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**UNDERSTANDING THE RISKY SEXUAL BEHAVIORS OF STUDY ABROAD
STUDENTS**

By
Ashley M. Schaffer

A Thesis

Submitted to the
Department of Psychology
College of Liberal Arts and Sciences
In partial fulfillment of the requirement
For the degree of
Master of Clinical Mental Health Counseling
at
Rowan University
June 4, 2012

Thesis Chair: DJ Angelone, Ph.D.

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Ashley M. Schaffer

Dedication

I would like to dedicate this paper to my family, who gives me the strength and confidence to accomplish anything I dream of.

Acknowledgements

I would like to express my appreciation to Professor DJ Angelone, for teaching me how to become a researcher.

Abstract

Ashley Schaffer

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STUDENTS

2011/12

DJ Angelone, Ph.D.

Master of Clinical Mental Health Counseling

Using the Triandis Model of Interpersonal Behavior (TIB) this study examined the influence of environmental and individual characteristics on predicting risky sexual behaviors of study abroad students. This study utilized a two-stage, qualitative and quantitative methodological framework. First, focus groups with previous study abroad students were held in order to gather data that informed the development of assessment. Second, data was subsequently collected from 128 study abroad students. The TIB significantly predicted a participant's intentions to engage in risky sexual behavior with the construct labeled subjective social norms emerging as a significant predictor. The model also significantly predicted engaging in risky sexual behavior while abroad. The situational conditions construct related to the study abroad environment emerged as a significant predictor of those engaging in risky sex. This study highlights the importance of both contextual and individual factors on understanding sexual behaviors, as well as the need for developing interventions to prevent possible consequences such as STIs.

Table of Contents

Abstract	v
List of Figures	vii
Chapter 1: Introduction	1
Chapter 2: Methodology	8
Participants	8
Materials	9
Measurement of Constructs	9
Procedure	13
Chapter 3: Results	15
Chapter 4: Conclusion & Discussion	17
List of references	23
List of Scales	26

List of Figures

Figure 1 Triandis Model of Interpersonal Behavior

22

Chapter 1

Introduction

Approximately 250,000 students completed study abroad programs during the 2006–2007 academic year, a number that has been steadily increasing and is expected to reach 1 million (1 out of every 18 students) by 2016-2017 (Institute of International Education, 2011). The majority of 4-year colleges and universities in the United States offer study abroad programs where students temporarily attend classes in a foreign country while earning credit in their home institution (Pedersen, Larimer, & Lee, 2010). Research with American study abroad students suggests these programs can enhance a student's worldview, expand their global perspective, increase cross-cultural skills, deepen respect and appreciation for people in other cultures, and boost confidence and self esteem (Pedersen, Larimer, & Lee, 2010). Although designed to promote experiential learning and positive cultural experience, reports from study abroad personnel and media detail problematic behaviors such as unprotected sexual activity (Pedersen, Larimer, & Lee, 2010).

The reports of problematic behaviors of study abroad students mirror the behaviors that occur amongst general travelers. In fact, substantial numbers of individuals traveling report having unprotected (and therefore risky) sex with people they meet while away (Bellis, Hughes, Thomson, & Bennett, 2004; Eiser & Ford, 1995; Herold & Van Kerkwijk, 1992) especially in the young adult population (CDC STD Surveillance, 2009; Sonmez, Apostolopoulos, Yo Ho, Yang, & Yu, 2006). These travelers describe risky sexual behaviors as the norm and excuse these behaviors as being the result of the vacation experience (Milhousen, Reece, & Perera, 2006). Being away from home may promote a sense of freedom from restrictions, relaxation of inhibitions, a focus on having a good time, a removal of constraints on personal behavior, increased sexual contact with new friends, and enhanced recklessness with regard to casual

sexual behavior (Eiser & Ford, 1995; Herold & Van Kerkwijk, 1992). While away from home, 14.7% of individuals reported vacationing explicitly to look for sex and 56% reported having sex at least once (Bellis, Hughes, Thomson, & Bennett, 2004). These distinctive changes in an individual's mood and behavior while traveling have been labeled "playful deviance" (Redmon, 2003). Researchers suggest that playful deviance, in the form of risky sexual behavior, is due to the cloak of anonymity that being away from home provides, the substantial levels of social interaction with new people, and an environment of permissiveness (by both peers and destination communities), all of which facilitate sexual risk taking (Sonmez et al., 2006).

