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Body Self-Esteem and Sexual Risk-Taking in Caribbean Adolescents

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by

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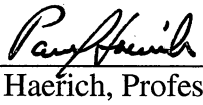
Each person whose signature appears below certifies that this thesis in his/her opinion is adequate, in scope and quality, as a thesis for the degree of Master of Arts.



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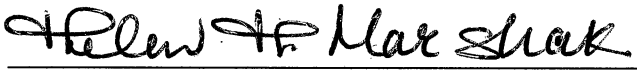

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One of the primary tasks of adolescence is the development of body self-esteem as they transition from children to young adults. This is also a time when many adolescents make decisions about risk behaviors that may affect their developing bodies such as drug use, smoking, and engaging in sexual activity. The current study examined the link between body self-esteem and sexual activity with the aim of predicting if high body self-esteem individuals differ from low body self-esteem individuals with regards to sexual risk-taking. This study was part of a larger study whose survey was based on two widely used and validated scales, the National Adolescent Student Health Survey (NASHS) and the CDC's Youth Risk Behavior Surveillance System (YRBSS). The survey was administered to 3,131 students who attended religious secondary schools throughout the Caribbean. It was hypothesized that the plans and beliefs regarding sexual risk-taking of low body self-esteem individuals will be riskier than those with high body self-esteem. Further, it was also the hypothesized that while individuals with high body self-esteem will engage in more sexual activity, the sexual behaviors of low body self-esteem individuals engage in will be riskier. Body self-esteem did not significantly predict plans or beliefs nor did it predict risky sexual activity. In all the analyses, gender

proved to be the most significant factor in predicting risky sexual behaviors with males engaging in both riskier and more frequent sexual activities.

Introduction

Young people experience a variety of biological, social, and psychological changes during adolescence. During this period, adolescents begin forming an autonomous identity as they learn from the consequences of their actions (Palmqvist & Santavirta, 2006). One topic that is ubiquitous throughout the literature is how adolescents deal with risk behaviors, especially sexual behavior, and what the factors are that lead to the participation in or the rejection of these behaviors. Risky sexual behavior is of particular interest because of the risk of unwanted pregnancy and the spread of sexually transmitted infections (STIs) (Kim-Godwin, Clements, Bullers, Maume & Demski, 2007). Most of the research in this area focuses on the external influencing factors that predict risky sexual behavior. Usually, this includes the home situation (Adam & Chase-Lansdale, 2002), parent-child relationships (Overbeek, Stattin, Vermulst, Ha & Engels, 2007), and peer influence (Palmqvist & Santavirta, 2006). Many researchers are also concerned with emphasizing the prevalence of sexual risk-taking via statistics (Kim-Godwin, Clements, Bullers, Maume, & Demski, 2007) which is vital for awareness. Still, far less focus has been placed on the internal influences that result in sexual risk taking.

The literature has shown that self-esteem and body satisfaction are positively correlated variables in that as one increases, so does the other (Frost & McKelvie, 2004; Boyes, Fletcher & Latner, 2007). The term body self-esteem encompasses the relationship between self-esteem and body satisfaction in order to represent self-esteem that pertains specifically to the body. High body self-esteem can serve as a protective factor against some risk behaviors including suicidal tendencies, drug use, alcohol use,

cigarette smoking, and risky sexual behavior (Wild, Flisher, Bhana, & Lombard, 2004). In the case of risky sexual behavior, those with higher self-esteem and body satisfaction engage in more sexual behavior on average, but it is those with lower self-esteem who engage in riskier sexual behavior (Ackard, Kearny-Cooke, & Peterson, 2003; Gillen, Lefkowitz, & Shearer, 2006).

One possible explanation for the discrepancy between high body self-esteem and low body self-esteem individuals and sexual risk taking is cognitive dissonance. Cognitive dissonance occurs when actions are inconsistent with beliefs. The incongruence causes discomfort leading the individual to seek consonance by modifying behavior to be more in line with their beliefs or to trivialize a belief to be more consistent with a behavior (Festinger 1957; Tsang, 2002). Adolescents may engage in riskier behaviors to relieve dissonance. If individuals with higher self-esteem and body satisfaction are engaging in more sexual activity, then others with low body self-esteem who desire to be like their popular peers may be more willing to engage in riskier behaviors in order to achieve cognitive consonance.

Adolescents in the Caribbean are of particular interest when studying risky sexual behavior. The region has the highest prevalence rate of HIV/AIDS in the Americas and is second in the world only to Sub-Saharan Africa (Joint United Nations Programme on HIV/AIDS, 2007). Less than 2% of the Caribbean population is infected by HIV/AIDS, yet one third of the 2% is between the ages of 15 and 25 and the AIDS is the leading cause of death amongst 24-44 year olds (Caribbean Epidemiology Centre (CAREC) Annual Report, 2007). In the Caribbean, there are socio-cultural norms that may exacerbate the problem such as the belief by older men that sex with young virgins can

cure sexually transmitted diseases and a stigma against condom purchase and use (Jack, 2001). Also, many schools do not include a sex education component and leave it up to the parents to educate their children on the topic. Many parents are uncomfortable discussing sex and sexuality with their children and so many adolescents are left with little or no resources to help them make decisions regarding their sexual health (Viosin & Dillon-Remy, 2001). The adolescent population in the Caribbean is of interest because of the effects sexual risk taking has on the population. HIV/AIDS is a problem in the region and researching risky sexual behavior may provide some clues on how to combat that problem. The current study examines the potential relationship of body self-esteem on the attitudes and behaviors regarding risky sexual activity in Caribbean adolescents. This construct is discussed in the literature below.

Adolescence: A Time of Risk

Adolescence is a time when most youth are confronted with the need to make decisions regarding risky behaviors. There are several different types of risky activities including drug, alcohol, and tobacco use as well as engaging in sexual activity. Some risk behaviors are more prevalent in the adolescent population than others and most youth will inevitably consent to participate in some of these risk behaviors, but the degree and frequency of engaging in such behaviors may result in different outcomes.

Drug use is one of the least frequently performed risk behaviors; however the consequences of repeated use may be some of the most detrimental. Some problems include truancy during adolescence (Engberg & Morral, 2006) and problems with health, psychosomatic symptoms, dysphoric emotional functioning, impaired romantic attachments, and trouble with parents and family later on in young adulthood (Newcomb

& Bentler, 1988). In the United States in 2007, 38.1% of adolescents had ever used marijuana, 7.2% had used cocaine, 4.4% had tried methamphetamine, 13.3% had used inhalants, and 3.9% used un-prescribed steroids (National Center for Chronic Disease Prevention and Health Promotion, 2008). Nearly two fifths of the American youth population is using as least one drug meaning that drug use is a prevalent risk behavior among U.S. adolescents. The U.S. is not alone in having a drug using adolescent population. Frequent drug use is also a problem in the Caribbean with 1.2% of adolescent females and 2.3% of adolescent males using marijuana and 1.4% of females and 3.2% of males using steroids on monthly or more frequent basis. Over a fifth of Caribbean adolescents reported experiencing problems related to alcohol or drug use usually involving the deterioration of friendships and relationships (Halcon et al., 2003). Even if most of the population doesn't use drugs frequently, many have tried drugs and have experienced detrimental effects.

Alcohol use is more common than drug use and can also have detrimental outcomes if used in excess. Aside from the long term negative health effects of consistent alcohol use, binge drinking is related to academic attrition and less favorable job market outcomes in early adulthood (Jennison, 2004). Most adolescents in the United States, 75% in 2007, have had at least one drink of alcohol during their lifetimes and 44.7% report having drank in the past month. About 26% of adolescents engage in heavy episodic drinking meaning that they will have five or more drinks within the span of a few hours (National Center for Chronic Disease Prevention and Health Promotion, 2008). In the Caribbean, 3.9% of females and 7.9% of males report drinking alcohol on a regular basis, 7.3% worry about their drinking or drug use, 5.8% say they drink 4 or more drinks

within an hour, and 6.9% say they have driven while being intoxicated (Halcon, et al., 2003). Age and gender play a role in drinking behaviors amongst adolescents. Older adolescents participate in more drinking behaviors than do younger adolescents and boys engage in more problem and binge drinking behaviors than girls who engage in more moderate drinking than boys. Also, individuals who drink tend to have friends who engage in similar drinking behaviors meaning that alcohol use is a peer activity (Arata, Stafford & Tims, 2003).

Smoking and tobacco use is another risk behaviour to which youth are frequently exposed. Half of U.S. adolescents have tried smoking cigarettes at least once, 20% have smoked recently, and 8.1% smoke regularly. Approximately one quarter of American adolescents currently use some form of tobacco including cigarettes, smokeless tobacco, or cigars (National Center for Chronic Disease Prevention and Health Promotion, 2008). Tobacco use is present amongst Caribbean youth as well, however fewer Caribbean adolescents, approximately 1.4%, regularly smoke. Having a parent or friends who smoke is one of the most significant factors predicting adolescent cigarette use (Copeland et al.). Because half of the US population smokes, cigarettes and tobacco are readily available to adolescents. Long term outcomes of tobacco use into adulthood may result in poorer functioning in several different domains including physical health, life satisfaction, depression, personal income, and academic performance and longevity (Georgiades & Boyle, 2007).

Sexual activity is another behavior that puts adolescents at risk in several different ways including unwanted pregnancy and HIV and other STD infections. Even with these risks, nearly half, 47.8%, of American high school students have engaged in sexual

intercourse and approximately 35% are currently sexually active. In terms of risk behavior, 14.9% of youth have had sex with multiple (four or more) partners, and among those who are sexually active, only 61.5% used a condom during last intercourse, 16% were on birth control pills, and 22.5% reported drinking or using drugs before engaging in intercourse (National Center for Chronic Disease Prevention and Health Promotion, 2008). In the Caribbean, many adolescents engage in sexual activity at a young age. Approximately 34% of Caribbean youth are sexually active, and of that 34%, 82% of males and 52% of females first engaged in sexual activity at or before the age of 13 (Ohene, Ireland & Blum, 2005). Adolescents who are supervised are less likely to engage in sexual activities at an earlier age. This includes both parental supervision as well as supervised activities like after school sports or clubs (Harris et al., 2006). Also, family poverty for both genders, and for males, associating with deviant peers increases the risk of engaging in risky sexual behaviours (Brook, Morojele, Zhang & Brook, 2006). Once adolescents decide to engage in sexual activity, they have little regard for messages of abstinence. They also stand a higher chance of dropping out of higher school or not finishing college. Those who wait tend to have higher academic aspirations than those who do not (Silver & Bauman, 2006).

Minor exposure to some risk is common among adolescents and does not necessarily result in a negative outcome. There is evidence, however, that high risk involvement in several risky activities increases the chances of a poor developmental outcome regarding risk behavior attitudes, temperament, well-being, religiosity, academic performance, family and friend relationship quality, victimization, and unstructured activities (Willoughby et al., 2007). Adolescents who do not engage in any risk taking

behaviors only make up approximately 6% of the adolescent population. These individuals consistently experience better developmental outcomes than their peers who frequently engage in high risk behaviours. Adolescents who frequently engage in several different high risk activities make up approximately 8% of youth; à population which consistently has the poorest of developmental outcomes (Willoughby et al., 2007).

