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**THE TRANSTHEORETICAL MODEL: AN ASSESSMENT OF READINESS TO
CHANGE HIV-RISKING BEHAVIORS IN A HIGH-RISK SAMPLE OF
ADOLESCENTS**

**BY
RAQUEL D. PINO**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
IN
PSYCHOLOGY**

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1993

Abstract

The present investigation was an initial attempt to apply the Transtheoretical Model to the area of HIV risk in adolescents. Adolescents were staged on readiness to change twelve HIV risk-related behaviors with the levels: Precontemplation, Contemplation, Preparation, Action, and Maintenance. Several variables were examined to see if differences in responses existed for adolescents in various stages of change including: (1) General AIDS Knowledge, (2) Knowledge of AIDS Transmission, (3) High-Risk Sexual Behavior, (4) High-Risk Drug Behavior, (5) Perceptions of Peer High-Risk Behavior, (6) Pros of Safer Sex, (7) Cons of Safer Sex, and (8) Self-Efficacy for Safer Sex. Three general conclusions were made: (1) the Transtheoretical Model can be applied to the area of HIV and adolescents to assess readiness to modify HIV risking behaviors, (2) as one moves through the Stages of Change for several HIV risk-related behaviors, a decrease in High-Risk Sexual Behaviors, High-Risk Drug Behaviors, and Peer High-Risk Behaviors can be observed, and (3) differences in General AIDS Knowledge, Knowledge of AIDS Transmission, the Pros/Cons of Safer Sex, and Self-Efficacy for Safer Sex appear to be constant across the stages of change for HIV risk-related behaviors for this sample of adolescents. Results should be interpreted cautiously due to the small sample size ($n = 52$).

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The Transtheoretical Model: An Assessment of Readiness to Change HIV-Risking Behaviors in a High-Risk Sample of Adolescents

Statement of the Problem

Currently adolescents account for less than one percent of all diagnosed AIDS cases in the United States. While this percentage is seemingly small, it is misleading. As of January 1993, 20 percent of all U.S. AIDS cases were ages 20-29 (Center for Disease Control, February 1993). Since the latency period of the disease is often 8-10 years, many of these infections are believed to have occurred during adolescence. With the widespread occurrence of sexual activity and experimentation with drugs, numerous researchers have identified adolescents as being at high risk of HIV infection (e.g. Brooks-Gunn & Furstenberg, 1990; DiClemente, Boyer, Morales, 1988; Siegel, Lazarus, Krashavsky, Durbin, & Chesney, 1991). By the age of 20, 70 percent of females and 80 percent of males have engaged in sexual intercourse, thereby increasing their probability of being exposed to HIV infection. Actual prevalence rates for drug use among adolescents are more difficult to obtain, however, it is estimated that more than 200,000 teens are injecting cocaine and/or heroin (Brooks-Gunn, Boyer, & Hein, 1988). With regard to AIDS risk, adolescents have

increasingly been exposed to valid information concerning the causes and prevention of AIDS. However, past research has demonstrated that even after being exposed to valid AIDS-related information, adolescents often fail to make effective behavioral changes in response to this information (e.g. Strunin & Hingson, 1987; Kegles, Adler & Irwin, 1988; Rickert, Jay, Gottlieb & Bridges, 1989; Roscoe & Kruger, 1990; Strunin, 1991). Due to the severe consequences associated with AIDS, it is urgent that we move beyond educational techniques as a basis for prevention. I do not propose that we abandon the notion of education in attempting to change one's behavior towards AIDS precautions but that we explore additional approaches to behavior change.

One promising approach is the Transtheoretical Model (Prochaska & DiClemente, 1983, 1984, 1986) which has proved to be successful in assessing and effecting change in a number of health related behaviors, including smoking cessation (Prochaska & DiClemente, 1983, 1984, 1986), alcohol abuse (Begin, 1989), dietary fat reduction (Rossi, Rossi, & Prochaska, 1990), exercise adoption (Marcus, Rossi, Selby, et al., 1991), and more recently HIV risking behaviors (Prochaska, Harlow, Redding, et al., 1992a; Prochaska, Redding, Harlow, et al., 1992b).

It is hypothesized that the Transtheoretical Model can be successfully applied to adolescent populations with the

purpose of facilitating change in HIV risking behaviors. The purpose of the present study is to: (1) examine AIDS-related knowledge in a high-risk sample of adolescents, (2) examine high-risk behavior in a diverse sample of adolescents, (3) examine perceptions of peer high-risk behavior, (4) assess adolescents' readiness to modify HIV risking behaviors utilizing the Transtheoretical Model, (5) assess the perceived advantages (pros) and disadvantages (cons) of behavior change, and (6) examine adolescents' efficacy to change HIV risking behaviors.

Justification and Significance of the Study

Impact of Knowledge on AIDS-Related Behavior

Based on previous research, it is reasonable to conclude that education alone does not necessarily lead to behavior change. Although a large percentage of adolescents are aware of the sexual transmission of HIV and the effectiveness of condom use in lessening one's probability of contracting AIDS, the majority of sexually active youth have not modified their sexual practices in response (Kegles, Adler, & Irwin, 1988).

Kegles et al. (1988) conducted a survey on a sample of San Francisco youth (ages 14 to 19 years) to assess the impact of increased AIDS-related information (by way of the media and school based information) on sexually active

adolescents' attitudes, intentions, and use of condoms over a one year period. Adolescents were assessed at two time points. The first assessment occurred between 1984 and 1985, and the second assessment occurred between 1985 and 1986. Adolescents received a series of questionnaires assessing six variables: (a) knowledge that condoms prevent sexually transmitted diseases (STD's), (b) value placed on using a contraceptive that prevents STD's, (c) importance of using a contraceptive that prevents one from getting STD's, (d) perception of partners' desire to use condoms, (e) intentions to ever use condoms, and (f) intentions to use condoms most of the time. In general, sexually active adolescents were aware that condom use was an effective means of preventing sexually transmitted diseases, specifically HIV infection. Both males and females agreed that using a contraceptive that prevents STD's was of great value and importance. However, sexually active adolescents did not increase their use of condoms, nor did they intend to do so in the future.

Strunin and Hingson (1987) obtained similar results in a sample of Massachusetts youth (ages 16 to 19) with regard to behavioral changes due to an increased concern of AIDS. More than 90 percent of the adolescents sampled were aware that AIDS is transmitted through sexual intercourse. However, of the sexually active adolescents, only 15 percent reported changes in their sexual behavior due to knowledge

of AIDS. Of those, only 20 percent reported effective behavioral changes (i.e. condom use, abstinence). Other less effective methods included selectivity of partners, being careful, monogamy, and prevention of fluid transmission.

Likewise, Rickert, Jay, Gottlieb, and Bridges (1989) conducted a survey of 99 adolescent females (ages 12-19 years) to examine attitudes and behaviors toward condom purchase and use. Findings revealed that although sexually active female adolescents were quite knowledgeable about AIDS, condom purchase and use were minimal (17 percent).

Furthermore, Roscoe and Kruger (1990) investigated the knowledge of AIDS in 255 late adolescents and assessed its influence on sexual behavior. Results indicated that adolescents possessed considerable knowledge with respect to AIDS, however, only 34 percent of the sample expressed that they had altered their sexual behavior in response to AIDS.

Finally, two Massachusetts studies assessed adolescents' perceptions of their risk of HIV infection (Strunin, 1991). In study 1, data was collected by phone surveys and in study 2, data was collected by self-administered questionnaires. More than 98 percent of the total sample were aware that HIV could be transmitted through sexual intercourse. Yet, of those who were sexually active, few reported making effective behavioral changes in response to AIDS.

In contrast to the previous studies, Sonenstein, Pleck, and Ku (1989) reported an increase in condom use among adolescent males (ages 17-19) living in metropolitan areas. Among sexually active males, rates of condom use at their last intercourse increased over 100 percent (21 percent to 58 percent) from 1979 to 1988. The authors attributed this increase to a heightened public awareness of AIDS. In spite of the increase in condom use among this sample of adolescent males, over 40 percent of those sampled in 1988 were engaging in unprotected sexual intercourse, thereby increasing their risk for HIV infection. In addition, this study failed to address the consistency of condom use in the adolescent population.

Transtheoretical Model

The Transtheoretical Model is a general model of health behavior change. The model maintains that behavior change is not a dichotomous event, in which people shift from an unhealthy behavior to a healthy behavior, but a process in which people move through a continuum of stages in their efforts to change a behavior (Prochaska, in press). Five stages of change have been identified, including: Precontemplation, Contemplation, Preparation, Action, and Maintenance.

Precontemplation is a stage in which people have no intentions of changing a problem behavior within the next

six months. Previous applications of this model to the area of HIV prevention have identified precontemplators as being: (1) individuals who are unaware of potential risks of HIV, (2) individuals who are aware of the risks associated with HIV but minimize danger to themselves, or (3) individuals who for other reasons do not intend to change their behavior (Prochaska et al., 1992b).

Contemplation is a stage in which people are seriously considering behavior change within the next six months. Prochaska et al. (1992b) describe contemplators, in the area of HIV prevention, as individuals who are knowledgeable of high risk behaviors associated with HIV and are considering how they might minimize their risk in the future. At any rate, contemplators are not currently involved in any type of behavior change.

Preparation is a stage in which people are ready to make a behavior change within the next 30 days. Individuals in the preparation stage have made progressive steps toward the reduction of the problem behavior. For instance, smoking cessation studies have used a 24 hour abstinence from cigarette smoking as a behavioral criteria for individuals in the preparation stage (DiClemente et al., 1991). Current applications of the stages of change to HIV risk reduction have not yet used the preparation stage. Prochaska et al. (1992a) attribute this to the difficulty in establishing behavioral criteria for preparation in the area

of HIV. For example, it would be difficult to equate condom use during one sexual encounter with a 24 abstinence from cigarette smoking. Further research in this area is needed to establish adequate behavioral criterion.

Action occurs when people are, in fact, altering and modifying the problem behavior. For areas such as smoking cessation, a criterion of 0-6 months without smoking has been established for the action stage. However, researchers in the area of HIV have not yet established a criterion for the stage of action. Prochaska et al. (1992b) have suggested a number of possible behavioral criteria:

- (1) using condoms during the past 6-10 sexual encounters,
- (2) having a monogamous relationship for a year or more after obtaining two or more negative HIV antibody tests,
- (3) abstaining from unprotective receptive anal intercourse,
- or (4) abstaining from vaginal sex, anal sex, and needle sharing with partners of unknown history.