Studying abroad occurs amongst young adults that have the opportunity to experiment in different countries without the risk of damaging their reputation at home. Study abroad students are typically away for longer periods of time than most travelers. Given this, the study abroad population may be at a particular risk for engaging in risky sex. In general, the number of reported sexual partners while away is higher than the number of sexual partners at home suggesting that the travel experience is associated with the probability of increased sexual activity (Maticka-Tyndale, Herold, & Oppermann, 2003). Similarly, the longer one travels the more casual sex opportunities will be presented (Egan, 2001). Not only is there an increase in sexual partnering while traveling, but also a decrease in condom use. Condom use is reported in a minority of sexual encounters even with non-permanent partners, with the vast majority of sexually active young people not using condoms consistently (Maticka-Tyndale & Kyeremeh, 2010). Among those who reported having had intercourse with a previously unknown partner while on holiday, 73% of males and 49% of females reported that this occurred without the protection of a condom (Eiser & Ford, 1995). These findings are exacerbated when considering the effectiveness of condoms in preventing HIV and other STI transmission. It seems reasonable

to believe that students leaving home to travel abroad may be exposed to these same circumstances under which increased sexual partnering, decreased condom use, and possible STI transmission occur. However, to date there is a lack of research focusing on the risky sexual experiences that are likely to be occurring by students abroad.

The lack of data on the risky sexual behaviors of study abroad students is concerning. While young people aged 15–24 years represent only 25% of the sexually active population, they acquire nearly 50% of all new STIs (Weinstock, Berman, Cates, 2000). Intercourse among individuals from different countries further complicates the issue of unprotected sex because this provides an opportunity for the international transmission of STIs (Maticka-Tyndale & Kyeremeh, 2010). The significance of international travel for its role in the global diffusion of STIs, including human immunodeficiency virus (HIV), is widely recognized (Egan, 2001). Individuals engaging in unprotected sex while traveling are major factors in the global spread of HIV and other sexually transmitted infections (Eiser & Ford, 1995).

The effects of STIs can be substantial. About 10-15% of women with untreated chlamydia will develop pelvic inflammatory disease (PID). PID and similar STIs cause permanent damage to the fallopian tubes, uterus, and surrounding tissues, which can lead to infertility. Each year, STIs cause at least 24,000 women in the U.S. to become infertile (Center for Disease Control and Prevention, 2011). STIs were also found to be associated with cervical cancer (Quinn, & Arnold, 2011). More concerning are the 30,000 deaths each year that are attributable to unprotected sexual behavior. These include miscarriages, cervical cancer, and HIV infections (Center for Disease Control and Prevention, 2011). It is estimated that the annual treatment cost of STIs in the United States to be in excess of \$14 billion. The lack of empirical data available on the sexual behaviors of study abroad students is compounded by the significant

cost of treatment, the spread and prevalence of many STIs, and the increasing numbers of students engaging in playful deviance while traveling abroad.

One tool that can be used to understand the interaction between risky sexual behavior and international travel is the Triandis Model of Interpersonal Behavior (TIB). The TIB is useful in identifying important predictors of sexual behaviors while traveling because it includes the environmental situation, as well as the characteristics of the individual. Researchers have used this model to assess the extent of its predictive capabilities on sexual decision-making in away-from-home situations similar to studying abroad (Maticka-Tyndale, Herold, Oppermann, 2003; Milhousen, Reece, & Perera, 2006). Given the extent of its usefulness in explaining sexual behaviors that present similar intensive environmental conditions, this model appeared to be one of the most suitable for exploring study abroad students.

The TIB is composed of three levels. At the first level are personal characteristics (such as gender, race, and social class) that are influenced by the individual's background, developed through years of experience and learning. At the second level, *cognitive and affective beliefs* are joined by *subjective social norms* and *personal beliefs* to influence the formation of an individual's *intentions* with regard to a specific behavior. The third level proposes that *intentions* regarding the behavior, *prior experience* with the behavior (or very similar behaviors), and *situational conditions* (the environment) predict whether or not an individual will engage in the behavior of interest (Triandis, 1977). While Triandis acknowledges the influence of the first level, most research is concentrated at the second and third levels, for these constructs are most likely to lend themselves to change through intervention (Milhousen, Reece, & Perera, 2006).

As stated, the second level is comprised of four constructs that together predict an individual's intentions to engage in the behavior of interest (i.e., intentions to engage in risky

sex). These include *cognitive and affective beliefs, subjective social norms, role beliefs, and personal normative beliefs*. *Cognitive and affective components* refer to judgments and feelings the individual may have regarding the behavior of interest. Specifically, the *cognitive component* is evaluative of the probable consequences of engaging in the behavior (i.e., good/bad, positive/negative, responsible/irresponsible). The *affective component* refers to feelings one might anticipate as a result of engaging in the behavior (i.e., glad/sad, empowered/disempowered, proud/guilty). *Subjective social norms* incorporate what the individual thinks other's perceptions would be about the appropriateness of the behavior (i.e., whether the individual's friends would perceive the behavior to be appropriate). Individuals also evaluate whether or not engaging in a behavior would be acceptable for someone of his or her age and gender in the construct labeled *role beliefs*. Finally, when determining intentions to engage in a behavior, an individual must assess the behavior in terms of his or her own morals and values, a construct labeled *personal normative beliefs*. These factors: *cognitive and affective beliefs, subjective social norms, role beliefs, and personal normative beliefs* are said to predict intentions to engage in the specific behavior of interest.