Adolescents are engaging in risk behaviors that, in some cases, lead to poor outcomes. In order to reduce the number of adolescents who are at risk for poor outcomes, it is important to consider some of the factors that contribute to adolescents taking risks.

Body Self-Esteem and Sexual Risk Taking

Self-esteem and body satisfaction become very important during adolescence as youth begin to mature and develop. The two concepts are often positively correlated in that as self-esteem increases, body satisfaction also increases and vice versa (Frost & McKelvie, 2004; (Boyes, Fletcher & Latner, 2007). Self-esteem is a term used to describe many facets of how people view themselves, however, for the purposes of this study, the term body self-esteem will be used to describe the self-esteem one has specifically pertaining to their body.

During adolescence, there are many challenges to maintaining a positive self image including media and peer influences. Media images portray an unrealistic ideal that can negatively influence adolescents' perception of what is attractive and in turn lower self-esteem and body satisfaction (Clay, Vignoles & Dittmar, 2005). The disproportionate amount of attractive people present in advertisements and on television is damaging to adolescent self-esteem, and this is especially the case with young females

who are more likely than boys to be dissatisfied with their body image and to compare their bodies to those seen in the media. Girls are also more likely to share intimate matters such as comparisons of their bodies to media images with their peers (Palmqvist & Santavirta, 2006). The media may present unrealistic images for adolescents to compare themselves to; however those images are reinforced through peer relationships. Pressure to be thin and attractive from peers is highly related to body dissatisfaction (Presnell, Bearman & Stice, 2004). Sociocultural factors such as media and peer relationships are important contributors to self-esteem and body satisfaction. Given this information, it is important to consider how adolescents perceive their bodies and their self-esteem and if there are any benefits or detriments that result from differences in body satisfaction.

With all of the outside influences like media and peer interaction, it is easy to consider that individuals may have a distorted idea of what they really look like. Most adolescent girls tend to report that they are heavier in reality than either their ideal image or the image they would consider most attractive to members of the opposite sex. Although most girls view themselves heavier than they really are, the difference between their actual weight and their ideal weight is not significant. Adolescent boys tend to report in the opposite direction in that many think they are too thin and express both their ideal image and the image they think girls would prefer more as heavier than their current figure (Cohn et al., 1987). As females age into adulthood, the disparity between current, ideal, and attractive to the opposite sex figures grows so that current perceived weight is heaviest and ideal weight is the thinnest with the figure they think most attractive to men being somewhere in the middle. The opposite is, again, true for men in that the disparity

lessens and there is little difference between body figure preferences (Zellner, Harner & Adler, 1989).

Adolescent boys tend to report higher body satisfaction on average than girls. Boys are most satisfied with their bodies when their weight is closest to the average and dissatisfaction increases if they are either heaver or thinner than the average. Girls show a more linear relationship between body satisfaction and weight in that body dissatisfaction increases as weight increases (Presnell, Bearman & Stice, 2004). Among boys who are dissatisfied with their bodies, some desire to gain and some desire to lose weight. This is in contrast to most dissatisfied females who nearly universally desire to be thinner with only a small proportion wishing to be heavier (Furnham, Badmin & Sneade, 2002). Although both males and females experience body dissatisfaction, girls are more preoccupied with thoughts of how to lose weight or change their bodies than are boys (Palmqvist & Santavirta, 2006).

Despite gender differences, both males and females who are dissatisfied with their bodies are more likely to exhibit lower self-esteem and to engage in unhealthy dieting practices than those who are satisfied with their bodies (Boyes, Fletcher & Latner, 2007). In 2007, 45.2% of adolescents reported trying to lose weight. In taking steps to prevent gaining weight or to lose additional weight, 11.8% of youth reported going 24 hours or more without eating and 4.3% used laxatives or vomited as a weight control tactic (National Center for Chronic Disease Prevention and Health Promotion, 2008).

In addition to low self-esteem and unhealthy eating habits, body dissatisfaction is a potential risk factor for depressive mood in the adolescent population. This finding is strongest for girls in early adolescence as opposed to boys who exhibit this relationship

strongest during mid-adolescence (Paxton, Neumark-Sztainer, Hannan & Eisenberg, 2006). Also, boys with low body self-esteem are more likely to consider suicide and to have been bullied at school than boys with higher body self-esteem. For girls, lower body self-esteem has been associated with an increased risk of suicide, drug, alcohol, and cigarette use and of risky sexual behaviour (Wild, Flisher, Bhana & Lombard, 2004).

Because adolescence is a time of experimentation and exploration, youth expose themselves to the potential for risk. Body image and self-esteem are established as important factors that develop during adolescence and sexual activity is an opportunity to receive positive feedback related to the body which may make the activity more desirable to developing adolescents. Adolescents with greater self-esteem regarding their bodies are the ones who are more likely to explore with their bodies. Sexually active individuals tend to have a more positive view of their appearance, less body dissatisfaction, and are more appearance oriented than abstinent individuals. Those who are more appearance oriented and evaluate their appearance positively also tend to engage in sexual activity with more partners than those who were dissatisfied with their bodies (Gillen, Lefkowitz & Shearer, 2006).

How adolescents perceive their bodies is an important predictor to the quality of their romantic relationships and possibly subsequently their sexual activities. Females with high body self-esteem have higher trust in and less jealousy with their partners than those with low body self-esteem. Males with high body self-esteem report being happier in relationships and friendships and have more trust in their relationships than those with low body self-esteem (Ambwani & Strauss, 2007). Individuals who are more satisfied with their bodies are more likely to have sex more frequently, initiating sex more often,

and express greater comfort undressing in front of their partners, trying new activities, and are more confident in their ability to provide pleasure for their partner (Ackard, Kearny-Cooke & Peterson, 2003).

The link between body self-esteem and sexual risk taking is not the same for males and females. Males who engage in riskier sexual activities, such as not using a condom every time and having multiple partners, are those who are more appearance oriented and have a positive evaluation of their body. Females with positive appearance evaluation feel more confident in abstaining from risky sexual behavior (Gillen, Lefkowitz & Shearer, 2006). Women with higher self-esteem also report less risky beliefs about sexual behaviors than those with low self-esteem (Belgrave, Van Oss Marin, & Chambers, 2000). The tendency for males to engage in more sexual activities and to be more likely to engage in riskier behaviors is consistent. Males report more confidence than females in their ability to ask someone on a date, masturbate, and watch pornography without embarrassment (Rosenthal, Moore, & Flynn 1991). Females, on the other hand, are more confident of being able to gauge the consequences of engaging in sexual activity and to saying no to unwanted sexual advances. Males also report a more recreational attitude towards sex and express more interest in and exposure to sexually explicit materials than females (Peter & Valkenburg, 2006). Females who have viewed such materials state curiosity as the main reason for exposure while most males view illicit materials in order to get aroused and masturbate. As a whole, males tend to be more concerned with the practical details of sex whereas females are more focused on the love-romance side of sex (Wallmyr & Welin, 2006). In line with this difference, women tend to be more selective when making decisions regarding their sexual activities than men.

The relationship between body satisfaction and self-esteem has been well established in the literature. The relationship is linear in that as self-esteem increases, so does body satisfaction. An important subsequent relationship to consider is whether or not self-esteem relating specifically to the body is a predictor of whether or not adolescents will engage in riskier sexual behavior.

Attitudes and Behaviors: The Cognitive Dissonance Association

Attitudes are often predictive of behaviors (Quattrone, 1985); however this is not always the case. Dissonance occurs when people act in a way that is inconsistent with their personal beliefs. The incongruity causes discomfort that can be alleviated in several different ways including a change in attitude, a change in behavior, (Festinger 1957), trivialization, or rationalization (Tsang, 2002). In the classic 1959 study, Festinger and Carlsmith tested Festinger's theory of cognitive dissonance by dividing subjects into three groups: $1, $20, and control and asking them to make a counter-attitudinal statement to another participant (actually a confederate) regarding an extremely boring task. When asked how enjoyable the task was and how likely they would be to participate in similar research in the future, the participants in the $1 group rated both items significantly higher than either the control or $20 groups. These results suggest that the $20 was enough of an external reward to justify the behavior, so these participants did not have to change their consonant cognitions and therefore did not experience a significant amount of dissonance. The $1 participants, however, did experience dissonance as is evidenced by their reported high enjoyment and willingness to participate ratings.

Since the introduction of Festinger's theory in 1957, several other studies have expanded upon the original findings of the subsequent 1959 experiment. Self-esteem

plays a role in the amount of dissonance an individual tolerates before changing an attitude or behavior to alleviate the incongruity. Those with lower self-esteem tolerate more dissonance than those with high self-esteem (Brown & Lohr, 1987). High self-esteem individuals tend to rationalize and change their attitudes more often than low self-esteem individuals who tend to prefer trivialization as a means to reduce dissonance (Martinie & Fointiat, 2006). According to the principles of cognitive dissonance, individuals with low self-esteem may relieve their cognitive discomfort by engaging in riskier behaviors than those with high self-esteem.

An aversive consequence is not necessary to create cognitive dissonance. Even if no one else is present to witness a contradictory behavior or to make judgments regarding a behavior, individuals still tend to change their attitude or behavior in order to maintain cognitive consonance (Harmon-Jones, Brehm, Greenberg, Simon & Nelson, 1996). If this is indeed the case, then it would make sense that internal factors play a role in relieving the discomfort of incongruence, that social factors are not a necessary condition for individuals to change their opinions or actions.

During adolescence, youth begin to form attitudes about risky behaviors. New information may cause adolescents to change their opinions regarding these activities, which in turn poses a threat to cognitive consonance. Adolescents who are less satisfied with their bodies or have low self-esteem tend to engage in unhealthy behaviors. Stice et al. (2008) found that body dissatisfaction, negative affect, thin-ideal internalization, and psychosocial impairment was significantly reduced after implementing a dissonance intervention for women with body image concerns. The intervention used the principles behind Festinger's theory to change the attitudes of the participants regarding the 'thin

ideal'. Although most women admitted to disliking the ideal, they still participated in behaviors that went against their negative opinions of it. Stice et al. were able to introduce an intervention in which participants voluntarily engaged in verbal, written, and behavioral exercises in which they critiqued the thin ideal. Participants were also given homework assignments such as writing counter-attitudinal essays about the problems associated with pursuing the thin ideal. The intervention lowered dissonance and increased body satisfaction.

Adolescents may engage in riskier behaviors to relieve cognitive discomfort. It has been established that individuals with higher self-esteem are more satisfied with their bodies and are more comfortable engaging in sexual activities than those with low body self-esteem (Gillen, Lefkowitz & Shearer, 2006). Although they feel more comfortable with their bodies and engage in more sexual activity, individuals with high body self-esteem engage in less risky sexual behaviors than those who have lower body self-esteem. According to the principles of cognitive dissonance, adolescents with lower body self-esteem are more likely to engage in riskier behaviors in order to alleviate dissonance and emulate those who have high body self-esteem. In other words, the desire to be desired may lead adolescents with low body self-esteem to engage in riskier behaviors. It is important to consider this possibility in high risk populations in order to attempt a reduction in poor outcomes.