Many of these behavioral criterion would be inappropriate for an adolescent population. However, modifications could be made to make the criteria more suitable for adolescents. For instance, rather than asking about condom use during all of the past 6-10 sexual encounters, the range of encounters could be reduced to 4-6. The rationale being that adolescents do not engage in sexual intercourse as frequently as adults.

Finally, maintenance is the period in which people

sustain their behavior change for more than six months. In the area of HIV prevention, Prochaska et al. (1992) have defined maintenance as "consistently maintaining safer sex practices for more than six months" (p. 8). Safe sex practices are defined as monogamy, abstinence, and/or consistent condom use. Researchers in the area of HIV risk have been able to successfully apply the stages of change to adult populations (Prochaska et al., 1992a; Prochaska et al., 1992b; Reeding, Rossi, Velicer, & Prochaska, 1989). Moreover, the stages of change have been successfully applied to adolescent populations in the areas of smoking acquisition (Elder, DeMoor, Young, et al., 1990; Stern, Prochaska, Velicer, & Elder, 1987), and delinquent behavior (Fiore-Lerner, 1990). However, to date, it is believed that there has been no attempt to utilize the stages of change in adolescent populations with respect to HIV risk. The present investigation is an initial attempt to do so.

Two features of the Transtheoretical Model which have been found to predict stage movement include self-efficacy and decisional balance. Self-efficacy is the notion that a person's perceived ability (efficacy expectations) on a given task will mediate future attempts to perform that task (Bandura, 1977). Self-efficacy has been used to both predict and explain behavior change across a wide range of behaviors. For instance, smoking cessation research has found self-efficacy to be a significant predictor of both

maintenance of cessation and movement through stages (DiClemente, Prochaska, Gibertini, 1985). In the area of HIV risk, numerous researchers have cited a reduction in risk taking behaviors as one's level of self-efficacy increased (Coates, 1990; Goldman & Harlow, in press; Kelly, St. Lawrence, Brasfield, Lemke, et al., 1990). For example, in an adult sample, Prochaska et al. (1992b) found an increase in efficacy for condom use across the first three stages of change (precontemplation, contemplation, action) and a leveling off during the maintenance stage.

The concept of decisional balance, as it applies to the transtheoretical model, is the notion that one weighs the advantages (pros) and disadvantages (cons) of a behavior before initiating a change. The pros can be thought of as facilitators of positive change, while the cons represent barriers to positive change. The concept of decisional balance (Janis & Mann, 1968, 1977) has been applied to a variety of health-related behaviors including, smoking cessation (Velicer, DiClemente, Prochaska, & Brandenburg, 1985), weight loss (O'Connell & Velicer, 1988), psychological distress (Penney, 1988), exercise adoption (Marcus, 1990), and radon testing and sunscreen use (Rossi, 1990). In the area of smoking cessation, the decisional balance inventory has been found to predict movement from contemplation to action (Velicer et al., 1985). Furthermore, the pros of change begin to outweigh the cons

of change early in the stage of contemplation, thereby facilitating movement to action (Prochaska et al., 1992a). Research in the area of HIV risk does not replicate the pattern of pros and cons common to that of smoking cessation. In both college and high risk samples, "the pros accounted for more of the variance in the movement through stages, while the cons remained relatively stable across the stages of change" (Prochaska et al., 1992, p. 12). This suggests, that while the advantages of condom use become more salient across stages, the disadvantages of condom use remain unchanged.

Research Hypotheses

Given the previous research literature on the ineffectiveness of increasing one's knowledge as an approach to behavior change, the necessity to move beyond educational approaches in the area of HIV prevention is apparent.

The present study was designed to investigate the hypothesis that the Transtheoretical Model could be utilized to assess readiness to modify HIV risking behaviors in adolescents. Furthermore, it was hypothesized that as one moves through the stages, a unique pattern of characteristics will emerge for each stage (see Table 1.):

- (1) AIDS-related knowledge was expected to be high and constant across the five stages of HIV behavior.

- (2) A decrease in risk-taking behaviors was predicted across stages.
- (3) A decrease in perceptions of peer risk-taking behaviors was expected across stages.
- (4) An increase in the pros of behavior change was predicted across stages.
- (5) A stable pattern of cons was expected across stages.
- (6) An increase in self-efficacy was predicted at preparation and action stages, with a leveling off at maintenance.

Method

Participants

Two small samples of adolescents were surveyed. Data from the combined sample ($n = 52$) was examined for most analyses. Table 1 provides demographics for the combined sample.

Insert Table 1 about here

Sample 1

Sample 1 participants included 37 adolescents (aged 12-16) currently receiving in-patient psychiatric services at Parkview Episcopal Hospital located in Pueblo, Colorado. Parkview's Behavioral Medicine department provides

short-term psychiatric care for adolescents ages 12-18. Patients typically admitted to the program are those exhibiting behavioral and/or emotional problems. A DSM-III-R diagnosis is required upon admission, typical Axis I diagnoses include: Major Depression, Adjustment Disorder, and Conduct Disorder. Patients requiring long-term in-patient care are referred to other agencies. The sample was comprised of 21 males and 16 females representing various ethnic backgrounds; White (29.7 percent), Hispanic (40.5 percent), African-American (5.4 percent), Native-American (10.8 percent) and other (13.5 percent).

The principle investigator received consent from the Director of Adolescent Psychiatric Services to conduct the present investigation. Upon admission, patients and guardians were provided with a brief description of the study along with an explanation of the potential benefits of participation. Benefits included: (1) increased awareness of one's own behavior, and (2) providing the researcher with valuable information with regard to adolescent AIDS-risking behaviors. Anonymity was assured upon consent. Consent was sought from both the adolescent and his/her legal guardian.

Sample 2

Participants in sample 2 included 15 adolescents (aged 15-16) currently involved in classes for the preparation of confirmation at Christ the King Parish located in Kingston,

Rhode Island. The sample was comprised of 3 males and 12 females.

The principle investigator received consent from the Director of Religious Formation and the Parish Priest to conduct the present investigation. Again, guardians were provided with a brief description of the study along with an explanation of the potential benefits of participation. Anonymity was assured upon consent. Consent was sought from both the adolescent and his/her legal guardian.

Measures

A seven-part questionnaire examined, (1) demographic and background information, (2) AIDS-related knowledge, (3) high-risk behaviors, (4) perceptions of peer high-risk behaviors, (5) stages of HIV risk-related behaviors, (6) decisional balance for safer sex, and (7) self-efficacy for safer sex.

AIDS Knowledge Survey

Items on the AIDS Knowledge Survey were compiled from previously developed instruments used to measure AIDS-related knowledge, attitudes and behaviors in adolescents (DiClemente et al., 1988; Siegel et.al., 1991).

Knowledge items were taken from the AIDS Information Survey developed by DiClemente et al. (1988). The AIDS

Information Survey is comprised of three subscales: A Knowledge Scale of AIDS, A Misconception Scale of Casual Contagion, and a Scale of Perceived Susceptibility. The survey was used to assess AIDS knowledge, attitudes, and beliefs in adolescent (ages 14-18). Items taken from the scale are those pertaining to knowledge of AIDS. An alpha coefficient of .72 revealed adequate internal consistency for the knowledge scale.

However, the majority of items for the AIDS Knowledge Survey were taken from a questionnaire used to assess knowledge, attitudes, and beliefs regarding HIV infection in adolescents (ages 11-16) (Siegel, 1991). Prior to the survey, the researcher pilot-tested the instrument in comparable populations and made necessary modifications to improve readability. Due to the anonymity of the survey a test of external validity was not conducted.

High-Risk Behavior

In a like manner, items on the high-risk behavior survey were adapted from Siegel's (1991) work on adolescent sexual activity and drug use behavior with respect to HIV infection. Item content included: sexual experience, number of sexual partners, alcohol use, drug use, and injection of drugs. Again, the researcher pilot-tested the instrument in comparable populations and made necessary modifications to improve readability prior to the actual

survey. However, a test of external validity was not conducted due to the anonymity of the survey.

Peer High-Risk Behavior

A ten-item questionnaire was used to assess adolescents' perceptions of their peers risk taking behaviors. Items on the peer high-risk behavior scale paralleled those on the high-risk behavior scale. Item content included: sexual experience, number of sexual partners, alcohol use, drug use, and injection of drugs.

Stages of Change for HIV Risk-Related Behaviors

A twelve-item staging questionnaire was used to classify adolescents into one of five stages of change for twelve HIV risk-related behaviors, including: sexual experience, drug injection, condom use, abstinence, monogamy, drug use prior to sex, alcohol use prior to sex, partner's sexual history, partner's drug history, multiple sexual partners, having sex with someone who has injected drugs, and having sex with someone who has had multiple sexual partners. Based on the response to these items, participants were placed into one of five stages of change for each behavior: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), or Maintenance (M). For this investigation, the maintenance stage is defined as the safest stage for each HIV risk related behavior. Items

assessing each of these five stages of change for HIV
risking behaviors are based on the work of Prochaska et al.
(1992a) in the area of HIV prevention and the original work
of Prochaska and DiClemente (1983,1984) in the area of
smoking cessation.

Decisional Balance for Safer Sex

A modified version of the decisional balance scale for
condom use, developed by Prochaska et al.(1992a), was used
to assess the pros and cons of safer sex. Since the
decisional balance scale was originally developed for use
with adult populations, wording of the items were modified
to improve readability and relevance to an adolescent
population. Item content for the advantages (Pros) of safer
sex included: safety/prevention, responsibility,
cleanliness, relationship, and enjoyment. Items for the
disadvantages (Cons) of safer sex focused on: less
enjoyment, partner consideration, hassles, image, and cost.
Based on previous studies in the area of HIV prevention
(Prochaska et al., 1992a), it was expected that the
decisional balance subscales would reveal high internal
consistency for both the pros and cons of safer sex.

