

LOCUS OF CONTROL: A PREDICTOR OF
RISKY SEXUAL BEHAVIORS

THESIS

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By

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CHAPTER 1

INTRODUCTION

People engaging in “risky” sexual behaviors run significant risk for developing sexually transmitted diseases. Knowledge of safer sexual practices could help change individuals unsafe practices. There are two general approaches in educational programs aimed at preventing risky sexual behaviors. Group approaches involve two or more individuals. Interventions are directed toward couples, families, social structures and social institutions, communities, policies and society as a whole (Kelly, 1999). The focus of individual approaches is one specific person at a time.

It is presumed that if we can counsel individuals and instill enough HIV risk knowledge, create positive enough attitudes and strong enough intentions toward condoms, and capably teach individuals the right risk-reduction skills, people will then be able to make and durably sustain risk-reduction behavior changes (Kelly, 1999, p300).

While techniques may be beneficial to some through prevention and information dissemination, they may be useless to others because they are geared towards all personality types. Individuals process information differently through their reinforcement beliefs. If the different ways individuals interpret information are incorporated into current prevention techniques, these techniques could become more successful. Sexual behavior serves many complex needs, so that determinants of high-risk sexual behavior are heterogeneous and often cannot be addressed with simple “one-size-fits-all” interventions (Erbelding, 2001). Locus of Control (LOC) is a scale used to classify individuals as being either “internalizers” or “externalizers”.

Individuals described as “internalizers” have a greater expectation that outcomes are contingent upon their own behavior (e.g. they are in control of what happens in life) whereas “externalizers” have a greater expectation that outcomes are contingent upon factors external to themselves (e.g., luck or powerful others) (Gleicher, Marsh & Weary, 1991, p46).

Information obtained about risky sexual behaviors and the application of theory of Locus of Control may be correlated. Understanding an individual's perception of Locus of Control may be useful in making current techniques aimed at the reduction of risky sexual behaviors more successful by incorporating individual differences in reinforcement beliefs.

The Illustrated Health Encyclopedia defines high-risk behaviors as those practices that increase the risk of acquiring a Sexually Transmitted Disease (STD). “The encyclopedia

describes high-risk behaviors as including multiple sexual partners (or changing sexual partners), a previous history of having any sexually transmitted disease, having had sexual relations with a partner whom has had a history of a sexually transmitted disease, having sex with an individual who is not aware of having an STD, or who has not been tested for a sexually transmitted disease, the use of alcohol or drugs in any situation where sexual activity has the potential to occur, having a sexual partner who is an IV drug user, having anal intercourse, and having sexual relations with an unknown partner without using any form of protection (Illustrated Health Encyclopedia, 2002, p1).”

Having sexual relations with multiple partners increases the risk of contracting a sexually transmitted disease. For example, individual A is having sex with individual B. If individual A has had sexual relations with 10 partners and individual B has had 13 previous sexual relations, there are 23 individuals included in their combined sexual history. It would be almost impossible for an individual to be certain that each of these previous partners has never had a sexually transmitted disease. Even if a previous sexual partner did not have an active sexually transmitted disease at the time of the sexual activity, they may have: (1) known they had one which was not currently active, or (2) had one but not been aware of having it.

Thirty-seven percent of sexually active young adults report that drinking or drug use has influenced their decisions about sex (SIECUS, 2002). SIECUS also reports that 31% of

those sexually active young adults say they have “done more” sexually while drinking or using drugs than they had planned. This means that individuals are engaging in more risky sexual behaviors while intoxicated. Other factors related to risky sexual behaviors include prostitution, early onset of sexual activity, and homosexual activity (Aruffo & Gottlieb, 1994). All of these factors put individuals at greater risk for contracting STD.

Even though many people may recognize the consequences of high risk sexual activities, they rarely take steps that will reduce their vulnerability. People often claim that the threat of STD's and AIDS has made them more cautious when it comes to sex, but self-reports of change do not always indicate behavioral changes (Fisher, 1988, p914).”

Certain high-risk groups such as individuals, who do not use condoms, engage in sex with random individuals and who use drugs, are targets for prevention (Aronowitz, Carey, Lewis & Morrison, 2001).

The AIDS Risk Reduction Project is an example of a group approach, which consists of videotaped messages that directly attack negative attitudes toward condom use. The speakers in these testimonials argue that condoms do not adversely affect sexual pleasure. Participants are also shown videotapes of couples discussing safe sexual practices and negotiating the use of condoms. They are also given the opportunity to practice these discussion skills with other members of the group, who

provide them with encouragement and social support (Fisher, 1988, p915).

These individuals are taught how to talk about sensitive topics and this may lead to changes in behaviors.

Reduction of risky sexual behaviors among young adults is desirable. Beginning with new student orientation and continuing through a student's undergraduate career, individuals encounter presentations, posters, and course work which reaffirms messages regarding STD transmission and recommended behavioral changes. The emphasis of college, of course, is in addition to information received from other sources such as the media, previous educational experiences, and so on. College students show high levels of knowledge with regard to HIV transmission and prevention, but this knowledge is often found not to predict risky behaviors (Dalton, Donald, & Ratliff-Crain, 1999, p626).

This may be due to the way group approaches are geared toward all personality types.

Despite widespread awareness of HIV risk and strong social support for the practice of safer sex activities, young adults continue to rely on personal myths and implicit beliefs when deciding to have sex. Perhaps the decision to engage in high-risk sexual behaviors is moderated by psychological processes that make personal beliefs about sex and risk more salient than

HIV-prevention information (Archer, Hulseley, & Mendez, 2001, p350).