Caribbean Population

The Caribbean has the second highest prevalence rate of HIV/AIDS in the world after Sub-Saharan Africa and is the most affected region of the Americas (Joint United Nations Programme on HIV/AIDS, 2007). As many as 1.2% of the adult population in

the Caribbean is living with HIV, making it higher than the global average of 1%, which qualifies the region as having a generalized epidemic of the disease (HIV/AIDS Policy Fact Sheet, 2007). The prevalence rate of the disease varies across countries with the island of Hispaniola including Haiti and the Dominican Republic bearing the largest HIV burden and accounting for nearly three quarters of the region's total 230,000 HIV positive population (Caribbean AIDS Epidemic Update Regional Summary, 2007; Joint United Nations Programme on HIV/AIDS, 2007). Despite it affecting less than 2% of the Caribbean population, AIDS was the fifth leading cause of death in 2004 after heart disease, diabetes, cerebrovascular diseases, and hypertensive diseases. It was the leading cause of mortalities amongst 25-44 year olds accounting for 20% of all deaths. (CAREC Annual Report, 2007). The trend of increase has seemed to stop in recent years and the rate of infections remains relatively stable in the Caribbean (Joint United Nations Programme on HIV/AIDS, 2007).

With 30% of the Caribbean's population falling between the ages of 10 and 24, adolescent risk behavior research has become an important commodity in combating the HIV/AIDS epidemic (Kurtz, Douglas, & Lugo, 2005). Approximately one third of the HIV positive population in the Caribbean is between the ages of 15 and 25 and nearly two thirds of that population is female meaning this population is extremely at risk for infection (HIV/AIDS Policy Fact Sheet, 2007). Adolescents are at risk because of specific socio-cultural norms that persist throughout the region such as coercive sex and a widespread belief by older men that sex with young girls and virgins can protect them from HIV/AIDS and cure sexually transmitted diseases. Incest, rape, and gang rape are prevalent within the adolescent population which further contributes to the problem

(Jack, 2001). It is also common for younger girls to get involved in relationships with older men who have a higher likelihood of having been exposed to the virus (Caribbean AIDS Epidemic Update Regional Summary, 2007). To further compound the problem, there is a stigma against girls purchasing condoms. Those who do are at risk for losing their reputation and for being labeled promiscuous. Discussing condom use with a male partner is also taboo in that many Caribbean men believe insisting on using a condom implies infidelity and a lack of intimacy. These discussions and beliefs leave women at risk for rejection and physical abuse from their partners. Women are also expected to maintain only one sexual relationship whereas it is acceptable for men to have relations with several women in addition to their primary relationship (Voisin & Dillon-Remy, 2001).

These socio-cultural explanations may account for the fact that only a small proportion of people use condoms on a regular basis. In St Maarten, only 10.8% of sexually active adolescents reported using a condom on a regular basis (McBride et al., 2005), 25% reported always using a condom in Anguilla, and in Haiti, only 28% of sexually active girls and 42% of sexually active boys reported using condoms with non-regular partners (Joint United Nations Programme on HIV/AIDS, 2007). Younger adolescents are even more prone to not using condoms because they are less worried and/or knowledgeable about contracting sexually transmitted infections, or STIs, than older adolescents (Kurtz, Douglas, & Lugo, 2005; Young Adolescents' Sexual and Reproductive Health and Rights: Latin America and the Caribbean, 2007). In addition to low condom use, only 11% of sexually active adolescents use birth control (Ohene, Ireland, & Blum, 2005).

It is common to begin engaging in sexual intercourse at a young age with the majority of both boys and girls reporting that they had sex for the first when they were 13 years old or younger (Ohene, Ireland, & Blum, 2005). Even though the majority of both sexes report having had sex at or before 13, a higher proportion of boys report having sex at a younger age than do girls, but this is accounted for by the widely accepted phenomenon that boys tend to exaggerate their sexual experience while girls tend to understate it. In this young adolescent population, 32% of boys and 48% of girls report that their first intercourse was forced (Young Adolescents' Sexual and Reproductive Health and Rights: Latin America and the Caribbean, 2007). Initiating sex at such an early age is a precursor to many additional risk behaviors other than HIV infection including alcohol and marijuana use, gang involvement, violence, running away from home, and skipping school. Males tend to exhibit these risk behaviors with a higher prevalence rate, however there is a stronger association between additional risk behaviors and early sexual initiation with females (Ohene, Ireland, & Blum, 2005).

Part of the problem is that there are not enough resources and information available for Caribbean adolescents. Sex education is not taught at most schools and parents are expected to address such issues with their children, however many parents are uncomfortable discussing such matters and avoid engaging in conversations about sexuality (Voisin & Dillon-Remy, 2001). This is unfortunate because having a good relationship and good communication with one's parents is associated with less sexually risky behaviours such as a decrease in the number of sex partners and less sexual initiation at a young age (McBride et al., 2005). Because resources are scarce, adolescents are ill informed about making decisions regarding their sexual behaviours. In

Jamaica, a quarter of girls and one third of boys believe that it is not possible to get pregnant from the first time engaging in intercourse. Almost none knew at what time during the female menstrual cycle girls are most likely to become pregnant (Young Adolescents' Sexual and Reproductive Health and Rights: Latin America and the Caribbean, 2007).

A dangerous trend that has arisen in the Caribbean is sex tourism which usually involves female tourists sleeping with heterosexual local men. These male prostitutes will leave their families for days at a time to make money having sex with tourists (Voisin & Dillon-Remy, 2001). Adolescent females are not exempt from the commercial sex industry. Young girls will have sex with men in exchange for food, clothes, school fees, and transportation (Jack, 2001).

Although the rate of HIV infection has stabilized in recent years in the Caribbean, the region still has one of the highest rates of HIV positive individuals in the world. Because of this, it is important to understand the risk behaviors of the adolescent population. Moreover, this information can help provide better resources in the hopes of decreasing HIV/AIDS rates in the region. This includes finding out what are both the risk and protective factors that are relate to risky sexual behavior and subsequently possible HIV infection.

The Problem Statement and Study Hypotheses

The literature supports the idea that personal attitudes and perceptions as well as body image are related to adolescent sexual behaviors. Festinger's theory of cognitive dissonance (1957) asserts that in order to reduce dissonance, either an attitude or a behavior must change in order to be more in line with the information that is causing the

incongruity. If adolescents are continually introduced to new information regarding their bodily perceptions and sexual behaviors, then it is possible that they are engaging in riskier attitudes or activities to reduce dissonance. Stice et al. (2008) used the principles of cognitive dissonance to change attitudes regarding body perception by engaging in behaviors trivializing the thin-ideal. Reduction in dissonance worked in a controlled setting, but it is also possible that individuals engage in similar interventions naturally. Research has shown that adolescents who are more satisfied with their bodies and have higher self-esteem engage in more sexual activity. Although these individuals engage in more sexual activity, the behaviors they engage in are less risky than those with low self-esteem. This study investigated whether or not Caribbean adolescents with lower body self-esteem are more willing to engage in riskier behaviors in order to alleviate the cognitive dissonance associated with having low body self-esteem. This information is valuable because due to specific socio-cultural norms, adolescents in the Caribbean are at high risk for contracting HIV and other STIs through engaging in risky sexual behaviors.

Hypothesis 1

Male adolescents will engage in riskier sexual behaviors than female adolescents.

Hypothesis 2

Body Self-Esteem will predict sexual beliefs and plans. Specifically, low body self-esteem individuals will have riskier beliefs and plans than their high body self-esteem counterparts.

Hypothesis 3

Adolescents with high body self esteem will engage in more sexual behavior than those with lower body self esteem, however, according to the principles of cognitive dissonance, individuals with low body self-esteem will relieve their cognitive discomfort by engaging in riskier behaviors than those with high body self esteem.

Method

Settings and Participants

This study uses archival data gathered by the study investigators as a part of a separate, larger project assessing several facets of adolescent risk behavior. Participants were secondary students selected from church-operated schools from six primary regions within the Inter-American Division of the General Conference of Seventh-day Adventists in the Caribbean. The sample drew from 17 schools in the Dominican Republic, 3 in Guadeloupe/ Martinique, 13 from Puerto Rico, 13 from Caribbean islands, and 9 from the Bahamas and Jamaica. The schools were categorized into two groups: "large" schools were identified as those with 100 or more students (n = 41) and "small" schools consisted of less than 100 students (n = 21). In order to ensure proportional representation of potential demographic differences (i.e. rural vs. urban) that may be present among the students attending these two types of schools, a stratified random sample of approximately one third of the schools from each of the two groups was selected using an online randomizing software program. The resulting sample included 13 large schools (n = 2,684 students) and 7 small schools (n = 447 students) for a total of 3,131 participants between the ages of 14-18 out of the possible 10,157 from the original 55 Adventist schools in the sampling region.

Procedure

This study used archival data and was exempt from IRB approval. The original study had full Loma Linda University IRB and Andrews University IRB approval as well as the full collaborative support of the Inter-American Division of the SDA church. A

training session was held in January, 2003 with Dr Carlos Archbold, who was Director of the Department of Education, General Conference, Inter-American Division Headquarters, and representatives from each of the regions to be studied. These representatives volunteered to be research assistants for the study and were responsible for implementing the study in their respective regions. During the instructional session, these volunteers were trained for implementing study procedures (i.e., consent/assent, confidentiality, debriefing, and alternate activity procedures) and the administration of the surveys in the schools in their respective regions. Care was taken to make certain that these individuals would not be known to participants, thus protecting anonymity.

Since 18 year olds are considered adults in the Caribbean, there was no attempt to acquire parental consent for their participation. These students were provided an informed consent form that explained the various aspects of the study and were asked to give written consent on the day of the survey administration in either English or Spanish.

All measures that are listed in the appendices include both English and Spanish versions. The appropriate version was given to all subjects depending on the language of their respective country. A passive parental consent procedure was used for students between the ages of 14 and 17. Cultural sensitivity required the selection of this consent procedure because in this setting, acquiring parental consent is a procedure foreign to customary practice. Thus our research collaborators from the Inter-American Division have explained that asking parents to give written consent would likely cause undue alarm and potentially jeopardize the study. At the very least, it would introduce significant sampling bias. As a compromise, study collaborators agreed that passive consent may be within cultural acceptance, thus protecting the integrity of the study and

allowing researchers to better estimate the prevalence of risk present in this study population.