The third level of the model is comprised of four constructs that combine to predict actual engagement in the behavior of interest (i.e., risky sex). These include *situational conditions, intentions* to engage in the behavior (as determined by the second level), an individual's *perception of their peers'* sexual behaviors, and an individual's *habit*. *Situational conditions* refer to the environment in which the behavior is occurring (i.e., study abroad environment) and their level of immersion in that environment. *Intentions* refer to the individuals' expectations to engage in the behavior of interest (i.e., risky sex) as determined by the constructs situated in the second level of the model. The perception of whether or not an individual thinks that their peers

are engaging in risky sexual behaviors is measured by their *perceptions of peer sexual behaviors*. Finally *habit* refers to previous experience with the behavior (i.e., previously engaging in risky sex).

Taken together, this model facilitates the understanding of the unique relationships that combine to influence behavior in a particular environment. In fact, researchers have used this model to examine the role environment and personal characteristics can play in influencing sexual behavior in different settings such as spring break in the United States, “schoolies week” in Australia, beachfront holidays in Europe, and Mardi Gras in New Orleans (Maticka-Tyndale, Herold, & Oppermann, 2003; Milhausen, Reece, & Perera, 2006; Sonmez et al., 2006). As stated, for the purpose of understanding risky sexual practices researchers have concentrated on the second and third levels. This focus allows for the study of individual characteristics that lend themselves to immersion in playful deviance and understanding the important role the environmental context can play in shaping sexual behaviors. When examining the second level of the model (predicting intentions to engage in risky sex), prior research has found subjective social norms (what your friends think of you engaging in risky sex) were most highly correlated with *intentions* to engage in risky sex followed by cognitive beliefs (what you think about the behavior) and role beliefs (what you think about the behavior for people your age/gender) for both men and women (Maticka-Tyndale, Herold, Oppermann, 2003; Milhausen, Reece, & Perera, 2006). When focusing on the third level of the model (i.e., predicting actual engagement in risky sex), prior research has found all constructs, an individual’s intentions, habit, situational conditions, and the perception of peer sexual behavior to be significant predictors of engaging in the behavior of interest across studies (Maticka-Tyndale, Herold, Oppermann, 2003; Milhausen, Reece, & Perera, 2006).

Previous research has focused on the sexual behaviors of participants who were away for a week or less (Maticka-Tyndale, Herold, & Oppermann, 2003; Milhausen, Reece, & Perera, 2006; Sonmez et al., 2006). Researchers acknowledge this may be problematic, stating that time away contributes to how many opportunities there are to engage in risky sexual behaviors. The longer one travels, the more casual sex opportunities will be presented (Egan, 2001). That is, the longer the person is away, the more likely it is that certain experiences or activities will occur, with these in turn influencing engaging in risky sex (Maticka-Tyndale, Herold, & Oppermann, 2003). The general length of time study abroad students are away is one semester (four months) or longer. Potentially, this population could be at a greater risk for engaging in these types of risky sexual behaviors because they are in these environments for a longer period of time.

The purpose of the current study was to assess the predictive capabilities of the Triandis model as a whole in understanding risky sexual behavior abroad. It is hypothesized that the previous research will inform the results of the current study (Maticka-Tyndale, Herold, & Oppermann, 2003; Milhausen, Reece, & Perera, 2006; Sonmez et al., 2006) such that the constructs on the second level (*affective and cognitive beliefs, subjective social norms, personal normative beliefs, and role beliefs*) will be predictive of a participant's *intentions* to engage in risky sex. Similarly, the constructs placed on the third level (*situational conditions, intentions, perceptions of peers, and habit*) will be predictive of engaging in risky sexual behavior while studying abroad. Considering the rise in students traveling abroad and the prevalence of their health risks, this population is of particular concern as the tripartite relationship among youth, travel, and risk taking has the potential to constitute a serious public-health hazard (Sonmez et al., 2006). Unlike previous research, this study examines an extended period away from home with a population that has not been considered.