Individual approaches are viewed by many as one of the most influential types of interventions because they aim at changing the individual's behavior. "The dissemination of changing perceptions of norms regarding high-risk sexual behaviors can be propitious to intervention by providing alternative perceptions that could lead to changes in behavioral expectations, expectations about what is acceptable to others, and risky behavior (CDC, 1991)." "Sex with casual partners typically holds the greatest potential for the spread of STD's and public health messages also stress greater caution with relatively unknown partners (Baker & Morrison, 1995)."

The use of condoms during sexual intercourse is one method of reducing one's risk of HIV infection, however 20% or less of individuals surveyed report regular condom use; typically one-third report never using condoms. Of those that use some method of birth control, most use methods that do not protect against sexually transmitted diseases (Dalton, Donald, & Ratliff-Crain, 1999, p626).

Incorrect condom use may actually be very common, but people may not perceive their lack of skill. In a study which recruited participants from an STD clinic, 89% of participants reported that they were "somewhat or very sure" that they could put a male latex condom on and take it off correctly. Of this group, 40% performed steps incorrectly on a penile model (Erbeling, 2001); indicating that many of those who believed they knew how to properly use a condom in fact did not. It is also hard to assess how many of these individuals attempted

safe sex with condom use, but did not engage in safer sex since they incorrectly put a condom.

Individual counseling is another strategy designed to reduce and prevent risky sexual behaviors. With this type of counseling the counselor attempts to facilitate insight into the behaviors that put an individual at risk for STD's and helps that person develop an individualized risk reduction plan (Erbelding, 2001). Different strategies include: information dissemination, skills building, self-management, problem solving, and psychological factors such as self-efficacy (NIH, 1997). Information dissemination is an important behavioral factor in the reduction of risky sexual behaviors. Inability to negotiate with a partner is an impediment to the adoption of safer sex practices (Rew & Taylor-Seehafer, 2000). An individual being taught correct ways to negotiate condom use with their sexual partner is an example of information dissemination. Problem solving has been defined as the self-directed cognitive-behavioral process by which a person attempts to identify or discover effective or adaptive solutions for specific problems encountered in everyday living (McGuire, 2001). Through this method, individuals learn ways of engaging in safer sex practices. Self-esteem is important to the development of a healthy sense of one's sexuality and may effect safer sex practices such as resisting pressures to engage in risky sexual behaviors (Rew & Taylor-Seehafer, 2000).

CHAPTER 2

MESSAGES MAY BE GEARED FOR THE SUCCESS OF ONLY SOME INDIVIDUALS

Group approaches such as AIDS Risk Reduction Programs aim at the reduction and elimination of risky sexual behaviors. Such approaches may influence only certain individuals. Not all individuals perceive information the same way. If individuals do not agree with the delivery method, do not understand, or do not care about information given, they may disregard that information entirely. If individuals use different methods to organize and process the same social experience, then it is likely they will perceive and interpret that experience quite differently (Norman, Osborne, Penticuff, Weadick, & Young, (1998). If messages were targeted for differences in personality types, they may be more effective in reducing risky sexual behaviors through the modification of prevention techniques.

The concept of locus of control (LOC) was developed by psychologist Julian Rotter. The LOC assess individuals' reinforcement beliefs as being internal or external.

Rotter defines the concept of Locus of Control as follows:

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the

result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When an individual interprets the event in this way, he/she is labeled as having an external locus of control. If a person perceives that the event is contingent upon his behavior or his own relatively permanent characteristics, this person is said to have an internal locus of control (Rotter, 1975, p57).

The Locus of Control not only classifies individuals differences in reinforcement beliefs, it is a scale used to measure and assess these differences. The original scale Rotter's (1966) I-E instrument used a dichotomous forced-choice format. There were 23 item pairs with one internal and one external statement in each pair. Subjects had to select the truest statement from each pair (Hau, 1995). The I-E scale was designed to sample individual's perceptions from a wide range of life areas such as love and affection, dominance, social-political events, social recognition, academic recognition and general life philosophy (Lange & Tiggemann, 1981).

Individuals are classified as having an internal or external Locus of Control. Internally and externally directed people can encounter identical situations, yet perceive that their actions will have quite different impact on their lives (Kratchman, Reed, & Strawser, 1994).

As previously mentioned, individuals with an internal locus of control believe that rewards follow from, or are dependent on their behavior. They believe that their actions can affect the course of their lives (Lange & Tiggemann, 1981). Externals believe that rewards are not dependent on their behavior and actions do not affect the course of their lives.

People with an internal locus of control are inclined to take responsibility for their actions, are not easily influenced by the opinions of others, and tend to do better at tasks when they can work at their own pace. If a person with an internal locus of control does badly on a test, she is likely to blame either her lack of ability or lack of preparation for the test (Gale Encyclopedia of Psychology, 2001, p1).

Individuals with an internal locus of control are noted to plan for sexual encounters through condom and birth control use which exemplifies the individuals belief that a cause and effect relationship exists between planning and desired sexual outcomes, the individual is capable of producing a plan for obtaining sexual rewards, and these plans have been or will be perceived as successful in generating rewards (Catania, McDermott & Wood, 1984, p311).

People with an external locus of control tend to blame outside circumstances for their mistakes and credit their successes to luck rather than to their own efforts. They are readily influenced by the opinions of others and are likely to pay attention to status of the opinion-holder when processing a “persuasive” message (Gale Encyclopedia of Psychology, 2001). In contrast to an individual who has an internal locus of control, a person with an external locus of control will tend to explain a low grade by saying that the test was too hard or that the teacher graded unfairly (Gale Encyclopedia of Psychology, 2001). Because of this

external focus, these individuals are predicted to engage in more risky sexual behaviors than those individuals who have an internal locus of control.