In order to implement this passive consent procedure, students in this age range were distributed consent letters describing the nature, purpose, and importance of the study and asked to take them home to their parents approximately three days prior to their designated survey administration day. These letters were in the language of each respective participating country (i.e., English, Spanish). In the consent letter, parents were asked to sign and return the letter only if they did NOT want their child to participate in the survey. Contact information for an impartial third party, designated as the study representative (specifically the Director of Education for the Seventh-Day Adventist Church in each region), was provided in the consent letter in case parents wanted to express concerns or had questions. Students whose parents did not object to their participation were given a student assent form to indicate their willingness to volunteer for the study on the day of the survey administration. To ensure that no student felt pressured to participate or be stigmatized for not participating, all students met in their regular classrooms for the administration of the questionnaire. The students who were not participating were given a crossword puzzle packet to complete while their classmates worked on the survey.

At the time of the survey administration, participating students were encouraged to answer the questions honestly and were reminded of their anonymity. No identifiers were included in the survey and participants were instructed that no measures would ever be taken to identify them, regardless of their responses. In order to protect school anonymity between regions, students were instructed not to indicate the name of the

school they attended on their questionnaires. Rather, surveyors were provided with a code number for each school by the LLU/AU research team prior to survey implementation. Students were asked to write this number directly on their questionnaires. Participants were also told that they were free to skip any questions that may have made them uncomfortable. At the end of the survey, students were given a debriefing form designed to reduce any anxieties or discomforts aroused by the nature of the survey questions. In addition, the students were given a contact number for a resource person who might be of assistance if problems of questions arose.

Materials

Youth Risk Survey

The survey included demographic information such as age, gender, and ethnic group, body image and perception items, questions derived from the National Adolescent Student Health Survey (NASHS) assessing attitudes and normative beliefs about high-risk behaviors, and questions assessing the prevalence of risk behaviors in the adolescent population derived from the Center for Disease Control's (CDC) Youth Risk Behavior Survey (YRBS), which is used as part of the Youth Risk Behavior Surveillance System (YRBSS). Item responses on the questionnaire included circling the letter corresponding to the appropriate response, circling all responses that applied, supply requested information, and rating items on a Likert scale.

Body self-esteem. There were two items assessing body self-esteem. The first, appearance perception, was 'I like how I look' with the response options 'all of the time', 'most of the time', 'some of the time', and 'I never like how I look'. The second item,

weight perception, was 'Please circle one statement that best fits what you think of your weight' with the response options 'I think I am too skinny', 'I think my weight is normal', and 'I think I am fat'. Individuals who identify either as too skinny or fat as well as liking the way they look never or some of the time are considered as having low body self-esteem. Those who think their weight is normal and like the way they look all of the time or most of the time are considered to have high body self-esteem. These items have not been validated; however the items appear to have good face validity and thus measure the construct.

Attitudes about sexual behavior. The seven items assessing beliefs and attitudes regarding sexual behavior were selected from the National Adolescent Student Health Survey (NASHS). The NASHS was initiated in 1985 by the American Health Association, the Association for the Advancement of Health Education and the Society for Public Health Education. The NASHS includes items assessing for drug and alcohol use, suicide, violence, AIDS, STDs, nutrition, consumer skills, and injury prevention. The items were created by a panel of experts from each health area (Windle, 1992). The survey demonstrates good construct validity because it adequately samples within the construct of adolescent risk behaviors (Current Trends Results, 1989). The items assessing plans about sexual activity include beliefs about: peers having sex, length of dating time before engaging in sex, oral sex, condom usage, and pregnancy. These items, measured on a Likert scale, were added to form one composite scale representing beliefs and attitudes about sexual behavior.

Sexual plans. The five items assessing plans regarding future sexual activities are also derived from NASHS. These items ask about plans adolescents have regarding their

future sexual activity including: having sex at their current age, how long they will date before engaging in sex, how well they will know their partner, condom usage, and the ability to say no. As with the beliefs scale, these items, measured on a Likert scale, were added to form one composite scale representing plans about sexual behavior.

Sexual behaviors. The items measuring sexual behaviors were derived from the Youth Risk Behavior Surveillance System (YRBSS). The YRBSS contains six categories of health behavior: behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and STDs, including HIV infection; unhealthy dietary behaviors; and physical inactivity. The Center for Disease Control (CDC) has conducted two test-retest reliability studies on this measure both in 1992 and 2000 yielding in approximately three fourths of the items having a substantial or higher reliability (kappa = 61% - 100%). The YRBSS has been widely used and is considered a valid measure for assessing youth risk behaviors (Methodology of the Youth Risk Behavior Surveillance System, 2004). The 16 items used for this study range in type including open ended, multiple choice, and Likert scale items and ask about sexual activities the adolescents have engaged in prior to participation in the survey.

Results

Data Analysis

In order to test the proposed hypotheses, the data were screened by viewing histograms for each item included in the analyses. Histograms indicated that the data concerning sexual behaviors was positively skewed because most of the participants reported engaging in little or no sexual behavior. Exceptions included Age of First Intercourse, Number of Partners, and Length of Time Dating which were all negatively skewed indicating a tendency for most participants to engage in more conservative sexual behavior.

Data were further screened for outliers at the univariate level for the sexual variables. Any data points which were greater than 3.29 standard deviations from the mean were considered outliers and were omitted from further analysis. Using this criterion, 6 participants were identified as outliers and were omitted.

Gender and age were included as covariates in the second hypothesis to control for effects on sexual beliefs and plans. Because of this, both gender and age were accounted for in the hierarchical multiple regressions performed to test the second hypothesis in order to explore the effects of the covariates on the hypothesized variables. Changes in *R*-Square values were used to test the effects. In order to further test the second hypothesis, a Beliefs Scale was created using a composite score of the 5 variables associated with beliefs about sexual activity. One item was reverse coded. A Plans scale was created using a composite score of the 5 variables measuring plans regarding future sexual behaviors. Three of these items were reverse coded.

Table 1

Demographics of Sample

Variable	*N*	*mean*	*sd*	*%*
Gender				
Male	627			45.8
Female	724			52.9
No Response	18			1.3
Age	1344	15.54	1.56	
Ethnicity				
East Indian	31			2.3
Afro Caribbean	110			8.0
Chinese	11			0.8
White	134			9.8
Black	431			31.6
Mulatre	175			12.8
Indio	14			1.0
Hispanic	189			13.8
Puerto Rican	55			4.0
No Response	98			7.2
Other	117			8.6

Hypothesis 1: Gender and Risky Sexual Behaviors

In order to test the first hypothesis that males tend to engage in riskier sexual behaviors than females, independent samples *t*-tests were conducted to determine the relationship between gender and 7 variables measuring risky sexual behavior. A Bonferoni correction was conducted to correct for alpha resulting in a much more conservative *p* value of .007. Levene's tests demonstrated that the assumption of homogeneity of variance was not met for any of the 7 of the independent samples *t*-tests. The reason for the violation is because the data are not normally distributed. Most of the distributions were skewed because of a greater tendency for most of the participants to have indicated less risky behaviors with only 34.9% of participants having engaged in

intercourse at all. Because of this, the statistics reported are those of equal variances not assumed.

The results of the independent samples *t*-tests indicate that males and females differ significantly for 5 out of the 7 high risk variables with males engaging in riskier behaviors than females. For the remaining two, there was no significant difference between genders. Males reported less of a likelihood to say 'no' when someone asked them to have sex, t (975) = 3.66, $p < .001$. Males also reported dating a romantic partner for a shorter amount of time before engaging in intercourse, t (863) = -9.68, $p < .001$. Males were more likely than females to have ever engaged in sexual intercourse, t (1070) = -6.65, $p < .001$ and to having first engaged in sex at a younger age, t (407) = -7.48, $p < .001$. Males also had more life time partners than did females, t (247) = 4.79, $p < .001$. Males and females did not differ significantly with regards to the number of recent sexual partners or frequency of condom use. Means and standard deviations for each of the 7 risk variables can be found in Table 2.

Hypothesis 2: Body Self-Esteem as Predictor of Sexual Beliefs and Plans

Two hierarchical multiple regressions were performed to test the second hypothesis that Body Self-Esteem will predict sexual beliefs and plans. Age and gender were entered into the first step and the two body self-esteem variables were entered into the second step for both analyses. Regression results indicate that the overall model significantly predicted sexual beliefs, $F(2, 1116) = 33.44$, $p < .001$. However, after controlling for age and gender in the first step, neither appearance perception, $F(1, 1116) = -.08$, $p = .780$, nor weight perception $F(1, 1116) = -.003$, $p = .96$ significantly improved the predictive quality of the model, $\Delta R^2 = .000$, $p = .96$. The overall model for

Table 2

Mean Scores and Standard Deviations for Male and Female Scores on Risk Variables

Variable	*Mean*	*Standard Deviation*
Ever Said No to Sex*		
Male	0.91	0.80
Female	0.76	0.59
Length of Time Dating*		
Male	3.00	1.19
Female	3.58	0.78
Ever had Intercourse*		
Male	1.55	0.50
Female	1.73	0.44
Age of First Intercourse*		
Male	11.88	3.74
Female	14.26	2.69
Total Number of Partners*		
Male	8.63	20.06
Female	2.23	3.30
Recent Partners		
Male	3.15	13.94
Female	0.74	0.77
Frequency of Condom Use		
Male	2.94	1.16
Female	2.71	1.24

**Indicates a significant p value of < .007*

the second hierarchical regression significantly predicted sexual plans $F(2, 1116) = 19.30$, $p < .001$. However, after controlling for age and gender in the first step, neither appearance perception, $F(1, 1116) = -.06$, $p = .81$, nor weight perception $F(1, 1116) = -.87$, $p = .35$ did not significantly improve the predictive quality of the model, $\Delta R^2 = .001$, $p = .61$. Results for both regressions indicate that gender and age are significant predictors of sexual beliefs and plans. In order to determine if body self-esteem predicted plans or behaviors differently by gender, both hierarchical regressions were re-run separately for males and females. Age proved to be the only significant predictor of both

beliefs and plans regarding sexual behaviors. Body self-esteem was not predictive of risky plans or behaviors for either males or females.

Table 3
Summary of Hierarchical Regression for Sexual Beliefs Scale

Variables	*Df*	R^2	ΔR^2	ΔF	β	*P*
Step 1	2, 1118	.11	.11	66.94		
Age					.16	< .001
Gender					-.27	< .001
Step 2	2, 1116	.11	.00	.043		
Appearance Perception					-.28	.78
Weight Perception					-.05	.96

Table 4
Summary of Hierarchical Regression for Sexual Plans Scale

Variables	*Df*	R^2	ΔR^2	ΔF	β	*P*
Step 1	2, 1065	.07	.07	38.13		
Age					-.06	.04
Gender					-.26	< .001
Step 2	2, 1063	.07	.00	.50		
Appearance Perception					-.01	.81
Weight Perception					-.03	.35

Hypothesis 3: High Body Self-Esteem vs. Low Body Self-Esteem and Risky Behavior

In order to test the third hypothesis that adolescents with high body self-esteem will engage in more sexual behavior but those with lower body self-esteem will engage in riskier behavior, two discriminate function analyses and a survival analysis were conducted. The first discriminate function analysis was performed to determine the ability of 7 variables – Ever Said No to Sex, Length of Time Dating, Ever had

Intercourse, Age of First Intercourse, Total Number of Partners, Recent Partners, and Frequency of Condom Use – to predict Appearance Perception. The analysis generated three functions with neither the first, $\Lambda = .94$, $\chi^2(21) = 19.76$, $p = .54$,the second, $\Lambda = .96$, $\chi^2(12) = 11.47$, $p = .490$, nor the third function, $\Lambda = .98$, $\chi^2(5) = 5.32$, $p = .38$ producing significant results. A second discriminate function analysis was performed to determine the ability of the same 7 variables to predict Weight Perception. The analysis generated two functions with neither the first, $\Lambda = .96$, $\chi^2(14) = 14.08$, $p = .44$, nor the second function, $\Lambda = .99$, $\chi^2(6) = 3.73$, $p = .71$ producing significant results. Thus, body self-esteem did not predict any of the seven sexual behaviors.