Chapter 2

Method

Participants

Participants included 128 current and previous students who completed study abroad programs within the past two years (64 men, 84 women). The mean age of participants at the time they completed the survey was 22.3 (SD= 3, range 18-37). The majority identified as White/Non-Hispanic (82.8%, n= 106) followed by Hispanic/Latino (6.1%, n= 8), other (5.1%, n= 5), African American/Black (2.3%, n= 3), Asian/Pacific Islander (1.5%, n= 2), and Native American (1.5%, n= 2). Most participants reported being exclusively heterosexual (87.3%, n= 110). This was followed by predominantly heterosexual, only incidentally homosexual (5.3%, n=7); predominately heterosexual but more than incidentally homosexual (3.1%, n= 4); equally heterosexual and homosexual (3.1%, n= 4); and predominately homosexual (.8%, n= 1). Almost half of participants reported being a senior in academic rank at the time of the survey (40.6%, n= 52), about a quarter were juniors (27.3%, n= 35), five sophomores (3.8%), one freshman (.8%), seventeen graduate students (13%), and the remainder identified as other (13.7%, n= 18).

The mean age of participants while studying abroad was 20.4 (SD=1.9, range 14-26). Sixty-one percent (n= 78) of participants reported being single (never married) during their study abroad trip and 27% (n= 35) reported being in a serious relationship without living with one another. The remainder of participants reported they were dating (8%, n= 10), living with a significant other (1%, n= 1), married (1.5%, n= 2), or divorced (1.5%, n= 2) at the time of their trip. The range of time away varied (1 month- 13 months or more) however the majority of participants (86%, n= 107) studied abroad for 5 months or less. There was a wide range of countries traveled to with participants reporting 33 different study abroad nations.

Materials

Instrument Development. Following Triandis' theory (1977), each construct was operationalized with respect to a specific time, context, and behavior of interest. Established instruments and relevant questionnaires on intentions, drug and alcohol use, and sexual behavior were taken from previous research using the Triandis model to understand sexual decision making in similar "away from home" situations (Milhausen, Reece, & Perera, 2006). Although the survey was primarily guided by TIB and previous research, several questions were elicited from focus group discussions with students. As per TIB guidelines (Triandis, 1977) focus groups were conducted with students who had traveled abroad within the past two years (N = 10). Participants were recruited through a campus wide e-mail sent from the University's International Department. Participants were offered pizza and soda as incentive to participate. One male (n = 3) and three female (n = 7) focus groups were held to elicit concepts unique to the study abroad population and environment. The use of qualitative methods allowed participants to express their perspectives in their own words, without being limited by extraneous assumptions. Content analysis of the focus group discussions helped to define, modify and add TIB concepts as needed.

Measurement of Constructs: Affective and cognitive beliefs. To measure the affective and cognitive beliefs, a series of seven-point semantic differential scales consisting of adjective pairs were used (1 = negative thoughts/feelings about engaging in risky sex, 7 = positive thoughts/feelings about engaging in risky sex). These adjective pairs described the experience and consequences of having sex with someone new while studying abroad (Maticka-Tyndale, Herold, & Oppermann, 2003; Milhausen, Reece, & Perera, 2006). The adjective pairs concerning the affective components (i.e., feelings about engaging in risky sex) included sexually

liberated/sexually conservative, attractive/unattractive, good about myself/bad about myself, proud/guilty, lonely/not lonely, fun-loving/serious, adventurous/ordinary, and glad/sad.

Respondents' scores for each of the 7-point Likert-type items were summed to create a total score. High scores indicated positive feelings regarding having sex with someone while abroad.

The adjective pairs measuring the cognitive (i.e., thought evaluations of having sex with someone new while studying abroad) included good/bad, responsible/irresponsible, fun/not fun, positive/negative, and smart/stupid. Respondents' scores were also summed with high scores indicating positive cognitive evaluations of having sex with someone the participant met while studying abroad. Cognitive and affective adjective pair scores were then summed together for a total score of a participant's thoughts and feelings regarding engaging in risky sex while abroad.

Subjective social norms. The measure of subjective social norms assessed the participant's perception of how much one's peer group approves or disapproves of the behavior of interest. Participants were asked, "How many of your friends would be likely to have sex with someone new they met while studying abroad?" on a 5 point Likert scale (1=none, 5=most). High scores indicated the participant perceived his or her peer group to be supportive of sex with someone he or she just met while studying abroad.

Personal normative beliefs. To measure personal normative beliefs (i.e., an individual's internalized standards or moral codes) participants were asked, "How many sexual partners (anal, oral, or vaginal) did you have prior to studying abroad?" High scores were indicative of personal normative beliefs in line with engagement in sexual intercourse abroad while low scores indicated more conservative beliefs about this behavior.

Role Beliefs. Items measuring the role belief construct focused on the degree to which the participants believed having sex with someone they just met while studying abroad would be

appropriate for someone of their age and in their situation (i.e., young and studying abroad). One of the goals of focus groups was to determine the specific role beliefs for this population. Those discussions revealed that participants excused risky behavior because they viewed the trip abroad and their subsequent behaviors as defining their independence. Thus, this was viewed as an important variable in considering risky sex. For the current study, participants were asked how strongly they agreed with the following statement on a 7 point Likert scale, “Prior to leaving, I thought studying abroad would make me a more independent person” (1 = strongly disagree, 7 = strongly agree). High scores indicated role beliefs supportive of becoming more independent while studying abroad.