Assessing what type of reinforcement belief an individual has may be essential in determining the occurrence of risky sexual behaviors. In contrast to the person with an internal locus of control, an individual with an external locus of control may not plan for sexual encounters. The spontaneity of their sexual encounter can be detrimental in that they may contract more sexually transmitted diseases than individuals with an internal locus of control. Because of their external focus the individuals may not establish a cause and effect relationship between safe sex and STD.

Group approaches aimed at the prevention of risky sexual behaviors may not account for individual differences in locus of control and/or information processing and only reach certain individuals in the population. Current approaches may be more successful regarding sexually safer practices if individuals differences in LOC are accounted for. This would inevitably reach more individuals. A message that would target both internalizers and externalizers would be one that incorporates environmental, social, and personal differences. If you target both internal and external extremes, the middle ones may benefit as well. "It may also be that rather than focusing on changing perceptions of locus of control as a target of interventions, locus of control can be a characteristic considered when interventions are implemented (Biro, DeVellis, Griffith, Lewis, Rosenthal, Stanberry, & Succop, 2001)."

AIDS prevention messages have been used to try to lower the incidents of risky sexual behaviors through group and individual message approaches. Such approaches however, may be more successful if differences in individual's locus of control are taken into account.

While both group and individual message approaches have strengths, they can be adjusted to target more individuals if they are redesigned to incorporate differences in locus of control.

CHAPTER 3

METHODS AND RESULTS

Methods

Subjects

One hundred and eighty-five college students from psychology classes at Southwest Texas State University were surveyed. The university has approximately 25,000 students. There were one hundred and twenty-seven females and fifty-eight males. Of the 185 participants, 102 were freshman, 44 sophomores, 28 juniors, 10 seniors, and 1 graduate student. Ages ranged from 17 to 24 and older with the majority falling into the 18-19 year-old category. There were one hundred and twenty-four 18 to 19 year olds, thirty-nine 20 to 21 year olds, thirteen 24 years and older, eight 22 to 23 year olds, and one seventeen year old. One hundred and thirty-seven were Caucasians, eight African-Americans, thirty-one Hispanics and nine individuals classified as others.

Materials

Prior to the administration of surveys individuals were given a consent form to read and sign. A copy of the consent form is included in Appendix 1. Individuals were assessed on

two variables: locus of control and risky sexual behaviors. Appendix 2 shows Sexual Behaviors Survey, a 10 item Likert scale used to assess individuals' sexual behaviors.

Rotter's LOC scale is included in Appendix 3. This scale was used to categorize individuals as internalizers or externalizers. This scale included twenty-nine items; twenty-three questions were used to assess perceived causes of behaviors and six questions used as unrelated "filler" questions. A score of 0 identified an individual as an extreme internalizer and a score of 23 would indicate an individual as being an extreme externalizer.

Demographic information was gathered on: gender, classification in school, age, and ethnicity.

Procedures

The questionnaire was administered to individuals at the beginning of three different psychology classes at Southwest Texas State University. Prior to the survey, individuals completed a consent form acknowledging their voluntary participation. Once returned, all consent forms were placed in a manila envelope prior to administration of the survey. After the surveys were administered, individuals placed completed surveys into another manila folder separate from consent forms so identities would remain anonymous. Surveys were hand scored on demographic questions, sexual behaviors, and locus of control.

Results

Analysis was conducted using the statistical software program SPSS (9.0) at the psychology computer lab. Analyses were conducted on the following sexual behaviors: total score for risky sexual behaviors, number of sexual partners in the previous year, sexual partners in the past five years, birth control use in females, condom use, drug use prior to or during sex, number of STD's, number of STD treatments, partners STD's, HIV test, and

whether or not an individual has had sex with an HIV infected individual. A locus of control score was calculated for each individual and entered along with the demographic and sexual behavior data. Frequencies and one-way ANOVA's were performed to assess relationships between each variable and Locus of Control score. A one-way ANOVA is used to test hypotheses about two or more population means (Norusis, 1997). A chi-square was performed to assess any relationship between birth control and condom use. A chi-square test for independence is a probability distribution used to test the independence of two nominal variables (Orton & Voelver, 1993).

Total Risky Sexual Behavior Score

Individuals scores for locus of control were categorized as individuals who scored a twelve or above as being an externalizers and individuals who score eleven and under as being internalizers. Sixty percent of individuals responded as internalizers (N=112) and 40% of individuals responded as externalizers (N=73). The mean score for internalizers was 13.6696 (SD=3.2226). The mean score for externalizers was 13.2603 (SD=2.4269). A one-way ANOVA was performed to determine if an individuals' total risky sexual behavior score was related to the individual's locus of control. As can be seen in Table 1, locus of control and total score for risky sexual behaviors was not significantly related ($F=.860$, $p=.355$).

Table 1. Analysis of Variance for Total Risky Sexual Behavior Scores and Locus of Control

Descriptives

RSBTOTAL								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1 00	112	13.6696	3.2226	.3045	13.0662	14.2731	7.00	23.00
2 00	73	13.2603	2.4269	.2840	12.6940	13.8265	9.00	20.00
Total	185	13.5081	2.9343	.2157	13.0825	13.9337	7.00	23.00

ANOVA

RSBTOTAL					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.406	1	7.406	.860	.355
Within Groups	1576.832	183	8.617		
Total	1584.238	184			

Gender

Females accounted for 69% (N=127) and males accounted for 31% of the population (N=58). As shown in Table 2, the mean locus of control score for females was 10.4646 (SD=3.60). The mean locus of control score for males was 10.4828 (SD=3.97). A one-way ANOVA did not reveal a statistically significant difference between individual's locus of control score and gender ($F=0.01$, $p=.975$).