Self-Efficacy for Safer Sex

A fourteen item scale was constructed to measure
self-efficacy (confidence) for safer sexual behavior in
adolescents. Items were adapted from a larger study that

measured self-efficacy for condom use. Prochaska et al. (1992a) constructed a 5-item scale to measure self-efficacy (confidence) for condom use in various situations. The development of item content was based on prior research conducted in the area of smoking cessation (Velicer et al., 1990). Item content focused upon four main types of situations: negative affect, positive social, substance use, and partner pressure. In a previous study (Prochaska et al., 1992a), the alpha coefficient for efficacy for condom use scale was extremely high ($\alpha = .91$). Similarly, it was expected that items on the self-efficacy scale for safer sexual behavior in adolescents would reveal high internal consistency.

Data Analysis

The data in this study was quantitatively analyzed using the statistical procedures of Principle Components Analysis (PCA), descriptive statistics and Multivariate Analysis of Variance (MANOVA). Analyses were conducted using the BMDP statistical programs (Dixon, 1990).

First, five PCA's were conducted to examine the structure of the following scales: AIDS Knowledge Scale, High-Risk Behavior Scale, Perceptions of Peer High-Risk Behavior Scale, Decisional Balance for Safer Sex (includes two separate scales of pros and cons), and Self-Efficacy for

Safer Sex. It was expected that each of these scales would be unidimensional, producing a single function with high loadings ($>.40$) for all items within a scale. Items that did not appear to be consistent with the others were dropped. Coefficient Alpha was calculated for each final scale. It was expected that all six scales would be highly consistent. Composite scores were created for each scale by averaging across items with loadings $\geq .40$.

Second, descriptive statistics were calculated for all of the major composite variables. This included calculating the means, standard deviations, ranges, skewnesses, and kurtoses for: AIDS knowledge, high-risk behavior, perceptions of peer high-risk behavior, decisional balance for safer sex (both pros and cons), and self-efficacy for safer sex. In addition, frequencies of subjects are provided for each level of the twelve stages of HIV-risk related behaviors.

Third, three one-way between-subjects MANOVAs were conducted for each of the twelve stages of HIV risk-related behaviors. Dependent variables included: (1) General AIDS Knowledge, Knowledge of AIDS Transmission, (2) High-Risk Sexual Behaviors, High-Risk Drug Behaviors, Perceptions of Peer High-Risk Behaviors, and (3) Pros/Cons of Safer Sex, and Self-Efficacy for Safer Sex. The independent variable was Stage of Change for each risk-related behavior with five levels: Precontemplation (PC), Contemplation (C),

Preparation (P), Action (A), and Maintenance (M). For each MANOVA, two followup analyses were conducted. First, a set of Analyses of Variance (ANOVAs) were conducted for each MANOVA to determine which of the dependent variables showed significant differences across groups. Second, Tukey analyses were conducted for each significant ANOVA to determine which groups showed significant differences. The expected pattern of relationships across groups is shown in Table 2.

Insert Table 2 about here

Results

Principle Components Analysis

Knowledge Scale

Two principle components were identified for the AIDS Knowledge Scale accounting for a total of 61.4 percent of the total variance in AIDS knowledge. Since it was expected that the two sets of items would be somewhat related, oblique rotation was conducted. The correlation between the two components was $-.11$. Criteria for item scoring on a component included a loading of at least $.40$. Seven items representing general AIDS knowledge formed the first

component, which accounted for 35.7 percent of the variance in knowledge items. Mean item loading was .77 (SD = .07). The second component, knowledge of AIDS transmission, consisted of seven items related to the transmission of AIDS. It accounted for 25.4 percent of the variance in knowledge items. Mean item loading was .76 (SD = .10). Responses to the items were averaged to form two composite scores of General AIDS Knowledge and Knowledge of AIDS Transmission.

High-Risk Behavior Scale

Similarly, two principle components were identified for the High-Risk Behavior Scale, accounting for a total of 62.5 percent of the total variance in high-risk behavior items. Again, oblique rotation was conducted. The correlation between the two components was .09. Criteria for item scoring on a component included a loading of at least .40. Six items, representing high-risk sexual behavior formed the first component. The first component accounted for 37.7 percent of the variance in high-risk behavior items, with a mean item loading of .74 (SD = .09). The second component consisted of four items related to high-risk drug behavior. This component accounted for 24.8 percent of the variance in high-risk behavior items and had a mean item loading of .77 (SD = .15). Responses to the items were averaged to form two composite scores of High-Risk Sexual Behavior and High-

Risk Drug Behavior.

Perceptions of Peer High-Risk Behavior

A single component was identified for the perceptions peer high-risk behavior scale accounting for a total of 57.3 percent of the total item variance. Criteria for item scoring on a component included a loading of at least .40. Ten items representing perceptions of peer high-risk behavior formed the component, with a mean item loading of .76 (SD = .05). Responses to the items were averaged to form a composite score for Peer High-Risk Behavior.

Decisional Balance

As was expected, two principle components were identified for the decisional balance scale accounting for a total of 72.9 percent of the total item variance. Again, oblique rotation was conducted. The correlation between the two components was -.04. Criteria for item scoring on a component included a loading of at least .40. The first component consisted of three items representing the cons (disadvantages), which accounted for 41.1 percent of the variance. Mean item loading for this component was .81 (SD = .09). The second component, pros (advantages) of safer sexual behavior, consisted of two items and accounted for 31.8 percent of the variance. Mean item loading for this component was .85 (SD = .02). Responses to the items

were averaged to form two composite scores for the Cons of Safer Sex and the Pros of Safer Sex.

Self-Efficacy

A single component was identified for the self-efficacy for safer sex scale accounting for a total of 66.4 percent of the total item variance. Criteria for item scoring on a component included a loading of at least .40. Thirteen items representing self-efficacy for safer sex formed the component, with a mean item loading of .81 (SD = .07). Responses to the items were averaged to form composite scores for Self-Efficacy For Safer Sex.

Descriptive Statistics

Table 3 provides descriptive statistics (means and standard deviations) for sample 1 (n = 37) and sample 2 (n = 15) on dependent variables. In addition, t-tests (with alpha = .01) are provided for each dependent variable to investigate possible group differences.

Insert Table 3 about here

Overall, sample 1: (1) appears to have moderately high

levels of General AIDS Knowledge, (2) has high levels of Knowledge of AIDS Transmission, (3) reports moderate levels of High-Risk Sexual Behaviors, (4) reports low levels of High-Risk Drug Behavior, (5) perceives Peer High-Risk Behavior as being moderate, (6) views the Pros (advantages) of Safer Sex as being more important than the Cons (disadvantages) of Safer Sex, and (7) reports moderate levels of Self-Efficacy for Safer Sex. A similar pattern is observed for sample 2, however adolescents in sample 2 reported significantly lower levels of high-risk sexual behaviors ($t = 3.55, p < .01$).

Table 4 provides descriptive statistics (means, standard deviations, skewnesses, kurtoses, and coefficient alphas) for the combined sample ($n = 52$), again revealing a comparable pattern. The final eight scales, with the exception at the pros scale, showed moderate to high internal consistency.

Insert Table 4 about here

Lastly, frequencies of subjects at each level of the independent variable for all twelve stages of change are provided for each sample (Table 5), as well as, the combined sample (Table 6). The pattern of frequencies shows that the

highest proportions of sample 1 participants were in the safer stages (Action or Maintenance) for 9 of the 12 areas. These participants showed a higher proportion in unsafe stages (Precontemplation or Contemplation) for three areas (Sex, Abstinence, and Sex with Someone Who has had Multiple Partners). In sample 2, the highest proportion of participants were in the safer stages for all 12 areas of HIV-related behaviors.

Insert Tables 5 and 6 about here

MANOVAs

Three one-way MANOVAs were conducted for each of the twelve stages of HIV risk-related behaviors. Dependent variables included: (1) General AIDS Knowledge, (2) Knowledge of AIDS Transmission, (3) High-Risk Sexual Behavior, (4) High-Risk Drug Behavior, (5) Perceptions of Peer High-Risk Behavior, (6) Pros of Safer Sex, (7) Cons of Safer Sex, and (8) Self-Efficacy for Safer Sex. The independent variable was Stage of Change (SOC) for each risk-related behavior with the five stages or levels as: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

SOC Sex

A one-way between-subjects MANOVA was performed on two dependent variables: General AIDS Knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for sex with the five levels: PC, C, P, A, and M. As expected, results indicated that the linear combination of the dependent variables was not significantly related to Stage of Change for sex $F(8,92) = 1.74, p = .10$.

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for sex. As hypothesized, results indicated that the linear combination of dependent variables was significantly related to Stage of Change for Sex $F(12,119) = 6.77, p < .001$. η^2 indicated that 75 percent of the variance in the linear combination of High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior was accounted for by Stage of Change for sex. Follow-up univariate ANOVAs revealed that there were significant differences in High-Risk Sexual Behavior and Perceptions of Peer High-Risk Behavior for adolescents in various Stages of Change for sex, $F_{\text{sex}}(4,47) = 25.91, p < .001, F_{\text{peer}}(4,47) = 3.40, p = .02$. Tukey follow-up tests indicated that adolescents in the Precontemplation stage for

sex reported significantly higher levels of High-Risk Sexual Behaviors ($m = 3.68$) compared to those in the Contemplation, Preparation, Action, and Maintenance stages ($m = 2.59$, $m = 1.02$, $m = 1.80$, $m = 1.33$). Furthermore, adolescents in the Contemplation stage for sex reported significantly higher levels of High-Risk Sexual Behaviors ($m = 2.59$) compared to those in the Action stage ($m = 1.02$); adolescents in the Contemplation stage for sex reported Perceptions of Peer High-Risk Behaviors to be significantly higher than adolescents in the Action stage ($m = 2.51$, $m = 1.32$).

Third, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for sex. Contrary to what was expected, the linear combination of the dependent variables was not significantly related to Stage of Change for sex $F(12,119) = .97$, $p = .48$.

Graphs of the means for each Stage of Change for sex, on the eight dependent variables, are given in Figures 1 to 3.

Insert Figures 1 - 3 about here

SOC Drug Injection

A one-way between-subjects MANOVA was performed on two dependent variables: General AIDS Knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for drug injection with the five levels: PC, C, P, A, and M. As predicted, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for drug injection $F(4,94) = 0.21, p = .93$.

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for drug injection. In contrast to hypotheses, the linear combination of dependent variables was not significantly related to Stage of Change for drug injection $F(6,92) = 0.84, p = .54$.