Table 5

Results for DFA Computed on Appearance Perception

Function	Eigenvalue	% of Variance	Canonical Correlation	Wilks' λ	χ^2	*df*	*P*
1	.03	42.1	.16	.94	19.76	21	.54
2	.02	31.1	.14	.96	11.47	12	.49
3	.02	26.9	.13	.98	5.32	5	.38

Table 6

Results for DFA Computed on Weight Perception

Function	Eigenvalue	% of Variance	Canonical Correlation	Wilks' λ	χ^2	*df*	*P*
1	.03	73.7	.18	.96	14.08	14	.44
2	.01	26.3	.11	.99	3.73	6	.71

A Cox regression analysis was performed to assess the impact of the body self-esteem variables on age of first intercourse. This was determined by assessing the event variable, Age of Intercourse, with the time variable, current Age of the participant. No data had to be censored because attrition was not an issue with this study. The model was not significant, $\chi^2(4) = 1.53$, $p = 84$, indicating that as a set, the body self-esteem predictors do not distinguish between those who have had sex in their lifetime and those who have not. Table 7 provides additional statistics.

Table 7

Cox Regression Analysis of Perception Variables on the DV Ever Had Sex

Variable	β	SE	Wald χ^2	*df*	*p*	HR	95% CI
Like Looks Usually	-.07	.42	.03	1	.86	.93	.41 – 2.10
Like Looks Sometimes	-.03	.42	.00	1	.95	.97	.43 – 2.21
Like Looks Rarely	-.17	.43	.16	1	.68	.84	.36 – 1.94
Weight Perception	.08	.10	.61	1	.44	1.08	.89 – 1.32

Discussion

In contrast to expectations, this study did not identify an association between specific measures of body self-esteem and risk sexual behaviors. This is the case with both body perception and weight perception. The variables that consistently had the strongest relationship with sexual risk taking were gender and age. Males consistently reported more frequent and riskier sexual behaviors than females. Also, as is consistent with the literature on adolescent sexual behaviors, older individuals participated in more sexual activity than younger individuals.

The high prevalence of HIV/AIDS in the Caribbean indicates a pressing need to assess and understand risk behaviors in order to develop meaningful and effective interventions. This is especially the case with adolescents because it is during adolescence that many individuals first participate in risk behaviors. Risky sexual behavior is perhaps one of the most important risk behaviors to consider because it is one of the most common methods of HIV transmission. Approximately one third of Caribbean adolescents are sexually active and of those individuals, most first initiated intercourse before they reached the age of 13 (Ohene, Ireland & Blum, 2005). Sexual behavior is particularly difficult to predict because there are several different social, cultural, internal, and external factors that may influence it. By examining self-esteem that pertains specifically to the body, it is possible to determine if this internal factor is a major predictor in a risk behavior that has been known to exacerbate the spread of HIV/AIDS. This study provided a unique opportunity to examine the risk behaviors of Caribbean adolescents in order to examine potential relationships between body self-esteem can predict sexual behavior.

The first hypothesis of this study was to determine if risky sexual behavior differed according to gender. Results from the study indicate that males did engage in significantly riskier behavior than females for 5 of the 7 sexual risk variables. More males reported ever having had sex, said no to sex less often, dated a partner for a shorter period of time before initiating intercourse, initiated sex at a younger age, and had more lifetime partners than females. There was no significant difference between genders on the items assessing the number of recent partners or the frequency of condom use.

Males and females may not have differed significantly in the number of recent sexual partners because the variable only asked for the number of partners in the three months prior to the study. Only a third of the study's participants were sexually active with most of the sexually active individuals having one or two partners rather than several. Most of the participants, male or female, did not have intercourse with enough people in the three months prior to the study to create a significant difference between the genders.

The literature on adolescent condom use is varied. In their 2007 national report, the CDC found that female adolescents are more likely than males to use condoms (Center for Disease Control, 2007); however in a 2008 report, the CDC reported that males consistently reported more frequent condom use than females (Center for Disease Control, 2008). In this study's Caribbean population, males did report more frequent condom use; however the difference was not statistically significant. This may be due to the reluctance of males to use condoms and the stigma against females purchasing condoms (Voisin & Dillon-Remy, 2001).

Gender and age were treated as covariates in the analyses testing the second hypothesis. Both covariates proved to be significant predictors of both risky beliefs and plans regarding adolescent sexual behavior. Males reported both significantly riskier beliefs and plans than females. In terms of age, older individuals reported riskier beliefs regarding sexual behavior; however younger individuals reported having riskier plans regarding future behaviors.

The premise of the second hypothesis was that body self-esteem would predict risky beliefs and plan regarding sexual behavior. Result showed that neither appearance perception nor weight perception were able to significantly predict either behaviors or plans. Levels of body self-esteem were also not related to any particular risk taking variable. In other words, those with high body self-esteem did not differ significantly from those with poor body self-esteem in terms risky sexual behaviors. Although the variables of interest did not add significant predictive power to either model, both models did significantly predict both beliefs and plans about sexual behaviors, primarily due to the associations of age and gender. To further investigate the findings that gender was such a significant predictor in both models, the same analyses were rerun separately according to gender, but the results did not differ significantly from the original analyses.

Lastly, neither of the two body self-esteem variables predicted which adolescents would engage in more sexual behavior and which would engage in riskier behavior. Also, neither body self-esteem variable was able to predict the hazard of early age sexual initiation. Overall, body self-esteem was not a significant predictor of sexual risk taking in this population of Caribbean adolescents. It is possible that the lack of significant findings may be due an inadequacy of the two item body self-esteem measure to

encompass the construct and/or because the sample contained relatively low rates of sexual behaviors.

Past research on the ability of self-esteem and body satisfaction to predict sexual risk taking has provided varied findings. Most researchers believe that self-esteem does act as a protective factor against some risk behaviors such as suicidal tendencies, drug use, alcohol use, and cigarette smoking (Wild, Flisher, Bhana, & Lombard, 2004). There is also research that supports the influence of body self-esteem on sexual risk taking; that those with higher self-esteem and body satisfaction engage in more sexual behavior on average, but it is those with lower self-esteem who engage in riskier sexual behavior (Ackard, Kearny-Cooke, & Peterson, 2003; Gillen, Lefkowitz, & Shearer, 2006). Other studies find that self-esteem, separate from body satisfaction, is a protective factor against some sexual risk behaviors including early initiation of sex, sporadic condom use, lack of contraception use, and unplanned pregnancy, but is a risk factor for an increased number of sexual partners (Kirby, Lepore & Ryan, 2005). These studies show conflicting results. In some cases, having high body satisfaction is related to having more sexual partners, whereas in others, high body satisfaction is considered a protective factor against risky behaviors like multiple partners (Gillen, Lefkowitz & Shearer, 2006). These contradictory findings indicate that it may be difficult to parse out findings.

A meta-analysis (Kirbv, Lepore, & Ryan, 2005) of 400 articles involving protective and risk factors of sexual risk taking identified having an organized community, lacking the presence of violence, substance abuse, and hunger, belonging to a supportive, intact family with higher education and income, being more religious and attending religious services, having peers and friends who do not abuse substances,

engage in negative behaviors, and have a favorable attitude towards condom and contraception use, and having romantic partners of the same age who support condom and contraceptive use as protective factors. Some risk factors included early puberty, substance use, involvement in gangs, aggression, involvement in sensation seeking behavior, increased amounts of emotional distress, poor family situations, and having older romantic partners. Body self-esteem was not among the mentioned protective or risk factors in this meta-analysis indicating that this variable is either not widely studied or hasn't had a notable effect on the risk behavior in either direction.

Several factors affect sexual risk taking in adolescents, and the degree to which any one factor may influence risky choices can vary greatly from adolescent to adolescent. Self-esteem and body satisfaction have been found to influence sexual risk behaviors in some studies, but not in others, as is the case with the current study. It is possible that body self-esteem was not a significant predictor of sexual risk taking in specifically a Caribbean population because body image is different in the Caribbean than in many other Western countries like the United States.

Although it is not as big a problem in the Caribbean as in the United States, obesity is an issue in the region. Nearly one third of Americans are obese, meaning they have a body mass index (BMI) of over 30, whereas obesity ranges from as low as 1.1% in Haiti to a high 40% in Barbados (World Health Organization, 2009). Even in the Caribbean countries with a high obesity weight, being overweight or obese does not carry the same negative stigma as it does in the US; in fact, it is often considered a sign of wealth and sometimes happiness (Simeon et al., 2003). The difference in weight

perception may account for that variable's inability to predict risk behaviors because it is not as important of a stressor on Caribbean adolescents as it is on American adolescents.

Limitations

Several limitations reduce the ability of these results to be generalized to the general population. This study was conducted using a population of adolescents who attended religious secondary schools. It is possible that the religious social environment acts as a protective factor against engaging in risky sexual behaviors. Religion and regular attendance of religious services have been identified as a protective factor against sexual risk taking (Kirby, Lepore, & Ryan, 2005). Also, only a little over a third of the study sample indicated ever having engaged in sexual intercourse which may have affected the overall results. Because two thirds of the respondents hadn't engaged in intercourse, it may have affected the ability to assess the hypothesis that body self-esteem can influence both the amount and the riskiness of behavior in which adolescents will engage. Some of the items lacked variability with more individuals reporting liking their appearance than not. This goes along with the idea that Caribbean adolescents are less affected by their body image than American adolescents. Also, in some cases, being heavier is a positive aspect signifying wealth and happiness (Simeon et al., 2003). If this is indeed the case with this sample, then having the perception of being overweight doesn't necessarily reflect body dissatisfaction. This difference in perception from many American studies could explain why this study's measure of body self-esteem was not a good predictor of risky sexual behavior. It is possible that the two items measuring body self-esteem may have negated each other.

Implications and Future Directions

The findings of this study indicate that body self-esteem is not a strong predictor of sexual risk-taking in Caribbean adolescents. It is possible that a different measure of body self-esteem could yield in significant results. Because of the difference in weight perception between individuals in the Caribbean and individuals in the United States, considering other factors of appearance besides weight may create a better measure for assessing body self-esteem. Gender was a strong predictor in both of the first two hypotheses and should be an important consideration when developing any policies related to sexual risk taking in this population. In the battle against HIV/AIDS in the Caribbean, researchers need to identify protective and risk factors that strongly predict sexual risk taking in this population in order to create policies that will affectively fight the problem. In the future, other environmental as well as personal factors need to be identified and studied including community, familial, peer, and internal factors.