Table 2. Analysis of Variance for Locus of Control and Gender

Gender	N	Mean	SD	SE	DF	F	Sig
Males	58	10.4828	3.9702	.5213	1	.001	.975
Females	127	10.4646	3.6029	.3197	183		
TOTAL	185	10.4703	3.7111	.2728	184		

Classification

Classification was evaluated with individual's LOC. Freshman accounted for 55% of the population (N=102); sophomores accounted for 24% of the population (N=44), juniors accounted for 15% (n=28), seniors accounted for 5% (N=10), and one graduate student accounted for .5% of the population. As shown in Table 3, the mean locus of control score for freshman was 10.833 (SD=3.5463). The mean locus of control score for sophomores was 9.7045 (SD=3.5802). The mean locus of control score for juniors was 10.5 (SD=4.6468). The mean locus of control score for seniors was 10.2 (SD=3.1198). The mean locus of control score for graduates was 9.0 (SD=0). A one-way ANOVA did not reveal a

statistically significant difference between classification and locus of control ($F=.761$, $p=.552$).

Table 3. Analysis of Variance for Locus of Control and Classification

Descriptives

loc

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					freshman	102			10.8333	3.5463	3.511	10.1368	11.5299	3.00	20.00
sophomore	44	9.7045	3.5802	5.397	8.6161	10.7930	3.00	19.00
junior	28	10.5000	4.6468	8.782	8.6982	12.3018	2.00	19.00
senior	10	10.2000	3.1198	9.866	7.9682	12.4318	4.00	14.00
graduate	1	9.0000	.	.	.	.	9.00	9.00
Total	185	10.4703	3.7111	2.728	9.9320	11.0086	2.00	20.00

ANOVA

loc

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	42.161	4	10.540	.761	.552
Within Groups	2491.926	180	13.844		
Total	2534.086	184			

Age

Individuals eighteen to nineteen accounted for 67% of the population ($N=124$); 215 were twenty to twenty-one year olds ($N=39$), and Twenty-two to twenty-three year olds account for 4% of the population. Seven percent consisted of individuals age twenty-four and older ($N=13$) and one individual was seventeen years old and accounted for .5% of the total population. A one-way ANOVA was performed to determine if age was a factor related to an individuals LOC score. As can be seen in Table 4, age and LOC were not significantly related ($F=.624$, $p=.646$).

TABLE 4. Analysis of Variance for Locus of Control and Age**Descriptives**

loc

	N	Mean	Std Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					17	1			14.0000	.			14.00	14.00
18-19	124	10.6452	3.6385	.3267	9.9984	11.2919	3.00	20.00
20-21	39	10.3077	3.9213	.6279	9.0366	11.5788	2.00	18.00
22-23	8	9.7500	5.1755	1.8298	5.4232	14.0768	4.00	19.00
24+	13	9.4615	2.8756	.7976	7.7238	11.1993	4.00	15.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

loc

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34.661	4	8.665	.624	.646
Within Groups	2499.426	180	13.886		
Total	2534.086	184			

Ethnicity

Caucasian individuals accounted for 74% of the population (N=137). African-Americans accounted for 4% of the population (N=8); Hispanics 17% (N=31), and 5% of individuals were classified as other in the population (N=9). A one-way ANOVA was performed to determine if ethnicity was a factor related to an individual's LOC score. As can be seen in Table 5, ethnicity and LOC were not significantly related ($F=.718$, $p=.543$).

Table 5. Analysis of Variance for Locus of Control and Ethnicity

Descriptives

loc

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
caucasian	137	10.4891	3.8580	.3296	9.8372	11.1409	2.00	20.00
african-american	8	11.7500	3.2404	1.1456	9.0410	14.4590	7.00	17.00
hispanic	31	10.4516	3.1711	.5695	9.2884	11.6148	3.00	17.00
other	9	9.1111	3.6209	1.2070	6.3278	11.8944	6.00	16.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

loc

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.787	3	9.929	.718	.543
Within Groups	2504.300	181	13.836		
Total	2534.086	184			

Sexual Partners in Previous Year

Sixty-one percent of individuals reported one to three sexual partners (N=113); 27% (N=50) of individuals reported zero sexual partners, 10% had four to six partners (N=10), and 2% had seven to ten sexual partners in the previous year (N=3). A one-way ANOVA was performed to determine if number of sexual partners in the previous year was a factor related to an individual's LOC score. As can be seen in Table 6, number of sexual partners in the previous year and LOC were not significantly related ($F=.222$, $p=.801$).

Table 6. Analysis of Variance for Locus of Control and Number of Sexual Partners in Previous Year.

Descriptives

loc								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	50	10.3400	3.5491	.5019	9.3313	11.3487	3.00	20.00
1-3	113	10.4336	3.7246	.3504	9.7394	11.1279	2.00	20.00
4-6	19	11.0000	4.2687	.9793	8.9425	13.0575	3.00	20.00
7-10	3	10.6667	3.7859	2.1858	1.2619	20.0715	8.00	15.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

loc					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.448	3	2.149	.154	.927
Within Groups	2527.639	181	13.965		
Total	2534.086	184			

Sexual Partners in Past Five Years

The number of sexual partners in the previous five years was evaluated with individuals LOC. Forty-five percent of individuals had one to three sexual partners (N=84%), 24% had zero partners (N=45), 17% had four to six partners (N=32), 7% had seven to ten partners (N=12) and 7% had sex with eleven or more partners in the previous five years (N=12). As can be seen in Table 7, number of sexual partners in the previous five years and LOC were not significantly related (F=.146, p=.965).

