter Adolescent Risk Inventory was being tested against longer forms of the test, it may be useful if it were transferred to a computer program to allow computer assisted self-interviewing because it will provide more privacy for adolescents. It may be more accurate also. Although these researchers were testing the efficiency of a shorter form of a test, it provided many valuable variables and data about sexually transmitted disease risk.

No data has been collected on Uptown regarding female adolescent sexually health using the methodology I propose. Therefore, I think that my study will help to fill in the gaps that are missing from this type of research.

III. PROPOSED RESEARCH METHODOLOGY

A. Data or Evidence to be Collected

The data I will be collecting will be from adolescent females in the Chicago neighborhood of Uptown. The research project will be from a positivist approach. I will be conducting descriptive research to discover the "who and how" of sexually transmitted disease risk in female adolescents. In other words, I will be researching who is getting sexually transmitted diseases and how they are getting it; the data will describe the characteristics of the female adolescent population in Uptown regarding sexual risk. The data I collect from adolescent females in Uptown will help me determine if substance use was a precursor to sex that could cause sexually transmitted diseases.

1. Description of the Data

There are two places from which I will collect data. First, I will collect information about schools in the Uptown neighborhood. I will then determine which grade levels have female students in the age range of 13-18. Because the sample will be restricted to female adolescents ages 13-18, this study will contain a nominal scale of measurement. I intend to have a stratified random sample from each school and grade level in the Uptown area. With the stratified random sample I hope to ensure external validity because the sample will be from different

grade levels and different schools. In doing this method I think that the data can be generalized to the same grade levels in different areas of Chicago or the country.

Also, I will collect information about sexual health clinics in Uptown. I will determine who lives in Uptown and who is visiting the clinics from a neighboring area. From there I will use purposive sampling to determine sexually transmitted disease risk in adolescent females who use substances before intercourse. With stratified random samples and purposive random samples I will be using both probability and non-probability sampling. Also, I can help to ensure internal validity by testing the two different groups. I can compare the results from the school data and the sexual health clinic data to see if there are any errors in the design of the project and to see if I am really measuring sexual risk behaviors related to substance use.

The specific data I will collect about sexually transmitted disease will be self-reported sexual transmitted disease that the women have contracted. This can then be cross-referenced with existing data available from the Chicago Department of Public Health. Specific data about risky sexual behavior will report on how many times the female has engaged in sexual activity without a barrier method of birth control (i.e. male or female condoms) or engaged in sexual activity without knowing their partner's sexually transmitted disease status. Substance use data will be collected on the females who have consumed any amount alcohol or other drugs prior to engaging in sexual activity. Subsequent questions will ask about which substance was consumed and how much was taken. For this study, the amount of alcohol that will constituted substance use is one or more drinks. According to the National Institute of Drug Abuse, one serving of alcohol is equal to "0.6 ounces of pure ethanol, or 12 ounces of beer; eight ounces of malt liquor; five ounces of wine; or 1.5 ounces (a "shot") of 80-proof distilled spirits or liquor

(e.g., gin, rum, vodka, or whiskey)." Additionally, any amount of drug use (other than alcohol) will constitute substance use.

2. Where the Data are Located

I will be using questionnaires for my research. Subsequently, the data will be located in the answers the adolescent females give to the questions asked.

B. Technique for Collection of Data

I will use a quantitative method for collect data. It will also be a cross-sectional approach because, for this study, I only want to get a "snapshot" of what is happening. I will be surveying females using questionnaires to collect the data. I am using this method instead of interviewing because sexual behavior and substance use among adolescents is a controversial topic. I am hoping that the participants will be more honest with surveys than with other more blatant measures.

The questionnaire that I plan to develop will contain demographic information, weight, height, sexual activity, substance use, substance use before sexual activity, and birth control methods. The questions will be well-planned so that I can determine if substance use precedes risky sexual behavior. I will run a pilot test of the questionnaire in order to determine if the questions I am asking are adequate to collect the data that I want.

I will distribute the questionnaires to students at each school through teachers in each of the classes. Also, I will enlist the help of clinicians at sexual health clinics in order for them to

pass out the questionnaires. I would like the questionnaire to be included in any intake papers that the participants are filling out for the sexual health clinic. A letter will be included with the survey to assure the participant's answers will be kept confidential and that they will be able to retain their anonymity throughout the process.

C. *Method of Analysis*

1. How the Data will be Examined for Meaning

When the surveys are complete and the data has been compiled I will organize the data according to the indicators and variables. I will input the data into an Excel spreadsheet. The Excel spreadsheet will then conduct quantitative analysis on the data to determine frequency of risky sexual behavior among female adolescents who were under the influence of a substance. The demographic information, sexual activity, substance use, and birth control methods will also be analyzed for patterns that correlate with sexual intercourse while under the influence of substances among female adolescents.

I will then use the tables and graph function of Excel to see if there are any trends evident from the data that was collected. The tables and graphs will include information about demographics, sexual activity, substance use, and birth control methods. It will then be compared to female adolescents who have answered "yes" to the question they had engaged in sexual activity while under the influence of alcohol or other drugs. I will see if there are any patterns present among the different variables.

2. How the Data will be Presented

The data will be presented in charts and graphs produced by Excel. The following documents will be presented:

- A map of Uptown with indications of where the data was collected.
- Charts showing frequency of sexual activity, substance use, and birth control methods according to demographic information.
- A chart showing substance use among female adolescents prior to sexual activity.

IV. OUTLINE OF FINAL REPORT

The final report will be presented as follows:

V. Expected Outcomes

I believe that the results of this study will benefit Uptown and the city of Chicago. By gaining a better understanding of the problems regarding female adolescent sexually transmitted disease risk, more help will be available to young women. I think that doctors, clinicians, and the government will be better able to help female adolescents make better decisions about their health.

Doctors and nurses will be better able to treat female adolescents because they will have a better understanding of female adolescent's behaviors and the risks which they take. They can warn female adolescents of the dangers of sex while drunk or high. Substance abuse treatment facility clinicians can teach their clients about the risks of using alcohol or other drugs and participating in unprotected sex. The doctors, nurses, and substance abuse treatment clinicians can help their patients plan interventions for when they are using substances so that they can still protect themselves from sexually transmitted diseases.

The government can also help plan interventions for protecting female adolescents and helping them advocate for themselves. They can offer more sexual education classes geared towards the needs that are set forth in research. For example, if a certain race, ethnicity, age, or grade level proves to be more at risk then sexual education classes can be tailored to each

individual need. If the government sets forth these interventions then teachers and parents can help with the process of educating young women. The education that is provided can help young women to take better care of their sexual health and advocate for themselves regarding sexually transmitted disease prevention and substance use.

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