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for drug injection. Counter to expectations, the linear combination of dependent variables was not significantly related to Stage of Change for drug injection $F(6,92) = 1.35, p = .24$.

Figures 4 to 6 depict the means of the eight dependent variables, across the five Stages of Change of drug injection.

Insert Figures 4 - 6 about here

SOC Condom Use

A one-way between-subjects MANOVA was performed on two dependent variables: General AIDS Knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for condom use, with the five levels: PC, C, P, A, and M. As expected, results indicated that the linear combination of the dependent variables was not significantly related to Stage of Change for condom use. $F(6,94) = 0.35$, $p = .91$.

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for condom use. Consistent with hypotheses, the linear combination of dependent variables was significantly related to Stage of Change for condom use $F(9,112) = 2.08$, $p = .04$. η^2 indicated that 17 percent of the variance in the linear combination of dependent variables was accounted

for by Stage of Change for condom use. In addition, the univariate ANOVAs revealed that there were significant differences in High-Risk Sexual Behaviors and Perceptions of Peer High-Risk Behaviors for adolescents in various stages of condom use, $F_{sex} (3,48) = 4.39, p = .01$, $F_{peer} (3,48) = 3.43, p = .02$. However upon further investigation, Tukey follow-up tests indicated that mean differences were not significant at $p < .05$.

Lastly, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for condom use. Contrary to hypotheses, the linear combination of dependent variables was not significantly related to Stage of Change for condom use $F (9,112) = 1.19, p = .31$.

The means for the eight dependent, across the five Stages of Change of condom use, are presented in Figures 7 to 9.

Insert Figures 7 - 9 about here

SOC Abstinence

A one-way between-subjects MANOVA was performed on two dependent variables: General AIDS Knowledge and Knowledge of

AIDS Transmission. The independent variable was Stage of Change for abstinence, with five levels: PC, C, P, A, and M. As hypothesized, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for abstinence $F(8,92) = 0.52$, $p = .84$.

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for abstinence. Counter to expectations, the linear combination of the dependent variables was not significantly related to Stage of Change for abstinence $F(12,119) = 1.09$, $p = .39$.

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for abstinence. In contrast to hypotheses, results indicated that the linear combination of the dependent variables was not significantly related to Stage of Change for abstinence $F(12,119) = 1.09$, $p = .38$.

Figures 10 to 12 provide graphs of the means of the eight dependent variables, over the five Stages of Change for abstinence.

Insert Figures 10 - 12 about here

SOC DRUGSEX

A one-way between-subjects MANOVA was performed on two dependent variables: General AIDS Knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for drug use prior to engaging in sex (DRUGSEX), with the five levels: PC, C, P, A, and M. As predicted, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for DRUGSEX $F(2,48) = 0.03, p = .97$.

Second, a one-way between subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change DRUGSEX. As hypothesized, the linear combination of dependent variables was significantly related to Stage of Change for DRUGSEX $F(3,47) = 6.96, p < .001$. Results indicated that 22 percent of the variance in the linear combination of dependent variables was accounted for by Stage of Change for DRUGSEX. In addition, the univariate ANOVAs revealed that there were significant differences in High-Risk Sexual Behavior and High-Risk Drug Behavior for

adolescents in various Stages of Change for DRUGSEX, $F_{sex} (1,49) = 5.34, p = .03, F_{drug} (1,49) = 18, p < .001$. Tukey follow-up tests indicated that adolescents in the Contemplation stage for DRUGSEX reported significantly higher levels of High-Risk Sexual Behaviors ($m = 3.43$) compared to those in the Maintenance stage ($m = 2.16$). Furthermore, adolescents in the Contemplation stage for DRUGSEX reported significantly higher levels of High-Risk Drug Behaviors ($m = 2.50$) compared to those in the Maintenance stage ($m = 1.21$).

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for DRUGSEX. In contrast to hypotheses, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for DRUGSEX $F (3,48) = 1.12, p = .35$.

Figures 13 to 15 give the means of the eight dependent variables, across the five Stages of Change for drug use prior to sex.

Insert Figures 13 - 15 about here

SOC ALCSEX

A one-way between-subjects MANOVA was performed on two dependent variables: General AIDS knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for alcohol use prior to engaging in sex (ALCSEX), with the levels: PC, C, P, A, and M. Consistent with hypotheses, the linear combination of dependent variables was not significantly related to Stage of Change for ALCSEX $F(6,94) = 0.21, p = .97$.

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for alcohol use prior to engaging in sex (ALCSEX). Counter to expectations, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for ALCSEX $F(9,112) = 1.45, p = .17$.

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for alcohol use prior to engaging in sex (ALCSEX). Counter to hypotheses, the linear combination of dependent variables was not significantly related to Stage of Change for ALCSEX

$F(9,112) = 0.88, p = .55.$

The means for the eight dependent variables, across the five Stages of Change for alcohol use prior to sex, are provided in Figures 16 to 18.

Insert Figures 16 - 18 about here

SOC Monogamy

A one-way between-subjects MANOVA was performed on two dependent variables: General AIDS Knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for monogamy, with the five levels: PC, C, P, A, and M. As expected, results indicated that the linear combination of dependent variables was not related to Stage of Change for monogamy $F(6,94) = 0.79, p = .58.$

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for monogamy. As hypothesized, the linear combination of the dependent variables was significantly related to Stage of Change for monogamy $F(9,112) = 3.41, p < .001.$ Eta² indicated that 45 percent of the variance in the linear combination of dependent variables was accounted

for by Stage of Change for monogamy. In addition, the univariate ANOVAs revealed that there were significant differences in High-Risk Sexual Behavior and High-Risk Drug Behavior for adolescents in various Stages of Change for monogamy, $F_{\text{sex}} (3,48) = 8.03, p < .001, F_{\text{drug}} (3,48) = 3.70, p = .02$. However upon further investigation, Tukey follow-up tests indicated that mean differences were not significant at $p < .05$.

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for monogamy. In contrast to hypotheses, results indicated that the linear combination of the dependent variables was not significantly related to Stage of Change for monogamy $F (9,112) = 0.47, p = .89$.

Figures 19 to 21 depict the means for the eight dependent variables, across the five Stages of Change for monogamy.

Insert Figures 19 - 21 about here

SOC Sex History

First, a one-way between-subjects MANOVA was performed

on two dependent variables: General AIDS Knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for inquiring about one's sexual history prior to having sex (SEX HISTORY), with the five levels: PC, C, P, A, and M. Consistent with hypotheses, the linear combination of the dependent variables was not significantly related to Stage of Change for SEX HISTORY $F(8,92) = 0.21$, $p = .99$.

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for SEX HISTORY. Consistent with hypotheses, results indicated that the linear combination of dependent variables was significantly related to Stage of Change for SEX HISTORY $F(12,119) = 2.72$, $p < .001$. η^2 indicated that 47 percent of the variance in the linear combination of dependent variables was accounted for by Stage of Change for SEX HISTORY. In addition, the univariate ANOVAs revealed that there were significant differences in High-Risk Sexual Behavior for adolescents in various Stages of Change for SEX HISTORY, $F(4,47) = 4.87$, $p < .001$. Tukey follow up tests indicated that adolescents in the Precontemplation stage for SEX HISTORY reported significantly higher levels of High-Risk Sexual Behaviors ($m = 4.29$) compared to those in the Preparation and Action stages ($m = 2.39$, $m = 1.70$).

Furthermore, adolescents in the Action stage for SEX HISTORY reported significantly lower levels of High-Risk Sexual Behaviors ($m = 1.70$) compared to those in the Maintenance stage ($m = 3.15$).

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for SEX HISTORY. In contrast to hypotheses, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for SEX HISTORY $F(12,119) = 0.75, p = .70$.

The means for the eight dependent variables are graphed in Figures 22 to 24, across the five Stages of Change for inquiring about one's sexual history prior to having sex.

Insert Figures 22 - 24 about here

SOC Drug History

First, a one-way between subjects MANOVA was performed on two dependent variables: General AIDS Knowledge, and Knowledge of AIDS transmission. The independent variable was Stage of Change for inquiring about one's drug history

prior to having sex (DRUG HISTORY), with the five levels: PC, C, P, A, and M. As hypothesized, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for DRUG HISTORY $F(8,92) = 1.61, p = .13$.

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for DRUG HISTORY. As predicted, the linear combination of dependent variables was significantly related to Stage of Change for DRUG HISTORY $F(12,119) = 1.96, p < .05$. η^2 indicated that 38 percent of the variance in the linear combination of dependent variables was accounted for by Stage of Change for DRUG HISTORY. In addition, the univariate ANOVAs revealed that there were significant differences in High-Risk Sexual Behavior and Perceptions of Peer High-Risk Behavior for adolescents in various Stages of Change for drug history, $F_{\text{sex}}(4,47) = 5.69, p < .001$, $F_{\text{peer}}(4,47) = 2.81, p < .05$. Tukey follow up tests indicated that adolescents in the Maintenance stage for DRUG HISTORY reported significantly lower levels of High-Risk Sexual Behaviors ($m = 1.72$) compared to those in the Precontemplation and Contemplation stages ($m = 3.35, m = 2.98$, respectively). Similarly, adolescents in the Maintenance stage for DRUG HISTORY reported Perceptions of

Peer High-Risk Behaviors to be significantly lower ($m = 1.78$) than adolescents in the Precontemplation stage ($m = 2.86$).

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for DRUG HISTORY. In contrast to hypotheses, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for DRUG HISTORY $F(12,119) = .83, p = .62$.

Figures 25 to 27 provide graphs of means for the eight dependent variables, across the five Stages of Change for inquiring about one's drug history prior to having sex.

Insert Figures 25 - 27 about here

SOC Multiple Partners

A one-way between-subjects MANOVA was performed on two dependent variables: General AIDS Knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for multiple partners (3 or more), with the levels: P, C, P, A, and M. As predicted, results indicated that the

linear combination of dependent variables was not significantly related to Stage of Change for multiple partners $F(8,92) = 1.15, p = .34$.

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for multiple partners. Contrast to hypotheses, the linear combination of dependent variables was not significantly related to Stage of Change for multiple partners $F(12,119) = 1.07, p = .40$.

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for multiple partners. Contrary to hypotheses, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for multiple partners $F(12,119) = 0.88, p = .57$.