Table 7. Analysis of Variance for Locus of Control and Number of Sexual Partners in the Past Five Years.

Descriptives

loc

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					0	45		
1-3	84	10.3571	3.8982	.4253	9.5112	11.2031	2.00	20.00
4-6	32	10.2813	3.7437	.6618	8.9315	11.6310	3.00	17.00
7-10	12	10.3333	4.1414	1.1955	7.7020	12.9647	6.00	20.00
11+	12	10.5833	3.7769	1.0903	8.1836	12.9831	5.00	18.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

loc

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.171	4	2.043	.146	.965
Within Groups	2525.916	180	14.033		
Total	2534.086	184			

Birth Control

The use of birth control in females categorized based on reported condom usage and LOC was examined. Thirty percent of the female population was on the birth control pill (N=56) and 39% were not on the pill (N=72). Information was then assessed with the information regarding condom use frequencies.

Condom Use

The use of condoms was first measured for both males and females. Thirty percent of individuals reported never using condoms (N=55); 26% reported frequent condom use (N=48), 23% reported always using a condom (N=42), 12% reported condom use as sometimes (N=23), 9% report infrequently using condoms (N=17). A chi-square was

performed to determine if birth control use in females and birth control were factors related to an individuals LOC score. As can be seen in Table 8, birth control use and condoms were not significantly related to LOC (Chi-square (2, N=89) =26.833, p=4).

Table 8. Chi-Square for Locus of Control and Condom Use

	Case Processing					
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
condoms *	89	100.0	0	.0%	89	100.0

condoms * birthcon Crosstabulation

Count		birthcon		Total
		females-yes	females-no	
condoms	never	6	3	55
	infrequently	7	2	17
	sometimes	8	6	23
	frequently	22	13	48
	always	10	12	42
Total		53	36	185

Chi-Square

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.438 ^a	4	.487
Likelihood Ratio	3.503	4	.477
Linear-by-Linear Association	1.893	1	.169
N of Valid Cases	89		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 3.64

Drug Use

Drug use prior or during sex was evaluated with relation to an individuals LOC score. Fifty-two percent of individuals never used drugs with sex (N=97). Twenty-two percent reported infrequent drug use (N=41); 18% reported sometimes using drugs (N=33), 7% reported frequent drug use (N=13), and one individual reported always using drugs and accounted for .5% of the population. A one-way ANOVA was performed to determine if drug use prior or during sex was related to an individuals LOC score. As can be seen in Table 9, drug use and LOC were not significantly related ($F=1.387$, $p=.248$).

Table 9 Analysis of Variance for Locus of Control and Drug Use

Descriptives

loc	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
never	97	10.3093	3.8470	.3906	9.5339	11.0846	2.00	20.00
infrequently	41	10.0732	3.4741	.5426	8.9766	11.1697	3.00	18.00
sometimes	33	11.6364	3.8228	.6655	10.2809	12.9919	6.00	20.00
frequently	13	10.2308	2.8330	.7857	8.5188	11.9427	5.00	15.00
always	1	7.0000	.	.	.	.	7.00	7.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

	Sum Square	df	Mean Square	F	Sig
Between	66.64	4	16.66	1.21	.248
Within	2467.44	18	13.70		
Total	2534.08	18			

Sexually Transmitted Diseases

Ninety-two percent did not have an STD (N=170) and 8% had an STD in the previous five years (N=15). A one-way ANOVA was performed to determine if STD was a factor

related to an individuals LOC score. As can be seen in Table 10, STD and LOC were not significantly related ($F=.340$, $p=.560$).

Table 10. Analysis of Variance for Locus of Control and STD's

Descriptives

loc								
					95% Confidence Interval for Mean			
	N	Mean	Std Deviation	Std Error	Lower Bound	Upper Bound	Minimum	Maximum
yes	15	9.9333	3.7123	.9585	7.8775	11.9891	4.00	20.00
no	170	10.5176	3.7182	.2852	9.9547	11.0806	2.00	20.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

loc						
	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	4.706	1	4.706	.340	.560	
Within Groups	2529.380	183	13.822			
Total	2534.086	184				

Number of STD Treatments

The number of STD treatments was evaluated with individuals LOC. Ninety-two percent did not have an STD ($N=170$); 5% had one treatment ($N=9$), 2% had two treatments ($N=4$), .5% had three treatments and .5% had five treatments for an STD ($N=1$). A one-way ANOVA was performed to determine if number of STD treatments was a factor related to an individuals LOC score. As can be seen in Table 11, number of STD treatments and LOC were not significantly related ($F=.143$, $p=.966$).