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Items and Scales

Demographics

How old are you? _____

What is your gender?

1. Male
2. Female

Body Self Esteem Variables

I like how I look (circle one):

1. all of the time
2. most of the time
3. some of the time
4. I never like how I look

Please circle the one statement that best fits what you think of your weight

1) I think I am too skinny
2) I think my weight is normal
3) I think I am fat

Belief Scale Items

I Believe That:

		Strongly Agree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
a.	It is OK for people my age to have sex	1	2	3	4	5
b.	It is OK for people my age to have sex with someone they have dated for a long time	1	2	3	4	5
c.	It is OK for people my age to have sex with someone they do not know very well	1	2	3	4	5
d.	Using condoms to prevent pregnancy or infections makes it OK for people my age to have sex	1	2	3	4	5
e.	People my age should use condoms if they have sex*	1	2	3	4	5

*Reverse coded item

Plans Scale

I Plan to:

		Strongly Agree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
a.	Have sex at my age	1	2	3	4	5
b.	Have sex at my age *only* if I have dated my partner for a long time*	1	2	3	4	5
c.	Have sex with someone *even if* we do not know each other very well	1	2	3	4	5
d.	Use condoms when I have sex*	1	2	3	4	5
e.	Say "NO" to having sex if I don't want to have sex*	1	2	3	4	5

*Reverse coded item

Risk Behavior Items

1. Have you ever said "NO" to someone who has asked you to have sex?
    1. Yes
    2. No
    3. No one has asked*

*Item deleted from analysis

2. How long do you usually date someone before having sex?
    1. A few days
    2. A few months
    3. More than 6 months
    4. I don't have sex*

*Item recoded with lowest weight

3. Have you ever had sexual intercourse
    1. Yes
    2. No

4. How old were you when you had sexual intercourse for the first time? (Please provide a number)
    a. I was ____ years old

5. During your life, how many people have you had sexual intercourse with? (Write a number)
    With _____ people

6. During the past 3 months, with how many people have you had sexual intercourse?
    a. With _____ people (Write "0" if you have not had sexual intercourse in the last 3 months)

7. How often do you use a condom when you have sex?
    1. Never
    2. Sometimes
    3. Often
    4. Always

Frequencies and Percentages for Body Self-Esteem Variables

Appearance Perception

Level	Frequency	Percent
I like how I look all of the time	553	42.3%
I like how I look most of the time	496	37.0%
I like how I look some of the time	255	19.0%
I never like how I look	35	2.6%

Weight Perception

Level	Frequency	Percent
I think I am too skinny	146	10.9%
Weight is normal	975	72.1%
I am fat	229	16.9%

IRB Approval Form

INSTITUTIONAL REVIEW BOARD

Exempt Notice

IRB# 59050

OFFICE OF SPONSORED RESEARCH • 11155 Anderson Street • Loma Linda, CA 92350
(909) 558-4931 (voice) • (909) 558-0131 (fax)

To: **Freier-Randall, Kiti**

Department: **Psychology**

Protocol: *An analysis of risk behaviors and protective factors of youth in Seventh-day Adventist schools in the Caribbean: an application of a theory-based behavioral model*

Your application for the research protocol indicated above was reviewed administratively on behalf of the IRB. This protocol is determined to be exempt from IRB approval as outlined in federal regulations for protection of human subjects, 45 CFR Part 46.101(b)(4).

Stipulations:

Please note the PI's name and the IRB number assigned to this IRB protocol (as indicated above) on any future communications with the IRB. Direct all communications to the IRB c/o the Office of Sponsored Research.

Although this protocol is exempt from further IRB review as submitted, it is understood that all research conducted under the auspices of Loma Linda University will be guided by the highest standards of ethical conduct.

Signature of IRB Chair/Designee: R L Rigsby Date: 3/16/09

Chair:
les L. Rigsby, M.D.
artment of Medicine
) 558-2341, rigsby@llu.edu

IRB Administrator:
Linda G. Halstead, M.A., Director
Office of Sponsored Research
Ext 43570, Fax 80131, lhalstead@llu.edu

IRB Specialist:
Mark Testerman
Office of Sponsored Research
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[School/Department of Education Letterhead-Grenada]

An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model

LOMA LINDA UNIVERSITY
Parental Consent (Passive)

We would like your permission to invite your son/daughter to participate in a research study entitled: "An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model." Your son/daughter is invited to participate in this study because they are currently a student at a Seventh Day Adventist school. This study is conducted by the collaborative efforts of Loma Linda University and the Inter-American Division of the General Conference. Loma Linda University is a health sciences campus in California. Researchers from the Departments of Public Health and Psychology at Loma Linda University are involved in a number of studies regarding adolescent high-risk behaviors in various international samples.

Purpose
The purpose of this study is to learn more about the attitudes of young people regarding behaviors that might potentially be harmful to their health. It is very important to understand the attitudes and behaviors of adolescents that may put their health at risk so that we can develop ways to help prevent such risks.

Procedure
With your consent, your son or daughter will be given an anonymous questionnaire in class asking his/her opinions on beliefs of health issues related to tobacco, drug abuse, alcohol consumption, and sexuality. Participation in the study will take about an hour.

Risks
The types of questions your son or daughter will be asked may be sensitive. However, your child may stop at any time or may choose not to answer questions. Any information your son/daughter reveals on this questionnaire will remain completely anonymous, and no effort will ever be made to identify him/her.

Benefits
The benefits to your son or daughter are that they will become aware of the potential danger of some behaviors. Furthermore, the data gathered from this study will be used to understand the needs of adolescents in future prevention and education programs. This data will also be used by the Inter-American Division in strategic planning of education policies for the Caribbean.

Confidentiality
No attempts will ever be made to identify individual responses by the researchers or your teachers. No one will be asked any identifiable information. In other words, no one will ever know your answers to the questions. All of the results will be summarized so that no one can be personally identified. No one will ever know what you report on the survey.

Participants' Rights
You are free to withdraw from this study at any time. Participation is completely voluntary and has no impact on academic performance in school.

Impartial Third Party Contact
If you wish to contact an impartial third party not associated with this study regarding any complaint you may have about the study, you may reach Christopher Williams at 809-442-7450.

Informed Consent
Please read the following and sign below for consenting to your participation in this study:

"I have read the contents of the consent form. My questions concerning this study have been answered to my satisfaction. I hereby give voluntary consent for my participation in this study. Signing this consent document does not waive my rights nor does it release the investigators, institution or sponsors from their responsibilities. I may call counselor Gloria Trotman at 868-622-2514 if I have additional questions or concerns."

Signature of Student	Date	Name of Student
_____	_____	_____

[School/Department of Education Letterhead-Puerto Rico]

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Impartial Third Party Contact
If you wish to contact an impartial third party not associated with this study regarding any complaint you may have about the study, you may reach Dr. Moises Velazquez at 787-834-6161.

Informed Consent
Please read the following and sign below for consenting to your participation in this study:

"I have read the contents of the consent form. My questions concerning this study have been answered to my satisfaction. I hereby give voluntary consent for my participation in this study. Signing this consent document does not waive my rights nor does it release the investigators, institution or sponsors from their responsibilities. I may call Pedro Fernandez at 787- 834-5274 if I have additional questions or concerns."

Signature of Student	Date	Name of Student
_____	_____	_____

[School/Department of Education Letterhead-Grenada]

LOMA LINDA UNIVERSITY

An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model

Informed Consent

We invite you to participate in a research study titled: "An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model". You are invited to participate in this study because you are a student who is currently attending a Seventh Day Adventist school. This study is conducted by Loma Linda University in California, the Inter-American Division of the SDA church and your school. This study is part of a number of studies regarding adolescent high-risk behaviors in around the world.

Purpose

The purpose of this study is to learn more about the attitudes of young people regarding behaviors some of which might potentially be harmful to their health. We feel that it is very important to understand the attitudes and behaviors of adolescents. Knowledge of the attitudes and behaviors of young people may allow us develop ways to help prevent health risks.

Procedure

With your consent, you will be given a questionnaire in class asking your opinions on beliefs of health issues related to tobacco, drug use, alcohol consumption, and sexuality. Participation in the study will take about an hour.

Risks

The types of questions you will be asked are sensitive and may cause some discomfort. However, you may stop at any time. Any information you reveal on this questionnaire will remain completely anonymous, and no effort will ever be made to identify you.

Benefits

You may benefit from participating in this study by becoming aware of the potential danger of some behaviors. The data gathered from this study will be used to understand the needs of adolescents. The results from this study will be summarized and presented to those involved by the research team, including the students who participate and their parents. This data will also be used in making future prevention and education programs and in determining policy for strategic HIV/AIDS planning in the Caribbean.

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Signature of Parent or Guardian	Date	Name of Child
_____	_____	_____

[School/Department of Education Letterhead-Trinidad]

An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model

LOMA LINDA UNIVERSITY
Parental Consent (Passive)

We would like your permission to invite your son/daughter to participate in a research study entitled: "An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model." Your son/daughter is invited to participate in this study because they are currently a student at a Seventh Day Adventist school. This study is conducted by the collaborative efforts of Loma Linda University and the Inter-American Division of the General Conference. Loma Linda University is a health sciences campus in California. Researchers from the Departments of Public Health and Psychology at Loma Linda University are involved in a number of studies regarding adolescent high-risk behaviors in various international samples.

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The purpose of this study is to learn more about the attitudes of young people regarding behaviors that might potentially be harmful to their health. It is very important to understand the attitudes and behaviors of adolescents that may put their health at risk so that we can develop ways to help prevent such risks.

Procedure
With your consent, your son or daughter will be given an anonymous questionnaire in class asking his/her opinions on beliefs of health issues related to tobacco, drug abuse, alcohol consumption, and sexuality. Participation in the study will take about an hour.

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Benefits
The benefits to your son or daughter are that they will become aware of the potential danger of some behaviors. Furthermore, the data gathered from this study will be used to understand the needs of adolescents in future prevention and education programs. This data will also be used by the Inter-American Division in strategic planning of education policies for the Caribbean.

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Impartial Third Party Contact
If you wish to contact an impartial third party not associated with this study regarding any complaint you may have about the study, you may reach Ian Green at 868-662-5356.

Informed Consent
Please read the following and sign below and return this portion of the form to the school ONLY if you do NOT want your son or daughter to participate in this study. If you do not sign and return this form, your child will be permitted to participate in the study.

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Signature of Parent or Guardian _____ Date _____ Name of Child _____

[School/Department of Education Letterhead-St. Lucia]

An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model

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Impartial Third Party Contact
If you wish to contact an impartial third party not associated with this study regarding any complaint you may have about the study, you may reach Donovan Rene at 758-451-8657.

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[School/Department of Education Letterhead-St. Lucia]

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Signature of Student	Date	Name of Student
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The purpose of this study is to learn more about the attitudes of young people regarding behaviors that might potentially be harmful to their health. It is very important to understand the attitudes and behaviors of adolescents that may put their health at risk so that we can develop ways to help prevent such risks.