The means for the eight dependent variables are graphed in Figures 28 to 30, across the five stages of change for multiple partners.

Insert Figures 28 - 30 about here

SOC SEXMULT

A one-way between-subjects MANOVA was performed on two dependent variables: General AIDS Knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for sex with someone who has had three or more sexual partners (SEXMULT), with the levels: PC, C, P, A, and M. As expected, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for SEXMULT $F(8,92) = 1.64, p = .12$.

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for SEXMULT. As expected, results indicated that the linear combination of dependent variables was significantly related to Stage of Change for SEXMULT $F(12,119) = 3.30, p < .001$. η^2 indicated that 53 percent of the variance in the linear combination of dependent variables was accounted for by Stage of Change for SEXMULT. In addition, the univariate ANOVAs revealed that there were significant differences in High-Risk Sexual Behavior and Perceptions of Peer High-Risk Behavior for adolescents in various Stages of Change for SEXMULT, $F_{\text{sex}}(4,47) = 6.99, p < .001, F_{\text{peer}}(4,47) = 8.84, p < .001$. Tukey follow up tests indicated that adolescents in the Precontemplation stage for SEXMULT

reported significantly higher levels of High-Risk Sexual Behaviors ($m = 3.55$) compared to those in the Maintenance stage ($m = 1.83$). Furthermore, adolescents in the Precontemplation stage for SEXMULT reported significantly higher levels of Perceptions of Peer High-Risk Behaviors ($m = 3.30$) compared to adolescents in the Maintenance stage ($m = 1.65$).

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex, Cons of Safer Sex, and Self-Efficacy for Safer Sex. Once again, the independent variable was Stage of Change for SEXMULT. In contrast to expectations, results indicated that the linear combination of dependent variables was not significantly related to Stage of Change for SEXMULT $F(12,119) = 0.49, p = .92$.

Figures 31 to 33 present the means of the eight dependent variables, across the five stages of change for sex with someone who has had multiple sexual partners.

Insert Figures 31 - 33 about here

SOC SEXINJ

First, a one-way between-subjects MANOVA was performed

on two dependent variables: General AIDS Knowledge and Knowledge of AIDS Transmission. The independent variable was Stage of Change for sex with a person who has injected drugs (SEXINJ), with the levels: PC, C, P, A, and M. In contrast to expectations, results indicated that the linear combination of dependent variables was significantly related to Stage of Change for SEXINJ $F(6,92) = 6.88, p < .001$. η^2 indicated that 52 percent of the variance in the linear combination of dependent variables was accounted for by Stage of Change for SEXINJ. In addition, the univariate ANOVAs revealed that there were significant differences in General AIDS Knowledge and Knowledge of AIDS Transmission for adolescents in various Stages of Change for SEXINJ, $F_{\text{gen}}(3,47) = 3.82, p = .02, F_{\text{trans}}(3,47) = 10.55, p < .001$. Tukey follow up tests indicated that adolescents in the Maintenance stage for SEXINJ reported significantly higher levels of General AIDS Knowledge ($m = 3.42$) compared to those in the Contemplation and Preparation stages ($m = 2.50, m = 2.14$, respectively). Furthermore, adolescents in the Precontemplation stage for SOCINJ reported significantly higher levels of General AIDS Knowledge ($m = 3.57$) compared to those in the Preparation stage ($m = 2.14$). In addition, adolescents in the Preparation stage for SEXINJ reported significantly lower levels of Knowledge of AIDS Transmission ($m = 1.43$) when compared to individuals in the Precontemplation, Contemplation, and Maintenance stages

($m = 3.86$, $m = 4.00$, $m = 3.64$).

Second, a one-way between-subjects MANOVA was performed on three dependent variables: High-Risk Sexual Behavior, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. Again, the independent variable was Stage of Change for SEXINJ. As hypothesized, results indicated that the linear combination of dependent variables was significantly related to Stage of Change for SEXINJ $F(9,109) = 9.40$, $p < .001$. η^2 indicated that 75 percent of the variance in the linear combination of dependent variables was accounted for by Stage of Change for SEXINJ. In addition, the univariate ANOVAs revealed that there were significant differences in High-Risk Drug Behavior and Perceptions of Peer High-Risk Behavior for adolescents in various Stages of Change for SEXINJ, $F_{\text{drug}}(3,47) = 11.77$, $p < .001$, $F_{\text{peer}}(3,47) = 9.36$, $p < .001$. Tukey follow-up tests indicated that adolescents in the Preparation stage for SEXINJ reported significantly higher levels of High-Risk Drug Behaviors ($m = 4.75$) compared to those in the Precontemplation, Contemplation, and Maintenance stages ($m = 1.00$, $m = 1.25$, $m = 1.29$). Furthermore, adolescents in the Contemplation stage for SEXINJ reported significantly higher levels of Peer High-Risk Behavior ($m = 5.00$) compared to those in the Maintenance stage ($m = 1.90$).

Finally, a one-way between-subjects MANOVA was performed on three dependent variables: Pros of Safer Sex,

Cons of Safer Sex, and Self-Efficacy for Safer Sex.

Once again, the independent variable was Stage of Change for SEXINJ. Consistent with hypotheses, results indicated that the linear combination of dependent variables was significantly influenced by Stage of Change for SEXINJ $F(9,109) = 1.62, p = .03$. η^2 indicated that 26 percent of the variance in the linear combination of dependent variables was accounted for by Stage of Change for SEXINJ. In addition, the univariate ANOVAs revealed that there were significant differences in Pros of Safer Sex for adolescents in various Stages of Change for SEXINJ, $F(3,47) = 3.14, p = .03$. However upon further investigation, Tukey follow-up tests indicated that mean differences were not significant at $p < .05$.

Figures 34 to 36 provide means of the eight dependent variables, across the five Stages of Change for sex with a person who has injected drugs.

Insert Figures 34 - 36 about here

Discussion

In examining the results of the present investigation, three general conclusions can be made. First, the Transtheoretical Model can be applied to the area of HIV and adolescents to assess readiness to change HIV risking behaviors. Second, as one moves through the Stages of Change for several HIV risk-related behaviors, a decrease in (a) High-Risk Sexual Behaviors, (b) High-Risk Drug Behaviors, and (c) Perceptions of Peer High-Risk Behaviors can be observed. Third, differences in General AIDS Knowledge, Knowledge of AIDS Transmission, the Pros/Cons of Safer Sex, and Self-Efficacy for Safer Sex do not appear to be related to the Stages of Change for most of the HIV risk-related behaviors examined in adolescents. Knowledge was found to be related to Stage of Change for Sex with Someone who has Injected Drugs, as were the Pros of Safer Sex.

Overall, adolescents in the Maintenance and Action stages of HIV risk-related behaviors reported decreased levels of (a) High-Risk Sexual Behaviors, (b) High-Risk Drug Behaviors, and/or (c) Peer High-Risk Behaviors compared to adolescents in the Precontemplation, Contemplation, and Preparation stages. This pattern was consistent for six of the twelve HIV risk-related behaviors including Stage of Change for: (1) Sex, (2) Drug Use Prior to Having Sex, (3) Inquiring About One's Sexual History Prior to Having

Sex, (4) Inquiring About One's Drug History Prior to Having Sex, (5) Sex with Someone Who has had Multiple Sexual Partners (3 or more), and (6) Sex with Someone Who has Injected Drugs.

A number of specific observations can be made. First, adolescents in the Precontemplation Stage of Change for Sex reported significantly higher levels of High-Risk Sexual Behaviors compared to adolescents at all other stages. In addition, adolescents in the Contemplation stage for sex reported higher levels of High-Risk Sexual Behaviors compared to those in the Action stage. This confirms that sexually active adolescents are, in fact, engaging in higher levels of High-Risk Sexual Behaviors compared to their non-sexually active counterparts, thereby increasing their risk for contracting HIV. In a like manner, adolescents in the Contemplation stage for sex reported higher levels of Perceptions of Peer High-Risk Behaviors compared to those in the Action stage, suggesting that sexually active adolescents believe that their peers are engaging in higher levels of high-risk behaviors (eg. sexual activity, substance use) compared to adolescents who are not sexually active.

Second, adolescents in the Contemplation Stage for drug use prior to sex reported significantly higher levels of High-Risk Sexual Behaviors and High-Risk Drug Behaviors compared to adolescents in the Maintenance stage. Findings

indicate that: (1) adolescents who use drugs prior to having sex engage in significantly higher levels of High-Risk Sexual Behaviors compared to adolescents who never use drugs prior to having sex, and (2) adolescents who use drugs prior to having sex report significantly higher levels of High-Risk Drug Behaviors compared to adolescents who never use drugs prior to having sex. Therefore, sexually active adolescents who use drugs prior to having sex may be at an increased risk for contracting HIV.

Third, differences in High-Risk Sexual Behaviors existed among adolescents in various Stages of Change for inquiring about one's sexual history prior to having sex. Adolescents who did not inquire about their partners past sexual history (Precontemplators) reported higher levels of High-Risk Sexual Behaviors compared to adolescents who inquired about their partners past sexual history (Preparation and Action). Yet, adolescents who have been inquiring about their partners past sexual experiences for a short time (Action) reported lower levels of High-Risk Sexual Behaviors compared to adolescents who have been asking their partners about their past sexual behaviors for a long time (Maintenance). The reason for this seemingly counter-intuitive finding is probably that the majority of participants were classified in the safest stage of Maintenance, consistent with the pattern for monogamy. This suggests that most of the participants may not have felt the

need to inquire about past sexual history if they were in monogamous relationships. It is important to point out, however, that perceived monogamy does not rule out any possibility of HIV-risk. One or both partners may be having sex with others, or may have had sex with an unsafe partner in the past. Adolescents, as well as adults, should be encouraged to inquire about the past sexual history of all sexual partners for whom they have not been in a monogamous relationship for 10 years or more, and with evidence of at least two HIV negative results from testing.