Table 11. Analysis of Variance for Locus of Control and Number of STD Treatments

Descriptives

loc

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	170	10.5176	3.7182	.2852	9.9547	11.0806	2.00	20.00
1	9	10.1111	4.5947	1.5316	6.5793	13.6429	4.00	20.00
2	4	9.2500	2.6300	1.3150	5.0652	13.4348	7.00	13.00
3	1	11.0000	.	.	.	.	11.00	11.00
5+	1	10.0000	.	.	.	.	10.00	10.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

loc

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.001	4	2.000	.143	.966
Within Groups	2526.086	180	14.034		
Total	2534.086	184			

Knowledge of Partners STD History

Assessing whether individuals knowledge of sexual partners having had an STD was evaluated with individuals LOC. Seventy-six percent of individuals responded to not having sex with an individual who has had an STD (N=140). Nineteen percent responded to being unsure of whether or not their partner had had an STD (N=35) and 5% reported they had sexual intercourse with a partner who had an STD (N=10). A one-way ANOVA was performed to determine if knowledge of sexual partners STD was related to LOC scores. As can be seen in Table 12, knowledge of sexual partners STD and LOC were not significantly related ($F=.589, p=.556$).

Table 12. Analysis of Variance for Locus of Control and Partners' STD**Descriptives**

loc

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
unsure	35	10.3143	3.6604	.6187	9.0569	11.5717	4.00	20.00
yes	10	11.7000	3.4010	1.0755	9.2671	14.1329	7.00	18.00
no	140	10.4214	3.7533	.3172	9.7942	11.0486	2.00	20.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

loc

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.308	2	8.154	.589	.556
Within Groups	2517.779	182	13.834		
Total	2534.086	184			

HIV Test

Individuals LOC was compared with whether or not an individual has had an HIV test. Seventy-nine percent of individuals responded to not having had an HIV (N=146) and 21% of individuals responded yes to having an HIV test (N=39). A one-way ANOVA was performed to determine if an HIV test was related to individuals LOC score. As can be seen in Table 13, HIV tests and LOC were not significantly related ($F=.176$, $p=.675$).

Table 13 Analysis of Variance for Locus of Control and HIV Test**Descriptives**

loc

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
yes	39	10.6923	3.7916	.6071	9.4632	11.9214	3.00	20.00
no	146	10.4110	3.7003	.3062	9.8057	11.0162	2.00	20.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

loc

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.436	1	2.436	.176	.675
Within Groups	2531.650	183	13.834		
Total	2534.086	184			

Sexual Intercourse with HIV Infected Partner

Ninety percent of individuals responded no to having intercourse with an HIV infected partner (N=167) and 10% responded to being unsure of having intercourse with an HIV infected partner (N=18). A one-way ANOVA was performed to determine if sexual intercourse with an HIV infected partner was related to individuals LOC. As can be seen in Table 14, intercourse with an HIV infected partner and LOC were not significantly related ($F=1.7, p=.194$).

Table 14. Analysis of Variance for Locus of Control and Sex with an HIV Infected Partner

Descriptives

loc

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
unsure	18	9.3889	3.3979	.8009	7.6992	11.0786	4.00	19.00
no	167	10.5868	3.7340	.2889	10.0163	11.1573	2.00	20.00
Total	185	10.4703	3.7111	.2728	9.9320	11.0086	2.00	20.00

ANOVA

loc

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.318	1	23.318	1.700	.194
Within Groups	2510.769	183	13.720		
Total	2534.086	184			

CHAPTER 4

RECOMMENDATIONS FROM THE INFORMATION OBTAINED ON CHANGING APPROACHES TO TARGET ALL INDIVIDUALS IN THE REDUCTION/PREVENTION OF RISKY SEXUAL BEHAVIORS

Discussion

The findings suggest that there was not a statistically significant relationship between individuals Locus of Control and the likelihood of engaging in risky sexual behaviors. This study assessed the relationship between degree of engagement in risky sexual behaviors such as number of sexual partners in the previous year, sexual partners in the previous five years, birth control and condom use, number of STD's, treatments, HIV tests, and engaging in sexual intercourse with an HIV infected partner as variables related to Locus of Control. It was proposed that individuals with higher "external" scores would engage in riskier sexual behaviors in contrast to individuals with higher "internal" scores. The research did not support this proposal.

The conclusions may have proven that there is no significant relationship, however if a more diverse group of individuals were sampled, results may have differed. Sixty-percent of individuals scored as internalizers. This study was attempting to suggest externalizers as engaging in riskier sexual behaviors. Externalizers only consisted of 40% of individuals

surveyed. If more individuals would have scored as externalizers, results may have differed. Demographic variables such as gender, classification, age and ethnicity were highly skewed in this sample. This sample was dominated by 18 to 19 year old freshman that were females. Females accounted for nearly 70% of the sample population. Results may have been different if males accounted for more than 30% of the sample due to males being noted as engaging in more sexual activity than females. Fifty-five percent of the individuals were freshman and 67% of the individuals were eighteen to nineteen year olds. This survey was conducted within the first month of many of their college careers. It would be interesting to reevaluate this sample at the end of their first year of college. Ethnicity may have played a role in the outcomes as well. Seventy-four percent of individuals surveyed were Caucasian. It would be interesting for future research to more evenly sample the different ethnic groups.