Procedure

With your consent, you will be given a questionnaire in class asking your opinions on beliefs of health issues related to tobacco, drug use, alcohol consumption, and sexuality. Participation in the study will take about an hour.

Risks

The types of questions you will be asked are sensitive and may cause some discomfort. However, you may stop at any time. Any information you reveal on this questionnaire will remain completely anonymous, and no effort will ever be made to identify you.

Benefits

The benefits you may gain from participating in this study are that you will become aware of the potential danger of some behaviors. Furthermore, the data gathered from this study will be used to understand the needs of adolescents in future prevention and education programs. The results will be summarized and presented to all parties involved by the research team, including the participants and their parents. This data will also be used in determining policy for strategic HIV/AIDS planning in the Caribbean.

Confidentiality
No attempts will ever be made to identify individual responses by the researchers or your teachers. No one will be asked any identifiable information. In other words, no one will ever know your answers to the questions. All of the results will be summarized so that no one can be personally identified. No one will ever know what you report on the survey.

Participants' Rights
You are free to withdraw from this study at any time. Participation is completely voluntary and has no impact on academic performance in school.

Impartial Third Party Contact
If you wish to contact an impartial third party not associated with this study regarding any complaint you may have about the study, you may reach Cheryl Rolle at 242-341-4021.

Informed Consent
Please read the following and sign below for consenting to your participation in this study:

"I have read the contents of the consent form. My questions concerning this study have been answered to my satisfaction. I hereby give voluntary consent for my participation in this study. Signing this consent document does not waive my rights nor does it release the investigators, institution or sponsors from their responsibilities. I may call counselor Barrington Brennen at 242-361-6355 if I have additional questions or concerns."

Signature of Student	Date	Name of Student
_____	_____	_____

[School/Department of Education Letterhead-Bahamas]

LOMA LINDA UNIVERSITY

An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model

Informed Consent

We invite you to participate in a research study titled: "An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model". You are invited to participate in this study because you are a student who is currently attending a Seventh Day Adventist school. This study is conducted by Loma Linda University in California, the Inter-American Division of the SDA church and your school. This study is part of a number of studies regarding adolescent high-risk behaviors in around the world.

Purpose

The purpose of this study is to learn more about the attitudes of young people regarding behaviors some of which might potentially be harmful to their health. We feel that it is very important to understand the attitudes and behaviors of adolescents. Knowledge of the attitudes and behaviors of young people may allow us develop ways to help prevent health risks.

Procedure

With your consent, you will be given a questionnaire in class asking your opinions on beliefs of health issues related to tobacco, drug use, alcohol consumption, and sexuality. Participation in the study will take about an hour.

Risks

The types of questions you will be asked are sensitive and may cause some discomfort. However, you may stop at any time. Any information you reveal on this questionnaire will remain completely anonymous, and no effort will ever be made to identify you.

Benefits

You may benefit from participating in this study by becoming aware of the potential danger of some behaviors. The data gathered from this study will be used to understand the needs of adolescents. The results from this study will be summarized and presented to those involved by the research team, including the students who participate and their parents. This data will also be used in making future prevention and education programs and in determining policy for strategic HIV/AIDS planning in the Caribbean.

Confidentiality
No attempts will ever be made to identify individual responses by the researchers or their teachers. No one will be asked any identifiable information. The results will be summarized so that no one can be personally identified. No one will ever know what your son or daughter reports on the survey.

Participants' Rights
Your son or daughter is free to withdraw from this study at any time. Participation is completely voluntary and has no impact on academic performance in school.

Impartial Third Party Contact
If you wish to contact an impartial third party not associated with this study regarding any complaint you may have about the study, you may reach Norma Miles at 246-426-8994.

Informed Consent
Please read the following and sign below and return this portion of the form to the school ONLY if you do NOT want your son or daughter to participate in this study. If you do not sign and return this form, your child will be permitted to participate in the study.

"I have read the contents of this form. My questions concerning this study have been answered to my satisfaction. It is assumed that my child will participate in this study unless I sign and return this form to my child's school prior to the administration of the survey, which will take place on [date to be inserted by each school]. My son or daughter's participation does not waive my rights and nor does it release the investigators, institutions or sponsors of this project from their responsibilities. I may call counselor Francina Griffiths at 246-422-3566 if I have additional questions or concerns."

Signature of Parent or Guardian	Date	Name of Child
_____	_____	_____

[School/Department of Education Letterhead-Dominica]

An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model

LOMA LINDA UNIVERSITY
Parental Consent (Passive)

We would like your permission to invite your son/daughter to participate in a research study entitled: "An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model." Your son/daughter is invited to participate in this study because they are currently a student at a Seventh Day Adventist school. This study is conducted by the collaborative efforts of Loma Linda University and the Inter-American Division of the General Conference. Loma Linda University is a health sciences campus in California. Researchers from the Departments of Public Health and Psychology at Loma Linda University are involved in a number of studies regarding adolescent high-risk behaviors in various international samples.

Purpose
The purpose of this study is to learn more about the attitudes of young people regarding behaviors that might potentially be harmful to their health. It is very important to understand the attitudes and behaviors of adolescents that may put their health at risk so that we can develop ways to help prevent such risks.

Procedure
With your consent, your son or daughter will be given an anonymous questionnaire in class asking his/her opinions on beliefs of health issues related to tobacco, drug abuse, alcohol consumption, and sexuality. Participation in the study will take about an hour.

Risks
The types of questions your son or daughter will be asked may be sensitive. However, your child may stop at any time or may choose not to answer questions. Any information your son/daughter reveals on this questionnaire will remain completely anonymous, and no effort will ever be made to identify him/her.

Benefits
The benefits to your son or daughter are that they will become aware of the potential danger of some behaviors. Furthermore, the data gathered from this study will be used to understand the needs of adolescents in future prevention and education programs. This data will also be used by the Inter-American Division in strategic planning of education policies for the Caribbean.

 _____ please initial

Confidentiality
No attempts will ever be made to identify individual responses by the researchers or your teachers. No one will be asked any identifiable information. In other words, no one will ever know your answers to the questions. All of the results will be summarized so that no one can be personally identified. No one will ever know what you report on the survey.

Participants' Rights
You are free to withdraw from this study at any time. Participation is completely voluntary and has no impact on academic performance in school.

Impartial Third Party Contact
If you wish to contact an impartial third party not associated with this study regarding any complaint you may have about the study, you may reach Marino Contreras at 809-227-1988.

Informed Consent
Please read the following and sign below for consenting to your participation in this study:

"I have read the contents of the consent form. My questions concerning this study have been answered to my satisfaction. I hereby give voluntary consent for my participation in this study. Signing this consent document does not waive my rights nor does it release the investigators, institution or sponsors from their responsibilities. I may call counselor Rosa Isela Ulloa at 809-685-1955 if I have additional questions or concerns."

Signature of Student	Date	Name of Student
_____	_____	_____

[School/Department of Education Letterhead-Dominican Republic]

LOMA LINDA UNIVERSITY

An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model

Informed Consent

We invite you to participate in a research study titled: "An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model". You are invited to participate in this study because you are a student who is currently attending a Seventh Day Adventist school. This study is conducted by Loma Linda University in California, the Inter-American Division of the SDA church and your school. This study is part of a number of studies regarding adolescent high-risk behaviors in around the world.

Purpose

The purpose of this study is to learn more about the attitudes of young people regarding behaviors some of which might potentially be harmful to their health. We feel that it is very important to understand the attitudes and behaviors of adolescents. Knowledge of the attitudes and behaviors of young people may allow us develop ways to help prevent health risks.

Procedure

With your consent, you will be given a questionnaire in class asking your opinions on beliefs of health issues related to tobacco, drug use, alcohol consumption, and sexuality. Participation in the study will take about an hour.

Risks

The types of questions you will be asked are sensitive and may cause some discomfort. However, you may stop at any time. Any information you reveal on this questionnaire will remain completely anonymous, and no effort will ever be made to identify you.

Benefits

You may benefit from participating in this study by becoming aware of the potential danger of some behaviors. The data gathered from this study will be used to understand the needs of adolescents. The results from this study will be summarized and presented to those involved by the research team, including the students who participate and their parents. This data will also be used in making future prevention and education programs and in determining policy for strategic HIV/AIDS planning in the Caribbean.

Confidentiality
No attempts will ever be made to identify individual responses by the researchers or your teachers. No one will be asked any identifiable information. In other words, no one will ever know your answers to the questions. All of the results will be summarized so that no one can be personally identified. No one will ever know what you report on the survey.

Participants' Rights
You are free to withdraw from this study at any time. Participation is completely voluntary and has no impact on academic performance in school.

Impartial Third Party Contact
If you wish to contact an impartial third party not associated with this study regarding any complaint you may have about the study, you may reach Errol Thomas at 876-625-9895.

Informed Consent
Please read the following and sign below for consenting to your participation in this study:

"I have read the contents of the consent form. My questions concerning this study have been answered to my satisfaction. I hereby give voluntary consent for my participation in this study. Signing this consent document does not waive my rights nor does it release the investigators, institution or sponsors from their responsibilities. I may call counselor Dr. Grace Kelly at 876-523-2252 if I have additional questions or concerns."

Signature of Student	Date	Name of Student
_____	_____	_____

[School/Department of Education Letterhead-Jamaica]

LOMA LINDA UNIVERSITY

An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model

Informed Consent

We invite you to participate in a research study titled: "An assessment of at risk health behaviors and protective factors of youth in Seventh Day Adventist schools in the Caribbean: An application of a theory based behavioral model". You are invited to participate in this study because you are a student who is currently attending a Seventh Day Adventist school. This study is conducted by Loma Linda University in California, the Inter-American Division of the SDA church and your school. This study is part of a number of studies regarding adolescent high-risk behaviors in around the world.

Purpose

The purpose of this study is to learn more about the attitudes of young people regarding behaviors some of which might potentially be harmful to their health. We feel that it is very important to understand the attitudes and behaviors of adolescents. Knowledge of the attitudes and behaviors of young people may allow us develop ways to help prevent health risks.

Procedure

With your consent, you will be given a questionnaire in class asking your opinions on beliefs of health issues related to tobacco, drug use, alcohol consumption, and sexuality. Participation in the study will take about an hour.

Risks

The types of questions you will be asked are sensitive and may cause some discomfort. However, you may stop at any time. Any information you reveal on this questionnaire will remain completely anonymous, and no effort will ever be made to identify you.

Benefits

You may benefit from participating in this study by becoming aware of the potential danger of some behaviors. The data gathered from this study will be used to understand the needs of adolescents. The results from this study will be summarized and presented to those involved by the research team, including the students who participate and their parents. This data will also be used in making future prevention and education programs and in determining policy for strategic HIV/AIDS planning in the Caribbean.

Confidentiality
No attempts will ever be made to identify individual responses by the researchers or their teachers. No one will be asked any identifiable information. The results will be summarized so that no one can be personally identified. No one will ever know what your son or daughter reports on the survey.