Fourth, adolescents in various Stages of Change for inquiring about one's drug history differed significantly on both High-Risk Sexual Behaviors and Peer High-Risk Behaviors. Adolescents who inquired about their partners previous drug use (Maintenance) reported lower levels of High-Risk Sexual Behaviors compared to adolescents who did not inquire about their partners previous drug use (Precontemplation, Contemplation, Preparation). Moreover, adolescents who were considering inquiring about their partners previous drug use (Contemplation) reported lower levels of High-Risk Sexual Behaviors compared to adolescents who did not plan to ever inquire about their partners previous drug use (Precontemplation). Furthermore, adolescents who inquired about their partners previous drug use (Maintenance) reported significantly lower levels of Perceptions of Peer High-Risk Behaviors compared to

adolescents who did not plan to ever inquire about their partners previous drug use. Again, this suggests that adolescents who do not inquire about their partners previous drug use are at an increased risk for contracting HIV.

Fifth, adolescents in various Stages of Change for sex with someone who has had multiple sexual partners differed significantly differ on High-Risk Sexual Behaviors and Perceptions of Peer High-Risk Behaviors. Adolescents who had sex with a person who has had three or more sexual partners (Precontemplation) reported significantly higher levels of High-Risk Sexual Behaviors and higher levels of Perceptions of Peer High-Risk Behaviors compared to adolescents who did not have sex with someone who has had more than three sexual partners (Maintenance). Once again, these findings suggest that adolescents who are having sex with someone who has had three or more sexual partners are at an increased risk for contracting HIV.

Finally, adolescents in various Stages of Change for sex with a person who has injected drugs differed significantly on several variables including General AIDS Knowledge, Knowledge of AIDS Transmission, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior. However, these findings may not reliable due to the extremely small number of persons in the Precontemplation (n = 1), Contemplation (n = 2), Preparation (n = 1), and Action Stages (n = 0).

In summary, results from this study indicate that adolescents who report increased levels of High-Risk Sexual Behaviors, High-Risk Drug Behaviors, and/or Perceptions of Peer High-Risk Behaviors are those who are: (1) sexually active, (2) using drugs prior to having sex, (3) not inquiring about their partners' sexual history or drug history, (4) having sex with people who have had three or more partners, and (5) having sex with people who inject drugs.

Three implications of the present findings have been identified. First, adolescents in various Stages of Change for several HIV risk-related behaviors differ on a number of behavioral dimensions (e.g. High-Risk Sexual Behavior, High-Risk Drug Behaviors, and Perceptions of Peer High-Risk Behavior). Accordingly, it may be worthwhile for researchers and practitioners to address issues of substance use, peer pressure, and sexual behavior in the design and implementation of AIDS related interventions for adolescent populations. This is especially true for adolescents in the Precontemplation, Contemplation, and Preparation stages for HIV related behaviors.

Second, the Transtheoretical Model is useful in the assessing adolescents' risk for contracting HIV. For this investigation, adolescents in the Precontemplation, Contemplation, and Preparation Stages of Change for HIV risk-related behaviors are likely to be at an increased risk

for contracting HIV. As a result, it is necessary for researchers and practitioners to identify and target these adolescents for interventions.

Third, for the most part, adolescents in various Stages of Change did not differ significantly on cognitive and attitudinal dimensions (eg. General AIDS Knowledge, Knowledge of AIDS Transmission, Pros/Cons of Safer Sex, and Self-Efficacy for Safer Sex). It is well established in the literature that increased AIDS knowledge does not necessarily lead to behavior change. Thus, it is necessary to move beyond educational techniques as a basis for prevention, perhaps focusing less attention on knowledge of AIDS and more attention on behavioral dimensions such as those mentioned above. However, since there has been a multitude of research in health related behaviors suggesting that decisional balance (pros and cons) and self-efficacy are predictive of stage movement several issues have been identified as being possible reasons for the non-significant findings of this investigation including: (1) insufficient power, (2) measurement issues, (3) social desirability, and (4) relevancy of subject matter. A post-hoc power analysis was conducted to examine the probability of obtaining significant results based on a sample of 52 participants. According to Coen (1977) the power of a statistical test is dependent upon three parameters: the significance criterion, the size of the sample, and the effect size (f).

Given the parameters of the present investigation, a power analysis indicated that the probability of obtaining significant results ranged from .072 to .583 depending upon the effect size ($f = .10$, $f = .25$, $f = .40$). According to Coen a desired power value is .80, therefore insufficient power is likely to have contributed to the non-significant findings of this study. The second issue that may have contributed to the non-significant findings of this investigation is the measurement of the pros and cons of safer sex. Two issues are likely to have contributed to the insufficient measurement of the pros and cons of safer sex including: (1) few items defining the factors (pros = 2, cons = 3), and (2) low factor loadings (Coefficient Alpha pros = .66, cons = .75). Consequently, poor measurement properties of the pros and cons scales may have contributed to the non-significant findings. The third issue is that of social desirability. Social desirability is defined as a need to gain approval by responding in a manner that is culturally appropriate and acceptable. Thus, subjects may have distorted their responses to present themselves in a favorable light, contributing to the non-significant findings. The final issue that has been identified as possibly contributing to the non-significant results of this study is the relevancy of the subject matter. Given the age of the participants ($M = 14.56$), the questions may have been too extreme (e.g. have you had sex with more than three

different partners?). Thus, the majority of the participants were classified as being in the safest stages (Maintenance and Action) possibly contributing to the non-significant results.

It is recognized that several problems are inherent to this investigation. First, due to the small sample size ($n = 52$) results should be interpreted cautiously. Several attempts were made to increase the size of the sample. However, the investigator was met with numerous difficulties in obtaining parental consent. Second, due to the small sample sizes for many of the stages, across most of the twelve HIV-related areas, there was probably not enough power to detect any significant differences. It is probable that with a larger sample, more significant findings would emerge. Third, although few statistical differences were revealed, participants for this investigation were recruited from two very different settings. It is likely that this sample is not representative of the adolescent population therefore, replication in a larger, more representative sample is necessary.

The present investigation was an initial attempt to apply the Transtheoretical Model to the area of HIV risk in adolescents. Although this investigation has several limitations, the importance of this study should not be minimized. In an age when sexual experimentation and drug use can lead to fatal outcomes, it is critical that

researchers and practitioners continue to explore models of behavior change. The Transtheoretical Model has been successfully applied to several areas of health related behaviors including HIV risk in adult populations, however more work is needed to determine if the model can be successfully applied to the area of HIV risk in adolescents. Recommendations for future researchers in this area are listed below:

- (1) Explore strategies that could aid in the recruitment of subjects (e.g. seeking passive rather than active parental consent).
- (2) Conduct a statistical power analysis (a priori) to compute approximate sample size needed to obtain significant results.
- (3) Limit the number of staging questions to include only those questions that appear to be most relevant to adolescents (e.g. condom use, multiple partners).
- (4) Address issues of peer influence since perceptions of peers risk-taking behavior appears to be predictive of adolescents risk-taking behavior.
- (5) Continue to investigate the relationship between the pros and cons and self-efficacy for safer sex.

Table 1.

Demographics for Combined Sample

Age M = 14.56, SD = 1.06, Range 12 to 16

Gender Male = 24 Female = 28

Grade

6th = 2
7th = 12
8th = 10
9th = 24
10th = 2
11th = 1

Ethnicity

White = 25
Hispanic = 16
Black = 2
Native Amer = 4
Other = 5

Religion

Catholic = 29
Jewish = 0
Protestant = 0
Other = 16
None = 7

Living Arrange

Both Parents = 19
Father Only = 3
Mother Only = 14
Other Family = 3
Other = 13

Siblings

0 = 4
1 = 15
2 = 15
3 = 10
4 or more = 8

Mother's Education

8th or < = 5
Some High School = 9
High School Grad = 9
Some College = 9
College Grad = 13
Don't Know = 7

Father's Education

8th or < = 3
Some High School = 7
High School Graduate = 9
Some College = 3
College Graduate = 18
Don't Know = 12

Table 2.
Pattern of Expected Outcomes

Variable	PC	C	P	A	M
Knowledge	High	High	High	High	High
High-Risk Behavior	High	Moderate	Moderate	Low	Low
Peer High-Risk	High	Moderate	Moderate	Low	Low
Pros	Low	Moderate	Moderate	High	High
Cons	Moderate	Moderate	Moderate	Mod	Mod
Self-Efficacy	Low	Low	High	High	Mod

Table 3.

Means, Standard Deviations, T-tests

Variable	Sample	Mean	S.D.	t-value	p
GENERAL KNOWLEDGE	1	3.29	0.49	-2.06	0.04
	2	3.55	0.13	--	--
KNOWLEDGE TRANSMISSION	1	3.58	0.57	-0.90	0.37
	2	3.71	0.26	--	--
HIGH-RISK SEX	1	2.63	1.20	3.55	*0.01
	2	1.44	0.26	--	--
HIGH-RISK DRUG	1	1.45	0.85	1.57	0.12
	2	1.09	0.28	--	--
HIGH-RISK PEER	1	2.28	1.10	2.35	0.02
	2	1.55	0.78	--	--
PROS	1	2.81	1.14	0.82	0.41
	2	2.53	0.97	--	--
CONS	1	1.61	0.80	0.69	0.49
	2	1.44	0.78	--	--
SELF-EFFICACY	1	2.51	1.07	-0.38	0.71
	2	2.63	1.12	--	--

Sample 1 (n = 37)

Sample 2 (n = 15)

* p < .01

Table 4.

Descriptive Statistics - Combined Sample (n = 52)

Variable	Mean	S.D.	Range	Skew.	Kurt.	Coeff. Alpha
GENERAL KNOWLEDGE	3.55	0.13	1.00-4.00	0.24	0.44	.89
KNOWLEDGE TRANSMISS	3.71	0.26	1.00-4.00	-1.34	1.29	.89
HIGH-RISK SEX	1.44	0.71	1.00-5.00	1.59	1.75	.84
HIGH-RISK DRUG	1.09	0.28	1.00-5.00	2.36	4.38	.79
HIGH-RISK PEER	1.55	0.78	1.00-5.00	0.93	-0.93	.91
PROS	2.53	0.97	1.00-4.00	-0.14	-1.23	.66
CONS	1.61	0.80	1.00-4.00	1.27	0.94	.75
SELF- EFFICACY	2.63	1.12	1.00-4.00	-0.22	-1.57	.95

Table 5.