While research did not support my findings, there are important conclusions that should be reported. These conclusions were both positive and negative with regards to individual's sexual behaviors and practices unrelated to individuals differences in LOC. Twenty-four percent of the individuals surveyed have not engaged in sexual intercourse. This difference was found in responding to the questions on sexual intercourse history. This shows that certain individuals through abstinence are taking preventative measures. The conclusions made from results of condom use were interesting. Six percent of individuals reported engaging in sexual intercourse unprotected from STD's without condoms. Twenty-one percent infrequently or sometimes used condoms. This shows that 27% of individuals in this survey are at increased risk for STD's and are not protecting themselves with the most effective method of protection. This may occur due to lack of responsibility for the use of condoms, improper use of condoms, or lack of partner's cooperation in using a condom

(Labrie, 2000). Drug use is an issue that is related to an individuals engaging in riskier sexual behavior. Half of the individuals surveyed report never using drugs during or prior to sex. Twenty-six percent of individuals reported sometimes, frequently, or always using drugs prior to or during sex. Drug use prior to or during sex should be carefully studied. Individuals may engage in sexual activity when they are in an altered state of mind. Drug use is still a target of intervention that requires more study. “The use of alcohol or drugs may impair judgment, communication abilities, and the coordination required to properly use barrier devises such as condoms. Alcohol and drugs can impair the ability to make appropriate choices about sex (IHE, 2002).” For future research, it would be interesting to determine what kind of drugs individuals were using. It is important to know whether alcohol is the only drug used or if other drugs are used prior to or during sex.

Only a small proportion of the individuals surveyed reported having an STD. It is a positive finding to note that more than 90% of individuals have not had an STD; however results did not evaluate individuals who have never been tested for an STD or may have been tested and had inconclusive results.

Seventy-nine percent of individuals have never been tested for HIV. This is an alarmingly high rate of individuals who are engaging in sexual relations that do not know whether or not they have HIV. The promotion of HIV tests for all individuals engaging in sexual relations needs to be further encouraged. Individuals’ reasons for not being tested can include abstinence, belief that they cannot be infected, or fear of knowing.

Knowledge of how to prevent STDs is important for all individuals. Simple strategies that take very little time can be used by individuals such as condoms; however results show that individuals are still at risk for obtaining STDs because they generally do not employ these

measures. Individuals may have the information, but lack the discipline to use it. Individuals need to be aware that increased number of sexual partners, condom and drug use are important variables related to the transmission and spread of STD's. Individuals should be aware that abstinence is the only way to be 100% safe from contracting STD's. It only takes a couple of seconds to prevent unwanted pregnancies and STD's by using a condom. Some individuals may feel that taking the time to put a condom on ruins "the intimate mood", however individuals should use protection unless they are in a monogamous relationship and both partners are aware of each others sexual history regarding STD's and HIV.

All individuals engaging in sexual intercourse should have STD and HIV tests. It is better to know than not know that you have the potential of spreading these diseases to others. Being aware also allows individuals to seek necessary treatments that can end or regress STD's, or slow down the process of HIV becoming AIDS.

In this study, Locus of Control did not predict degree of engagement in risky sexual behaviors. Although the locus of control theory is not related to sexual behaviors, individuals have differences in personality which influences the way information is processed. Individual differences in information processes may be due to the way they were raised, beliefs, values or morals. From a soci-ecological perspective, risky sexual behavior can be viewed as the dynamic interaction of the social environment and individual factors such as genetic heritage, personality and health practices (Rew & Taylor-Seehafer, 2000).

It may be that personality factors do affect risky sexual behaviors, however the locus of control scale may not have been able to show this. Current prevention approaches may not be able to target messages exclusively for internalizers or externalizers due to the LOC scale being a broad measurement of individuals differences in reinforcement beliefs. A possible

problem with the I-E scale arises because it covers such a variety of situations very briefly. The scores may be masking different components of LOC and thereby lose specific predictive ability (Lange & Tiggeman, 1981). It seems that LOC can be influenced by interventions, but that it is not an easily changed aspect of the personality (Chubb & Fertman, 1997).

Future research should be conducted to assess if other theories of personality may be predictors of an individual's likelihood of engaging in riskier sexual behaviors. In future studies, it may be important to assess whether individuals are married. Individuals who are married are more likely to have fewer partners in the previous year and both partners would already be aware if their partner or themselves has had STD's or has AIDS. Future research should assess condom usage more completely with regards to individual's sexual behaviors. It would be interesting to determine if condom use is solely for the purpose of preventing pregnancies and STD's, to prevent contraction of STD's, or both. Individuals may be engaging in sex with partners whom they are unsure of their STD status and may be using the pill and condoms at the same time. They would use both methods because they may not fully trust their partner's commitment to being monogamous. The birth control pill may be used for the purpose of pregnancy prevention and the condom may be used only for the purpose of preventing STD's.

Future studies should be conducted on locus of control and certain specific variables. It would be interesting to assess if individuals who are characterized as being internalizers are more likely to go to college than individuals characterized as being externalizers. It would also be interesting to determine if abstainers are higher in internal locus of control. The current research did not distinguish which individuals in the study have not engaged in any

sexual intercourse in their lives. Future research could also assess whether or not a relationship exist between locus of control and HIV testing. If individuals who abstain from sexual intercourse are eliminated from the control group, results may have differed.

APPENDICES

APPENDIX 1. CONSENT FORM

CONSENT FORM

Title of Study: Locus of Control: A Predictor of Risky Sexual Behaviors

You are invited to participate in a study of locus of control and its relation to risky sexual behaviors. I am a graduate student at Southwest Texas State University at San Marcos, (Psychology). The study is being performed for my graduate thesis. I hope to learn if there is a relationship between individual's perception of control and risky sexual behaviors. You were selected as a possible participant in this study because we are surveying individuals from psychology courses. Participation is entirely voluntary and the only compensation will be in the form of class points at the discretion of the instructor. If an instructor does offer an incentive for participation, those students who choose not to participate will be provided with an alternative method for earning the points. Names will be kept anonymous. You will be one of the hundred subjects chosen to participate in our survey.

If you decide to participate, I will ask you to fill out my survey that will take no longer than 15 minutes and the answers that you give will remain confidential. I understand that views of sexual behaviors may be something that people do not feel comfortable talking about, however I assure you that my thesis committee and myself only see the surveys. Names are not to be placed on the surveys.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission.