Intentions to engage in risky sex while studying abroad. To measure intentions to engage in risky sex, participants were asked how strongly they agreed (1 = strongly disagree, 7 = strongly agree) with the following statements; “I intended to engage in sexual activity with a casual partner (someone you had just recently met) while studying abroad” and “I intended to use a condom during sexual activity (anal, oral, or vaginal) while studying abroad.” These scores were then combined to create the variable measuring intentions to engage in risky sexual behavior. High scores indicate stronger intentions to engage in risky sex.

Situational Conditions. During the elicitation phase of the current and previous research (Milhousen, Reece, & Perera, 2006), participants identified specific situations they believed were conducive to or that impeded engaging in sexual intercourse with a new partner. In order to measure the situational conditions, participants were asked to indicate the frequency of 16 items describing experiences consistent with the conditions most commonly reported by travelers (1 = never, 4 = frequently). Situational conditions consisted of three subscales; sexualized environment (e.g., It seemed like everyone was having sex), alcohol use (e.g., You got drunk),

and specific conditions to the study abroad environment (e.g., You were encouraged to skip class and/or assignments by peers because you were a study abroad student). The 16 items were then summed together with high scores indicating greater immersion in the study abroad culture.

Perceptions of peer sexual behavior. To measure a participant's perception of whether or not their friends during their study abroad experience were engaging in risky sexual behaviors they were asked, "How many of your friends engaged in sexual intercourse (anal, oral, or vaginal) with someone they met while studying abroad?" Higher scores indicated a greater perception of peers engaging in risky sexual behavior while abroad.

Habit. The construct of habit used in this study was intended to ascertain participants' previous risky sexual experiences. To measure this, participants were asked whether they had engaged in sexual intercourse (anal, oral, or vaginal) with a casual partner (someone they had just recently met) prior to studying abroad. Habit was measured as a dichotomous variable coded 1 if the respondent had not engaged in sexual activity with a casual partner previously and 2 if they had. This variable was combined with participants' condom use. Participants were asked, "Prior to studying abroad how often did you use condoms?" (1 = every time, 5 = never). Participants that indicated using condoms every time were coded as a 1. Those participants who reported not using condoms consistently in the past were coded as a 2. Participants who scored a 2 (indicating previous experience having sex with a casual partner), and/or participant's scoring a 2 (indicating not using condoms consistently) were categorized as having previous experience engaging in risky sex. Only those scoring a 1 on both having sex with a casual partner and using a condom every time were identified as having no habit of engaging in risky sex.

Risky sex while studying abroad. To measure the criterion variable in this study, participants were asked "While studying abroad how many total casual partners (someone you

had just recently met) did you engage in sexual activity with (anal, oral, or vaginal)?

Participation in risky sex was measured as a dichotomous variable coded 1 if the respondent had not engaged in any type of sexual activity and 2 if they had engaged in sexual activity with a casual partner. This variable was then combined with participants' condom use. Participants were asked "While studying abroad how often did you use condoms while engaging in sexual activity?" (1 = every time, 5 = never). Condom use was coded as a dichotomous variable with 1 representing condom use every time a participant engaged in intercourse and 2 if the participant had not used condoms consistently. Participants who scored a 2 indicating that they had engaged in sexual activity with a casual partner, and/or participant's scoring a 2 indicating that they had not used condoms consistently were categorized as having engaged in risky sex while studying abroad. Only those scoring a 1 on having sex with a casual partner and a 1 on using a condom every time were identified as non risk takers.

Procedure

Approval was obtained from Rowan University Institutional Review Board. Data was collected using an online survey engine (Survey Monkey). The survey link was posted on various websites intended for study abroad and/or college personnel (i.e., Facebook, study abroad blogs). In addition, an e-mail was sent to students of the university through the International Office with the link to the survey and incentive to participate. The purpose and procedures of the study and the ethical guidelines appeared on the first page provided on the survey link. Informed consent was obtained with participant's decision to continue with the survey, as stated on the first page of the link. The last page of the survey contained the debriefing form that thanked participants for their time, as well as provided mental health resources should the participant need them. The last page also included a space to provide an e-mail address.

Providing an e-mail address placed the individual in the drawing for one of four \$25 Amazon.com gift cards. These e-mail addresses were in no way linked to the participants' data and were not used for anything other than notification of the raffle results.

Chapter 3

Results

Prior to studying abroad, 43% of participants reported having sexual intercourse with one or more casual partners (someone you had just recently met) and 36% reported not using condoms consistently. Prior to leaving, 49% of participants reported they intended to engage in risky sex. While studying abroad, 39% of participants reported engaging in sexual intercourse with a casual partner and 23% reported inconsistent condom use during their trip. Collectively, almost half of the participants (49%) reported they had engaged in risky sexual behavior while studying abroad. There was no difference in risky sex by gender.