Frequencies Sample 1 and Sample 2:

Stage of Change (SOC) Variables

<u>SOC Sex</u>		<u>SOC Drug Injection</u>		<u>SOC Condom</u>	
sample1	sample2	sample1	sample2	sample1	sample2
PC = 11	PC = 1	PC = 0	PC = 0	PC = 0	PC = 0
C = 18	C = 1	C = 1	C = 0	C = 9	C = 1
P = 1	P = 4	P = 1	P = 0	P = 3	P = 0
A = 6	A = 9	A = 0	A = 0	A = 8	A = 0
M = 1	M = 0	M = 35	M = 15	M = 17	M = 14

<u>SOC Abstinence</u>		<u>SOC DRUGSEX</u>		<u>SOC ALCSEX</u>	
sample1	sample2	sample1	sample2	sample1	sample2
PC = 17	PC = 5	PC = 0	PC = 0	PC = 0	PC = 0
C = 3	C = 3	C = 5	C = 0	C = 5	C = 1
P = 3	P = 0	P = 0	P = 0	P = 1	P = 0
A = 10	A = 3	A = 0	A = 0	A = 1	A = 0
M = 4	M = 4	M = 32	M = 15	M = 30	M = 14

<u>SOC Monogamy</u>		<u>SOC Sex History</u>		<u>SOC Drug History</u>	
sample1	sample2	sample1	sample2	sample1	sample2
PC = 5	PC = 1	PC = 4	PC = 0	PC = 10	PC = 0
C = 4	C = 0	C = 4	C = 1	C = 6	C = 1
P = 0	P = 0	P = 3	P = 0	P = 3	P = 0
A = 2	A = 0	A = 5	A = 0	A = 6	A = 0
M = 26	M = 14	M = 21	M = 14	M = 12	M = 14

<u>SOC Mult Partners</u>		<u>SOC SEXMULT</u>		<u>SOC SEXINJ</u>	
sample1	sample2	sample1	sample2	sample1	sample2
PC = 15	PC = 0	PC = 12	PC = 0	PC = 1	PC = 0
C = 2	C = 1	C = 2	C = 0	C = 2	C = 0
P = 1	P = 0	P = 1	P = 1	P = 1	P = 0
A = 3	A = 0	A = 3	A = 0	A = 0	A = 0
M = 16	M = 14	M = 19	M = 14	M = 33	M = 15

Table 6.

Frequencies Combined Sample:
Stage of Change (SOC) Variables

SOC Sex

PC = 12
C = 19
P = 5
A = 15
M = 1

SOC Drug Injection

PC = 0
C = 1
P = 1
A = 0
M = 50

SOC Condom

PC = 0
C = 10
P = 3
A = 8
M = 31

SOC Abstinence

PC = 22
C = 6
P = 3
A = 13
M = 8

SOC DRUGSEX

PC = 0
C = 5
P = 0
A = 0
M = 47

SOC ALCSEX

PC = 0
C = 6
P = 1
A = 1
M = 44

SOC Monogamy

PC = 6
C = 4
P = 0
A = 2
M = 40

SOC Sex History

PC = 4
C = 5
P = 3
A = 5
M = 35

SOC Drug History

PC = 10
C = 7
P = 3
A = 6
M = 26

SOC Multiple Partners

PC = 15
C = 3
P = 1
A = 3
M = 30

SOC SEXMULT

PC = 12
C = 2
P = 2
A = 3
M = 33

SOC SEXINJ

PC = 1
C = 2
P = 1
A = 0
M = 48

Figure 1. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 2. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Stages of Change (SOC) for Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 3. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 4. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Drug Injection: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 5. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Change (SOC) for Drug Injection: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 6. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Drug Injection: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 7. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Condom Use: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 8. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Change (SOC) for Condom Use: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 9. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Condom Use: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 10. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Abstinence: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 11. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Stages of Change (SOC) for Abstinence: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 12. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Abstinence: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 13. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Drug Use Prior to Sex (DRUG/SEX): Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 14. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Stages of Change (SOC) for Drug Use Prior to Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 15. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Drug Use Prior to Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 16. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Alcohol Use Prior to Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 17. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Stages of Change (SOC) for Alcohol Use Prior to Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 18. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Alcohol Use Prior to Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 19. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Monogamy: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 20. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior for five levels of the Stages of Changes (SOC) for Monogamy: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 21. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Monogamy: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 22. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Inquiring about One's Sexual History Prior to having Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 23. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Stages of Change (SOC) for Inquiring about One's Sexual History Prior to Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), Maintenance (M).

Figure 24. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Inquiring about One's Sexual History Prior to having Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 25. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Inquiring about One's Drug History prior to having Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 26. Mean Scores for High-Risk Sex, High-Risk Drug Behavior, and Perceptions of Peer High-Risk Behavior across five levels of Change (SOC) for Inquiring about One's Drug History Prior to Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 27. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Inquiring about One's Drug History Prior to having Sex: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 28. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Multiple Partners: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 29. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Stage of Change (SOC) for Multiple Partners: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 30. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stage of Change (SOC) for Multiple Partners: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 31. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Sex with Someone with Multiple Partners: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 32. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Stages of Change (SOC) for Sex with Someone with Multiple Partners: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), Maintenance (M).

Figure 33. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stage of Change (SOC) for Sex with Someone with Multiple Sexual Partners: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 34. Mean Scores for General AIDS Knowledge and Knowledge of AIDS Transmission across five levels of Stages of Change (SOC) for Sex with Someone Who has Injected Drugs: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 35. Mean Scores for High-Risk Sex Behavior, High-Risk Drug Behavior, Perceptions of Peer High Risk Behavior across five levels of Stages of Change (SOC) for Sex with Someone Who has Injected Drugs: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Figure 36. Mean Scores for the Pros, Cons, and Self-Efficacy for Safer Sex across five levels of Stages of Change (SOC) for Sex with Someone Who has Injected Drugs: Precontemplation (PC), Contemplation (C), Preparation (P), Action (A), and Maintenance (M).

Background Information

THIS SURVEY IS ANONYMOUS AND VOLUNTARY. PLEASE TAKE YOUR TIME AND ANSWER ALL QUESTIONS. IF YOU HAVE ANY QUESTIONS PLEASE ASK.

For questions 1-3 please FILL IN the blank:

1. Age _____
2. Sex _____ (Male or Female)
3. What is the highest grade that you have completed in school? _____

For the following questions please CIRCLE your answers:

4. What is the ethnic background that you most closely identify with?
 - a. White
 - b. Hispanic
 - c. African-American or Black
 - d. Native American
 - e. Other
5. What religion are you?
 - a. Catholic
 - b. Protestant
 - c. Jewish
 - d. Other
 - e. None

6. Who do you presently live with?
- a. Both Mother and Father
 - b. Mother Only
 - c. Father Only
 - d. Grandparent(s) or other family member(s)
 - e. Other
7. Not counting you, how many children are in your family?
- a. 0
 - b. 1
 - c. 2
 - d. 3
 - e. 4 or more
8. To the best of your knowledge, how much education has your mother completed?
- a. 8th grade or less
 - b. Some High School
 - c. High School Graduate
 - d. Some College
 - e. College Graduate
 - f. Don't Know
9. To the best of your knowledge, how much education has your father completed?
- a. 8th grade or less
 - b. Some High School
 - c. High School Graduate
 - d. Some College
 - e. College Graduate
 - f. Don't Know

10. The reason I am in the hospital is....

- a. depression
- b. troubles with the law
- c. problems with my family
- d. troubles at school
- e. anger
- f. alcohol problems
- g. drug problems
- h. running away
- i. other _____

General AIDS Knowledge

For the following questions please CIRCLE the best answer:

11. AIDS is a condition that destroys the body's ability to fight disease.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False

12. AIDS is caused by a virus.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False

13. ONLY homosexual (gay) men get AIDS.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False

14. There is a cure for AIDS.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False

15. You can have AIDS and not know it.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False

16. Stress can cause AIDS.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
17. Anybody can get AIDS.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
18. Most people who get AIDS die from the disease.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
19. AIDS is a life-threatening disease.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
20. People who have AIDS usually have lots of other diseases as a result of AIDS.
 - a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False

21. I can avoid AIDS by exercising regularly.
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
22. AIDS can be cured if treated early.
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False

Knowledge of AIDS Transmission

For the following questions please CIRCLE your answers:

A PERSON CAN GET AIDS OR THE AIDS VIRUS

23. From a Blood Transfusion

- a. Definitely True
- b. Probably True
- c. Probably False
- d. Definitely False

24. From Sharing Needles

- a. Definitely True
- b. Probably True
- c. Probably False
- d. Definitely False

25. From Sex without Condom

- a. Definitely True
- b. Probably True
- c. Probably False
- d. Definitely False

26. From Sex with Condom

- a. Definitely True
- b. Probably True
- c. Probably False
- d. Definitely False

27. From Sex with a Healthy Looking Person
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
28. From Giving Blood
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
29. From a Cook in a Restaurant
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
30. From Shaking Hands
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
31. From Sharing Dishes
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False

32. From a Public Toilet
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
33. From a Cough or a Sneeze
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
34. From a Public Phone
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False
35. From an Insect
- a. Definitely True
 - b. Probably True
 - c. Probably False
 - d. Definitely False

High-Risk Behaviors

For the following questions please CIRCLE your answers:

NOTE: Sexual Partner = someone with whom you have had sex with.

36. How many times have YOU ever had sex?

- a. 0
- b. 1-3
- c. 4-6
- d. 7-9
- e. 9 or more

37. During the month BEFORE you entered the hospital, how many times did YOU have sex?

- a. 0
- b. 1-3
- c. 4-6
- d. 7-9
- e. 9 or more

38. How many different sexual partners have YOU ever had?

- a. 0
- b. 1-3
- c. 4-6
- d. 7-9
- e. 9 or more

39. During the month BEFORE you entered the hospital, how many alcoholic drinks did YOU have?

- a. 0
- b. 1-3
- c. 4-6
- d. 7-9
- e. 9 or more

40. How many times have YOU ever used drugs (other than alcohol)?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
41. During the month BEFORE you entered the hospital, how many times did YOU use drugs (other than alcohol)?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
42. How many times have YOU ever injected drugs like heroin and/or cocaine?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
43. During the month BEFORE you entered the hospital, how many times did YOU inject drugs like heroin and/or cocaine?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more

44. How many times have YOU ever had sex with someone who has injected drugs such as heroin or cocaine?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
 - f. don't know
45. How many times have YOU ever had sex with someone who has had more than 3 sexual partners?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
 - f. don't know

Perception of Peer High-Risk Behavior

Please answer questions 46 - 55 to the best of your knowledge

REMEMBER: Sexual Partner = someone with whom you have had sex with.