Your decision whether or not to participate will not prejudice your future relations with Southwest Texas State University. If you decide to participate, you are free to discontinue participation at any time without prejudice.* You will be offered a copy of this form to keep.

If you have any questions, please ask us. If you have additional questions later, Dr. Osborne 24-3153, will be happy to answer them.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above and have decided to participate. You may withdraw at any time without prejudice after signing this form, should you choose to discontinue participation in this study.**

Signature of Participant

Date

Signature of Investigator

Date

NOTE: Investigators are required to use this format to facilitate review of the consent Form.

* You are under no obligation to participate in the study. Your completing and returning the questionnaire will be taken as evidence of your willingness to participate and your consent to have the information used for purposes of the study. **You may retain the cover letter and this explanation about the nature of your participation and the handling of the information you supply.

APPENDIX 2. SEXUAL BEHAVIORS SURVEY
PLEASE CIRCLE ONE OF THE FOLLOWING

Sex:

Male Female

Classification:

Freshman Sophomore Junior Senior Graduate

Age:

18-19 20-21 22-23 24+

Ethnicity:

Caucasian African-American Hispanic Other

Number of Sexual Partners (total number during the previous year)

0 1 to 3 4 to 6 7 to 10 11+

Number of Sexual Partners (total number during the previous 5 years)

0 1 to 3 4 to 6 7 to 10 11+

How often was protection from pregnancy used during sexual intercourse (sponge, pill, birth control shot, etc)?

Never Infrequently Sometimes Frequently Always

How often was protection from an STD used during sexual intercourse? (Condom)

Never Infrequently Sometimes Frequently Always

Patterns of alcohol or drug use (marijuana, cocaine, speed, heroin, or other drugs) prior to and during sex

Never Infrequently Sometimes Frequently Always

Treated for an STD during the past 5 years

Yes No

If you have been treated for an STD during the past 5 years, how many times?

1 2 3 4 5+

Have you had sex with a partner who has been treated for an STD during the past 5 years?

Unsure Yes No

Having ever had an HIV test

Yes No

Having had sex with an HIV-infected partner

Unsure Yes No

APPENDIX 3. SURVEY ON LOCUS OF CONTROL

Select that alternative which you personally believe to be more true.

I more strongly believe that:

1. ___ Children get into trouble because their parents punish them too much.
 ___ The trouble with most children nowadays is that their parents are too easy with them.
2. ___ Many of the unhappy things in people's lives is partly due to bad luck.
 ___ People's misfortunes result from the mistakes they make.
3. ___ One of the major reasons why we have wars is because people don't take enough interest in politics.
 ___ There will always be wars, no matter how hard people try to prevent them.
4. ___ In the long run people get the respect they deserve in this world.
 ___ Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5. ___ The idea that teachers are unfair to students is nonsense.
 ___ Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. ___ Without the right breaks one cannot be an effective leader.
 ___ Capable people who fail to become leaders have not taken advantage of their opportunities.
7. ___ No matter how hard you try some people just don't like you.
 ___ People who can't get others to like them don't understand how to get along with others.
8. ___ Heredity plays the major role in determining one's personality.
 ___ It is one's experiences in life which determine what they're like.
9. ___ I have often found that what is going to happen will happen.
 ___ Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10. ___ In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
 ___ Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. ___ Becoming a success is a matter of hard work; luck has little or nothing to do with it.
___ Getting a good job depends mainly on being in the right place at the right time.
12. ___ The average citizen can have an influence in government decisions.
___ This world is run by the few people in power, and there is not much the little guy can do about it.
13. ___ When I make plans, I am almost certain that I can make them work.
___ It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyway.
14. ___ There are certain people who are just no good.
___ There is some good in everybody.
15. ___ In my case getting what I want has little or nothing to do with luck.
___ Many times we might just as well decide what to do by flipping a coin.
16. ___ Who gets to be the boss often depends on who was lucky enough to be in the right place first.
___ Getting people to do the right thing depends upon ability; luck has little to do with it.
17. ___ As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.
___ By taking an active part in political and social affairs the people can control world events.
18. ___ Most people don't realize the extent to which their lives are controlled by accidental happenings.
___ There really is no such thing as "luck".
19. ___ One should always be willing to admit mistakes.
___ It is usually best to cover up one's mistakes.
20. ___ It is hard to know whether or not a person really likes you.
___ How many friends you have depends upon how nice a person you are.
21. ___ In the long run the bad things that happen to us are balanced by the good ones.
___ Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22. ___ With enough effort we can wipe out political corruption.
___ It is difficult for people to have much control over the things politicians do in office.

23. ___ Sometimes I can't understand how teachers arrive at the grades they give.
___ There is a direct connection between how hard I study and the grades I get.
24. ___ A good leader expects people to decide for themselves what they should do.
___ A good leader makes it clear to everybody what their jobs are.
25. ___ Many times I feel that I have little influence over the things that happen to me.
___ It is impossible for me to believe that chance or luck plays an important role in my life.
26. ___ People are lonely because they don't try to be friendly.
___ There's not much use in trying too hard to please people, if they like you, they like you.
27. ___ There is too much emphasis on athletics in high school.
___ Team sports are an excellent way to build character.
28. ___ What happens to me is my own doing.
___ Sometimes I feel that I don't have enough control over the direction my life is taking.
29. ___ Most of the time I can't understand why politicians behave the way they do.
___ In the long run the people are responsible for bad government on a national as well as on a local level.

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