There were no significant correlations between participants' intentions to engage in risky sex and engaging in risky sex ($r_{pb} = .14$, $N = 94$, $p > .05$). Affective beliefs were found to be most highly correlated with intentions to engage in risky sex ($r = .39$, $p = .05$). Subjective social norms were also correlated with intentions ($r = .38$, $p = .05$).

Using a multiple linear regression analysis, affective beliefs, subjective social norms, personal normative beliefs, and role beliefs were used to predict intentions to engage in risky sex. The TIB significantly predicted intentions to engage in risky sex ($F(4, 85) = 5.04$, $p < .05$). The TIB explained 15% of the variance (Adjusted $R^2 = .154$) in participant's intentions to engage in risky sexual behavior. Affective beliefs ($b = .26$, $p < .05$) and subjective social norms were both significant predictors of intentions ($b = .24$, $p < .05$), meaning participants' feelings about engaging in risky sex and their view on how other's would judge their engagement in risky predicted participants' intentions.

Secondly, intentions, situational conditions, perceptions of peer sexual behavior while abroad, and habit were used to predict engaging in risky sex using a logistic regression. The TIB

also significantly predicted participants' engagement in risky sex (χ^2 (df=1) = 11.04, p=.03). More specifically, engagement in the situational conditions of the environment was related to a greater likelihood of engaging in risky sex (odds ratio = 1.12, 95% Confidence Interval). The model accounted for between 16% and 21% of the variation in engaging in risky sexual behavior, with 72% of the sexual risk takers being successfully predicted. For the non-risk takers, 58% of predictions were accurate. The overall accuracy of predictions for sexual risk takers and non-sexual risk takers was 65%.

Chapter 4

Discussion

The purpose of this study was to assess the extent in which the Triandis Model of Interpersonal Behavior can successfully predict the sexual decision making of study abroad students. This represents one of the first attempts to understand the sexual behaviors of students studying abroad and provides an understanding of sexual behavior in environmental conditions that have been virtually unexplored. It is a novel contribution to sex research and can offer further support for the extent to which the environment influences sexual behaviors. Given the rise in students studying abroad and the sustained reports of risky sexual behavior while traveling, the importance of this research cannot be overlooked.

The primary outcome variables of interest in this study were participants' intentions to engage in risky sexual behavior and actual reports of engagement in risky sex. Nearly half of participants reported they had intended to have sex with a casual partner and/or did not intend to use condoms. Intentions to engage in risky sex were consistent with reports of actual engagement in risky sex with almost half of the sample reporting they had engaged in sexual activity with a casual partner and/or did not use condoms consistently. Considering the estimated one million students studying abroad (Institute of International Education, 2009) these results suggest that a staggering 500,000 students may be engaging in risky sexual behaviors while abroad each year. These results also demonstrate that students are anticipating or intending to engage in risky sex prior to leaving as a part of their study abroad experience and further support intentions as an important predictor of behavior.

In view of the relatively high reports of intentions to engage in risky sex, the TIB's ability to identify predictors of a participant's intentions was essential. This puts further

emphasis on the importance researchers have placed on health education and what can be done *before* hazards of any kind are encountered (Eiser & Ford, 1995). Specifically, subjective social norms supporting risky sex while abroad were significant predictors of intentions to engage in these behaviors. These findings are consistent with previous research (Maticka-Tyndale, Herold, Oppermann, 2003; Triandis, 1980) on peers exerting a strong influence on each others' activities and the importance of social influences on the formation of intentions. However, no other predictor variables were significant. These results could suggest that a participant's perception of how much their peer group approves of their behavior is a crucial piece in understanding which individuals are more likely to engage in this type of behavior.

The TIB was also able to significantly predict engaging in risky sex. In previous research, the extent to which a participant is exposed to the environmental factors of an event, measured by the situational conditions variable, has been consistently predictive of behaviors during an event (Maticka-Tyndale, Herold, & Oppermann, 2003; Milhausen, Reece, & Perera, 2006; Sonmez et al., 2006). That was again true for this study, with emersion in situational conditions being the only significant predictor of engaging in risky sex abroad. It appears the more an individual engaged in the study abroad environment the more playful deviance occurred. During focus group discussions, participants reported that while studying abroad their "only job was to experience the culture" and that they could "get away with it" because they were just "being a study abroad student". These findings point to the important influence the environment plays on an individual's behaviors, specifically the types of behaviors that would not normally be acceptable in one's home environment.