46. How many times has your BEST FRIEND ever had sex?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
47. During the month BEFORE you entered the hospital, how many times did your BEST FRIEND have sex?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
48. How many sexual partners has your BEST FRIEND ever had?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
49. During the month BEFORE you entered the hospital, how many alcoholic drinks did your BEST FRIEND have?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more

50. How many times has your BEST FRIEND ever used drugs (other than alcohol)?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
51. During the month BEFORE you entered the hospital, how many times did your BEST FRIEND use drugs (other than alcohol)?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
52. How many times has your BEST FRIEND ever injected drugs like heroin and/or cocaine?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more
53. During the month BEFORE you entered the hospital, how many times did your BEST FRIEND inject drugs like heroin and/or cocaine?
- a. 0
 - b. 1-3
 - c. 4-6
 - d. 7-9
 - e. 9 or more

54. How many times has your BEST FRIEND ever had sex with someone who has injected drugs such as heroin or cocaine?

- a. 0
- b. 1-3
- c. 4-6
- d. 7-9
- e. 9 or more

55. How many times had your BEST FRIEND ever had sex with someone who has had more than 3 sexual partners?

- a. 0
- b. 1-3
- c. 4-6
- d. 7-9
- e. 9 or more

Stages of Change for HIV-Risk Behaviors

For the following questions please CIRCLE your answers.

NOTE: Sexual Partner = someone with whom you have had sex with.

56. Have you ever had sex?
- a. YES, I have been having sex for a long time. (PC)
 - b. YES, I have been having sex but only for a short time. (C)
 - c. NO, but I'm considering having sex in the next couple of months. (P)
 - d. NO, but I'm considering having sex in the future. (A)
 - e. NO, and I do not plan to ever have sex. (M)
57. Have you ever injected drugs like heroin or cocaine?
- a. YES, I have been injecting drugs like heroin or cocaine for a long time. (PC)
 - b. YES, I have been injecting drugs like heroin or cocaine but only for a short time. (C)
 - c. NO, but I'm considering injecting drugs like heroin or cocaine in the next couple of months. (P)
 - d. NO, but I'm considering injecting drugs like heroin or cocaine in the future. (A)
 - e. NO, and I do not plan to ever inject drugs like heroin or cocaine. (M)

58. Do you usually use condoms while having sex?
- a. YES, I have been using condoms for a long time. (M)
 - b. YES, I have been using condoms but only for a short time. (A)
 - c. NO, but I'm considering using condoms in the next couple of months. (P)
 - d. NO, but I'm considering using condoms in the future. (C)
 - e. NO, and I do not plan to ever use condoms. (PC)
 - f. I have NEVER had sex. (M)
59. Have you been putting off having sex?
- a. YES, I have been putting off having sex for a long time. (M)
 - b. YES, I have been putting off having sex but only for a short time. (A)
 - c. NO, but I'm considering putting off having sex in the the next couple of months. (P)
 - d. NO, but I'm considering putting off having sex in the future. (C)
 - e. NO, and I do not plan on to put off having sex. (PC)
60. Do you usually use drugs before having sex?
- a. YES, I have been using drugs before having sex for a long time. (PC)
 - b. YES, I have been using drugs before having sex but only for a short time. (C)
 - c. NO, but I'm considering using drugs before having sex in the next couple of months. (P)
 - d. NO, but I'm considering using drugs before having sex in the future. (A)
 - e. NO, and I do not plan to ever use drugs before having sex. (M)
 - f. I have NEVER had sex. (M)

61. Do you usually use alcohol before having sex?
- a. YES, I have been using alcohol before having sex for a long time. (PC)
 - b. YES, I have been using alcohol before having sex but only for a short time. (C)
 - c. NO, but I'm considering using alcohol before having sex in the next couple of months. (P)
 - d. NO, but I'm considering alcohol before having sex in the future. (A)
 - e. NO, and I do not plan to ever use alcohol before having sex. (M)
 - f. I have NEVER had sex. (M)
62. Do you usually have sex outside of a steady relationship?
- a. YES, I have been having sex outside of a steady relationship for a long time. (PC)
 - b. YES, I have been having sex outside of a steady relationship but only for a short time. (C)
 - c. NO, but I'm considering having sex outside of a steady relationship in the next couple of months. (P)
 - d. NO, but I'm considering having sex outside of a steady relationship in the future. (A)
 - e. NO, and I do not plan to ever have sex outside of a steady relationship. (M)
 - f. I have NEVER had sex. (M)

63. Before having sex, do you usually ask your partner about their past sexual experiences?
- a. YES, I have been asking my partner about their past sexual experiences for a long time. (M)
 - b. YES, I have been asking my partner about their past sexual experiences but only for a short time. (A)
 - c. NO, but I'm considering asking my partner about their past sexual experiences in the next couple of months. (P)
 - d. NO, but I'm considering asking my partner about their past sexual experiences in the future. (C)
 - e. NO, and I do not plan to ever ask my partner about their past sexual experiences. (PC)
 - f. I have NEVER had sex. (M)
64. Before having sex, do you usually ask your partner about previous drug use that they may have had?
- a. YES, I have been asking my partner about previous drug use that they may have had for a long time. (M)
 - b. YES, I have been asking my partner about previous drug use that they may have had but only for a short time. (A)
 - c. NO, but I'm considering asking my partner about previous drug use that they may have had in the next couple of months. (P)
 - d. NO, but I'm considering asking my partner about previous drug use that they may have had in the future. (C)
 - e. NO, and I do not plan to ever ask my partner about previous drug use that they may have had. (PC)
 - f. I have NEVER had sex. (M)

65. Since you have been having sex, have you had sex with more than 3 people?
- a. YES, I have been having sex with more than 3 different people for a long time. (PC)
 - b. YES, I have been having sex with more than 3 different people but only for a short time. (C)
 - c. NO, but I'm considering having sex with more than 3 different people in the next couple of months. (P)
 - d. NO, but I'm considering having sex with more than 3 different people in the future. (A)
 - e. NO, and I do not plan to ever have sex with more than 3 different people. (M)
 - f. I have NEVER had sex. (M)

66. Are you having sex with a person who has had more than 3 sexual partners?

- a. YES, I have been having sex with a person who has had more than 3 sexual partners for a long time. (PC)
- b. YES, I have been having sex with a person who has had more than 3 sexual partners but only for a short time. (C)
- c. NO, but I'm considering having sex with a person who has had more than 3 sexual partners in the next couple of months. (P)
- d. NO, but I'm considering having sex with a person who has had more than 3 sexual partners in the future. (A)
- e. NO, and I do not plan to ever have sex with a person who has had more than 3 sexual partners. (M)
- f. I don't know if I'm having sex with someone who has had more than three different sexual partners. (M)
- g. I have NEVER had sex. (M)

67. Are you having sex with someone who has injected drugs such as heroin or cocaine?
- a. YES, I have been having sex with someone who has injected drugs such as heroin or cocaine for a long time. (PC)
 - b. YES, I have been having sex with someone who has injected drugs such as heroin or cocaine but only for a short time. (C)
 - c. NO, but I'm considering having sex with someone who has injected drugs such as heroin or cocaine in the next couple of months. (P)
 - d. NO, but I'm considering having sex with someone who has injected drugs such as heroin or cocaine in the future. (A)
 - e. NO, and I do not plan to ever have sex with someone who has injected drugs such as heroin or cocaine. (M)
 - f. I don't know if I'm having sex with someone who has injected drugs such as heroin or cocaine. (M)
 - g. I have NEVER had sex. (M)

Pros and Cons of Safer Sex

Listed below are several possible advantages and disadvantages of safer sex (safer sex is defined as: putting off sex, sticking with one partner, avoiding sex with those who inject drugs, using a condom, etc.). How IMPORTANT are each of these to you.

68. I would feel more protected if I practiced safer sex.

- a. Not at all Important
- b. Somewhat Important
- c. Important
- d. Very Important

69. Practicing safer sex is a hassle.

- a. Not at all Important
- b. Somewhat Important
- c. Important
- d. Very Important

70. Practicing safer sex would make sex less enjoyable.

- a. Not at all Important
- b. Somewhat Important
- c. Important
- d. Very Important

71. I would feel cleaner if I practiced safer sex.

- a. Not at all Important
- b. Somewhat Important
- c. Important
- d. Very Important

72. Practicing safer sex would make sex less romantic.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important
73. I would worry less about diseases such as AIDS if I practiced safer sex.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important
74. Practicing safer sex isn't cool.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important
75. Using condoms costs too much.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important
76. I would feel more responsible if I practiced safer sex.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important

77. Practicing safer sex would ruin my reputation.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important
78. Sex would be more enjoyable if I practiced safer sex.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important
79. I would feel more respected by my partner if I practiced safer sex.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important
80. I would feel embarrassed in front of my partner if I practiced safer sex.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important
81. Practicing safer sex would make sex seem too planned.
- a. Not at all Important
 - b. Somewhat Important
 - c. Important
 - d. Very Important

Self-Efficacy for Safer Sex

Listed below are some situations that might affect people's decisions to practice safer sex (safer sex is defined as: putting off sex, sticking with one partner, avoiding sex with those who inject drugs, using condoms, etc.). How SURE are you that you would PRACTICE SAFER SEX in these situations?

NOTE: Partner = boyfriend/girlfriend or potential sexual partner.

82. When I am really sexually excited I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
83. When my partner is really angry I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
84. When I am depressed I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure

85. When I am using alcohol I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
86. When I am taking drugs I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
87. When I am feeling angry I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
88. When I am feeling lonely I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
89. When my partner is hurt I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
90. When I am High I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure

91. When I am drunk I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
92. When I am angry I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
93. When I feel pressured to have sex I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure
94. When others will view me as being afraid I would practice safer sex.
- a. Not Sure
 - b. Somewhat Sure
 - c. Sure
 - d. Very Sure

THANK YOU FOR YOUR HELP!! IF YOU HAVE ANY QUESTIONS REGARDING THE CONTENT OF THIS SURVEY PLEASE FEEL FREE TO ASK.

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