Participants' Rights
Your son or daughter is free to withdraw from this study at any time. Participation is completely voluntary and has no impact on academic performance in school.

Impartial Third Party Contact
If you wish to contact an impartial third party not associated with this study regarding any complaint you may have about the study, you may reach Christopher Williams at 809-442-7450.

Informed Consent
Please read the following and sign below and return this portion of the form to the school ONLY if you do NOT want your son or daughter to participate in this study. If you do not sign and return this form, your child will be permitted to participate in the study.

"I have read the contents of this form. My questions concerning this study have been answered to my satisfaction. It is assumed that my child will participate in this study unless I sign and return this form to my child's school prior to the administration of the survey, which will take place on [date to be inserted by each school]. My son or daughter's participation does not waive my rights and nor does it release the investigators, institutions or sponsors of this project from their responsibilities. I may call counselor Gloria Trotman at 868-622-2514 if I have additional questions or concerns."

Signature of Parent or Guardian _____ Date _____ Name of Child _____

[School/Department of Education Letterhead-Puerto Rico]

Student Assent

You are invited to participate in a research study about your attitudes and behaviors. In this survey you will be asked about your attitudes and beliefs regarding some behaviors, which can be harmful to your health. The survey will take about an hour to complete.

The types of questions you will be asked may be sensitive. For example, you will be asked what you think of drinking alcohol, using drugs, or behaving sexually with someone. You may stop at any time if you find yourself becoming uncomfortable.

Whether or not you decide to participate in the study will not impact your grades in school.

Neither your parents, nor your teachers will ever have access to the answers you provide on this questionnaire. Furthermore, we ask that you do not provide your name on the survey forms since this study will be conducted anonymously.

Please know that your participation is completely voluntary. If you choose not to participate, please work on the puzzles at the end of your packet.

If you have read this form, agree to participate in the study, and have had all of your questions answered by one of the assistants, please sign your name at the bottom. We thank you for your participation in this study.

_____ _____

Signature of Student Date

[Logo de la Escuela o Departamento de Educación-Puerto Rico]

Consentimiento del alumno

Te invitamos a participar en una investigación acerca de tus actitudes y conductas. En este estudio se te preguntará acerca de tus actitudes y creencias con respecto a ciertos comportamientos que pueden ser de perjuicio para tu salud. Tomará aproximadamente una hora contestar la encuesta.

El tipo de preguntas que se te harán son de naturaleza sensible o delicada. Por ejemplo, se te preguntará qué crees con respecto a consumir bebidas alcohólicas, drogas o tener relaciones sexuales con alguien.

El hecho de que decidas o no participar en el estudio, no tendrá ningún impacto sobre tus calificaciones en la escuela.

Ni tus padres ni tus maestros tendrán acceso a las respuestas que das en el cuestionario. Más aun, te pedimos que no anotes tu nombre en el formulario de la encuesta siendo que se trata de un estudio que se llevará a cabo en forma anónima.

Por favor recuerda que tu participación es completamente voluntaria. Si eliges no participar, siéntete libre de utilizar los acertijos que aparecen al final de la encuesta.

Si has leído esta información, estás dispuesto a participar en el estudio y han sido contestadas todas tus preguntas por los asistentes, firma el documento en el espacio indicado al final del mismo. Te agradecemos por tu participación en este estudio.

Firma del alumno	Fecha	Nombre del alumno
_____	_____	_____

[Logo de la Escuela o Departamento de Educación-Puerto Rico]

Nos gustaría solicitar su permiso para que su hijo(a) participe en la investigación titulada: "Evaluación de conductas de alto riesgo en relación con la salud y factores de protección de los jóvenes en las escuelas adventistas en la región del Caribe: Aplicación de una teoría basada en el modelo conductista". Este estudio se lleva a cabo en colaboración con la Universidad Loma Linda y la División Interamericana de la Asociación General. La Universidad Loma Linda es una universidad dedicada a las ciencias de la salud, ubicada en California. Los investigadores en el Departamento de Salud Pública y Psicología de la Universidad Loma Linda, llevan a cabo una serie de estudios en relación con las conductas adolescentes de alto riesgo basados en varias muestras internacionales.

Propósito
El propósito de este estudio es aprender más acerca de las actitudes de los jóvenes con respecto a comportamientos que podrían ser potencialmente dañinos para su salud. Es muy importante entender las actitudes y comportamientos de los adolescentes que podrían poner en peligro su salud, a fin de que podamos desarrollar medios para ayudar a prevenir tales riesgos.

Procedimiento
Siempre con su consentimiento, su hijo(a) recibirá en clase un cuestionario anónimo solicitando su opinión en creencias sobre salud en relación con el tabaco, consumo de drogas, consumo de alcohol y sexualidad. Su participación en el estudio llevará aproximadamente una hora.

Riesgos
Los tipos de preguntas que se le harán son de naturaleza sensible y podrían causar cierta molestia. Sin embargo, su hijo(a) puede dejar de responder en cualquier momento que lo desee o no contestar algunas preguntas. Cualquier información revelada por su hijo(a) en este cuestionario, permanecerá completamente anónima y no se hará ningún esfuerzo por identificarlo.

Beneficios
Los beneficios que podría obtener al participar en este estudio son simplemente que su hijo(a) estará más consciente del peligro potencial de algunas conductas o comportamientos. Aun más, los datos obtenidos a través de este estudio se usarán para entender mejor las necesidades de los adolescentes en futuros programas de prevención y educación. Los resultados serán usados también por la División Interamericana en la planificación estratégica de los reglamentos educativos para la región del Caribe.

Confidencialidad
No se hará ningún esfuerzo por identificar las respuestas individuales, ni por parte de los investigadores, ni de los maestros. No se le pedirá a nadie

información que lo identifique. Se resumirán los resultados de tal manera que nadie podrá ser identificado personalmente. Nadie sabrá nunca lo que su hijo(a)informó en la investigación.

Derechos de los participantes
Su hijo(a) es libre de retirarse de este estudio en el momento que lo desee. La participación es completamente voluntaria y no tiene impacto alguno en el desempeño académico en la escuela.

Contacto imparcial con terceras personas
Si usted desea ponerse en contacto con una tercera persona no asociada con este estudio, en relación con alguna queja que tenga sobre el estudio, puede ponerse en contacto con Dr. Moises Velazquez a 787-834-6161.

Fe de consentimiento
Lea por favor lo siguiente, firmelo y envie de vuelta esta sección del formulario a la escuela SÓLO en el caso de que usted NO desee que su hijo(a) participe en este estudio. Si no firma y regresa este formulario, entonces se le permitirá a su hijo(a) participar en el estudio.

"He leído el contenido de este formulario. Mis interrogantes con respecto a este estudio han sido contestadas a mi entera satisfacción. Se da por entendido que mi hijo(a) participará en este estudio a menos que yo firme este formulario y lo devuelva a la escuela de mi hijo(a) antes de administrarse tal encuesta, lo cual tendrá lugar el [fecha determinada por la escuela]. La participación de mi hijo(a) en el estudio no anula mis derechos y no libera a los investigadores, instituciones o patrocinadores de este proyecto de sus responsabilidades. Puedo llamar a call Pedro Fernandez al 787- 834-5274 si tengo preguntas o preocupaciones adicionales".

Firma del padre o guardián	Fecha	Nombre del alumno
_____	_____	_____

[Logo de la Escuela o Departamento de Educación-Puerto Rico]

Nos gustaría invitarte a participar en la investigación titulada: "Evaluación de conductas de alto riesgo en relación con la salud, y factores de protección de los jóvenes en las escuelas adventistas en la región del Caribe: Aplicación de una teoría basada en el modelo conductista". Este estudio se lleva a cabo en colaboración con la Universidad Loma Linda y la División Interamericana de la Asociación General. La Universidad Loma Linda es una universidad dedicada a las ciencias de la salud, ubicada en California. Los investigadores en el Departamento de Salud Pública y Psicología de la Universidad Loma Linda, llevan a cabo una serie de estudios en relación con las conductas adolescentes de alto riesgo, basados en varias muestras internacionales.

Propósito
El propósito de este estudio es aprender más acerca de las actitudes de los jóvenes con respecto a comportamientos que podrían ser potencialmente dañinos para su salud. Es muy importante entender las actitudes y comportamientos que podrían poner en peligro la salud de los adolescentes, a fin de que podamos desarrollar medios para ayudar a prevenir tales riesgos.

Procedimiento
Siempre con tu consentimiento, se te entregará en clase un cuestionario solicitando tu opinión en cuestiones sobre salud en relación con el tabaco, consumo de drogas, consumo de alcohol y sexualidad.

La participación en este estudio llevará aproximadamente una hora.

Riesgos
Los tipos de preguntas que se te harán son de naturaleza sensible y podrían causar cierta molestia. Sin embargo, puedes dejar de responder en cualquier momento que lo desees. Cualquier información revelada en este cuestionario permanecerá completamente anónima y no se hará ningún esfuerzo por identificarte.

Beneficios
Los beneficios que podrías obtener al participar en este estudio son simplemente que estarás más consciente del peligro potencial de algunas conductas o comportamientos. Aun más, los datos obtenidos a través de este estudio se usarán para entender mejor las necesidades de los adolescentes en futuros programas de prevención y educación. Se resumirán los resultados y se presentarán a todas las partes participantes en la investigación, incluyendo a los propios participantes y a sus padres. Tales resultados se usarán también para determinar reglamentos de planificación estratégica en relación con HIV y SIDA en el Caribe.

Loma Linda University
Adventist Health Sciences Center
Institutional Review Board
Approved 7/8/05 Void after 7/7/2006
#53357 Chair R. L. Rigsby, M.D.

Confidencialidad
No se hará ningún esfuerzo por identificar las respuestas individuales, ni por parte de los investigadores, ni de los maestros. No se le pedirá a nadie información que lo identifique. Nadie sabrá nunca lo que informaste en la investigación.

Derechos de los participantes
Eres libre de retirarte de este estudio en el momento que lo desees. La participación es completamente voluntaria y no tiene impacto alguno en el desempeño académico en la escuela.

Contacto imparcial con terceras personas
Si deseas ponerte en contacto con una tercera persona no asociada con este estudio, en relación con alguna queja que tengas sobre el estudio, puedes ponerte en contacto con Dr. Moises Velazquez a 787-834-6161.

Fe de consentimiento
Lee por favor lo siguiente y firmalo dando tu consentimiento para tu participación en este estudio:

"He leído el contenido del formulario de consentimiento. Mis interrogantes con respecto a este estudio han sido contestadas a mi entera satisfacción. Por lo tanto, doy mi consentimiento voluntario en relación con mi participación en este estudio. El firmar este documento de consentimiento no me hace renunciar a mis derechos ni libera a los investigadores, institución o patrocinadores de sus responsabilidades. Puedo llamar a call Pedro Fernandez a 787- 834-5274 si tengo preguntas o pendientes adicionales".

Firma del alumno	Fecha	Nombre delalumno
_____	_____	_____