Alarmingly, half of the sample reported inconsistent condom use and/or engaging in sexual intercourse with a casual partner (someone you had just met). Further, they did so within

an average 5 month time span. Given the greater opportunities for young people to socialize in a distant and often carefree environment, the potential for international settings to contribute to rises in STIs and unwanted pregnancies is substantial. This is especially true of environments away from home where access to protective measures such as condoms and birth control is absent, confusing, or poorly promoted. Time away is consistently followed by rises in demand for emergency contraception, increased attendance at sexual health clinics, and additional requests for terminations among young people (Bellis, et. al., 2011). Psychological costs, including specific anxiety about HIV infection, general feelings of lowered self-worth, and the possibility of unwanted sexual encounters all add to the concern and importance of understanding risky sexual behaviors abroad.

Although an integral addition to sex research, one possible limitation to these findings is that they were conducted a posteriori. Participants were asked to think back to and report their intentions prior to leaving. This may have been a difficult task given that some participants had studied abroad up to two years prior. This could be a possible explanation for why a large number of participants reported intentions to engage in the behavior. In line with cognitive dissonance, participants may have sought consistency in their pre and post experiences. That is, cognitive dissonance suggests that feelings of discomfort and unease that arise when there is a discrepancy between our beliefs and behaviors (CITE). Participants may have attempted to explain their risky sexual behaviors by reporting that had intended to do so prior to leaving.

Another possible limitation to this study is that our criterion variable (risky sexual behavior) was dichotomized. The spectrum of sexual behaviors while abroad may be missed. A participant who reported ten casual partners and never using a condom was coded the same as a participant who reported one casual partner and using condoms over half of the time. Future

research may benefit from understanding the risky sexual practices of study abroad students on a continuum.

It should also be noted that the sample contained almost exclusively individuals that identified as White/Non-Hispanic and described their orientation as heterosexual. Future research on study abroad students should attempt to gather samples of both heterosexuals and homosexuals as well as a diverse range of ethnicities. Cultural values and traditions may play a role in developing the intentions of engaging in risky sexual behavior as well as actually engaging in it.

Our findings appear to support anecdotal impressions of a relatively high level of risky sexual activity amongst study abroad students and also make a significant contribution to understanding the influence of both the environment and the individual in risky sexual behaviors. The TIB provided a useful framework for understanding the complex variables that influence both the intentions to engage in risky sex and the risky sexual behaviors of study abroad students. It appears that subjective social norms are particularly predictive of intentions and likewise situational conditions for engagement in the behavior. Interventions to decrease the sexual risk taking of students studying abroad may want to target perceptions of peer behavior as well as the anticipated immersion in the environment. These interventions may be best placed at orientations given to students before their trips. This could allow students the opportunity to prepare for sexual encounters they may be anticipating (i.e., bringing condoms or birth control). Delivering good sexual health interventions to millions of young people travelling abroad also requires collaboration with study abroad institutions, airlines and airports, event organizers, health protection organizations, sexual health experts, and health services abroad (Bellis, et. al.,

2004). Future research should continue attempts to understand this unique population and the factors influencing their risky behaviors.

Figures

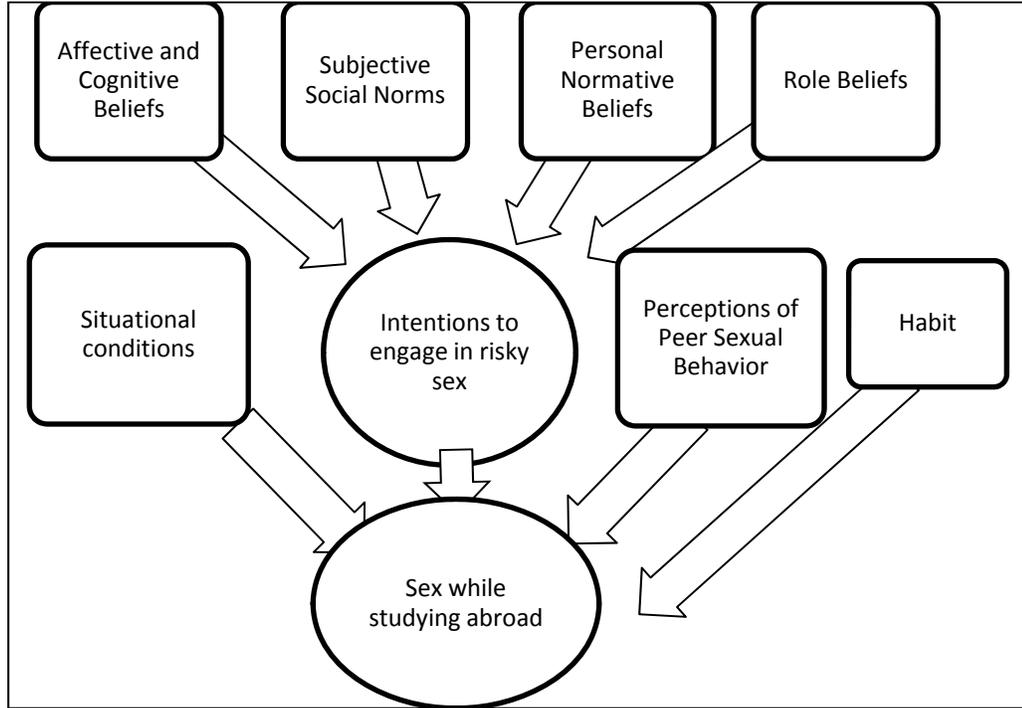


Figure 1. The Triandis Model of Interpersonal Behavior. This figure illustrates the second and third levels of the model, those most subject to change.

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Demographics

1. What is your age?
2. What was your age when you left to study abroad?
3. What is your gender?
 - a. Male
 - b. Female
4. Please select the response that corresponds to your race or ethnicity
 - a. African-American/Black
 - b. Hispanic/Latino/Latina
 - c. White/Non-Hispanic
 - d. Asian/Pacific Islander
 - e. Native American
 - f. Other
5. Please select the response that corresponds to your academic rank while studying abroad
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Graduate Student
 - f. Other
6. Please select the response that best corresponds to your marital status while studying abroad
 - a. Single (never married)

- b. Dating (seeing one or more person(s) without commitment to monogamy)
 - c. Involved in a serious relationship, but not living with a significant other
 - d. Living with a significant other
 - e. Married
 - f. Separated
 - g. Divorced
 - h. Other
7. Please select the response that corresponds with your sexual orientation
- a. Exclusively heterosexual
 - b. Predominantly heterosexual, only incidentally homosexual
 - c. Predominately heterosexual, but more than incidentally homosexual
 - d. Equally heterosexual and homosexual
 - e. Predominately homosexual, but more than incidentally heterosexual
 - f. Predominately homosexual, but incidentally heterosexual
 - g. Exclusively homosexual
8. What is/was your major in school while studying abroad?
9. What city did you study abroad in?
10. What country did you study abroad in?
11. What semester did you study abroad?
- a. Fall
 - b. Spring
 - c. Summer
 - d. Other

12. What year did you study abroad in?

- a. 2008 or before
- b. 2009
- c. 2010
- d. 2011

13. In months, how long were you abroad?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5
- f. 6
- g. 7
- h. 8
- i. 9
- j. 10
- k. 11
- l. 12
- m. 13 or more

14. Who did you study abroad with?

- a. I went alone
- b. A friend
- c. Multiple friends

- d. Family member(s)
- e. Significant other
- f. Spouse
- g. Other

15. Reason for studying abroad?

Study Abroad Questions

1. While abroad, were your classes graded on a pass/fail basis, or did your grades affect your grade point average at your home institution?

Grade Point Average was affected

PASS/FAIL

2. How many sexual partners have you had in your lifetime?

3. How often do you use condoms during sexual activity (anal, oral, or vaginal)?

N/A Every time Over half of the time Half of the time

Less than half

Never

Please rate how much you agree/disagree with the following statements:

4. Prior to leaving I felt studying abroad would make me a more independent person.

Strongly Disagree

Strongly Agree

5. Prior to studying abroad, I expected or intended to engage in sexual activity with a new partner I met while studying abroad.

Strongly Disagree

Strongly Agree

6. My friends would be likely to have sex with someone new they met while studying abroad.

Strongly Disagree

Strongly Agree

7. Prior to studying abroad, I expected or intended to use a condom when engaging in sexual activity with a new partner.

Strongly Disagree

Strongly Agree

8. Prior to studying abroad, how many casual partners (someone you had just recently met) did you engage in sexual activity with?

Affective

Prior to leaving, how did you expect to feel about having sex with someone you met while studying abroad?

1 2 3 4 5 6
7

Sexually Conservative
Sexually Liberated

1 2 3 4 5 6
7

Disempowered
Empowered

1 2 3 4 5 6
7

Angry
Happy

1 2 3 4 5 6
7

Unattractive
Attractive

1 2 3 4 5 6
7

Bad about myself
Good about myself

1 2 3 4 5 6
7

Guilty
Proud

1 2 3 4 5 6
7

Lonely
Not lonely

1 2 3 4 5 6
7

Serious
Fun loving

1 2 3 4 5 6
7

Ordinary
Adventuresome

1 2 3 4 5 6
7

Sad
Glad

Cognitive

Prior to leaving, what did you think about having sex with someone you met while studying abroad?

1 2 3 4 5 6
7

**Bad
Good**

1 2 3 4 5 6
7

**Irresponsible
Responsible**

1 2 3 4 5 6
7

**Not fun
Fun**

1 2 3 4 5 6
7

**Negative
Positive**

1 2 3 4 5 6
7

**Stupid
Smart**

