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**Safe Sex Practices:
Identity Style, Sexual Communication,
And HIV/AIDS Knowledge**

by

Kathia Marie Hallal

B.A.Sc. in Family and Social Relations, University of Guelph, 2002

THESIS

Submitted to the Faculty of

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Abstract

The focus of this research was to gain a better understanding of the factors that potentially enhance safe sex practices, given the aggressive spread of sexually transmitted infections (STIs), including the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) namely in the adolescent population. Despite the substantial amount of research that has been done in this area, no findings seem substantive enough in nature to satisfactorily shape effective programs for the prevention of STIs, including HIV/AIDS.

Two Ontarian Universities were sampled and a total of 264 students between the ages of 18 and 22 (inclusively) were subsequently included in the study. Respondents completed and returned the questionnaire measuring identity style, sexual practices, sexual communication and HIV/AIDS knowledge and beliefs. There are a few main reasons for concurrently including these four measures. First, identity formation is a major life task of adolescence – as important as the discovery of one’s sexuality and sexual experimentation. Since the literature suggests that identity developmental issues affect decisions to engage in sexually risk-taking behaviour, it is appropriate to examine these relationships. Second, sexual communication seems to emerge as a promising area for education around STIs and HIV/AIDS. Finally, knowledge and beliefs about HIV/AIDS is measured because without accurate knowledge of the mode of transmission of this deadly disease, sexual communication would seem ineffective.

Given the salience of identity formation and sexuality, and the promising emergence of sexual communication (based in accurate HIV/AIDS knowledge) as a preventive tool to STIs, including HIV/AIDS, the relationship between identity style,

sexual practices, sexual communication, and HIV/AIDS knowledge and beliefs were examined.

High levels of sexual activity - unprotected sexual activity - were reported by both genders. Little to no relationship was found between sexual practices and the variables of identity style, sexual communication and HIV/AIDS knowledge. Age, however, emerged as an important determinant of safe sex, with younger individuals practicing safer sex. A negative relationship also emerged between sexual communication and safe sex practices. In addition getting oneself medically checked for STIs, including HIV/AIDS was related to lower rates of sexual protection, indicating that it is used as a safe sex mechanism. Implications of findings are discussed.

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On a personal note, the researcher acknowledges the continual support and encouragement she receives from her husband, T. Nathaniel Owen-Going, her twin sister, Dahlia Marie Hallal and her brother, Rufino Ricardo Ansara. In addition, the researcher would like to thank her mother in law, Pamela Denise Owen, for her valuable advice and feedback on the project. Last but not least, the researcher would especially like to acknowledge her parents, Georges Hallal and Magda Ansara Hallal for the love and support they provided throughout all the years. They are truly the reason for the researcher's every success to date.

Finally, the researcher would like to dedicate this thesis to the loving memory of her cherished grandfather, Elias Georges Hallal.

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Chapter 1: Introduction

Adolescent Sexuality

Some Canadian Statistics

An understanding of the general sexual behaviours reported by Canadian youth to date may put the sexual behaviours in this study into context. According to the 1994/95 National Population Health Survey (NPHS), a substantial proportion of teenagers are sexually active (Statistics Canada, 1999). Indeed, an estimated 43% of women aged 15 to 19 had had at least one sex partner in the previous year, and about 13% reported having at least two partners during that time. Considering only those who were sexually active at the time, 32% of these 15 to 19 year old women had more than one partner (Statistics Canada, 1999). Evidently, as the number of sexual partners increases, so does the risk of acquiring an STI (Statistics Canada, 1999). In addition, there is evidence that adolescents are engaging in sexual behaviour earlier than in the past (Boyer, 1990; Moore & Rosenthal, 1993; Rollins, 1989 as cited in Feeney, Kelly, Gallois, Peterson, & Terry, 1999), which may be putting them at increased risk as a result of physiological, psychosocial and social issues (i.e., peer pressure) (Braverman & Strasburger, 1994).

Among the safe sex practices widely promoted in Canada is the routine use of condoms, especially in short-term relationships where the partner's sexual history is unknown. While there is evidence for increasing use of condoms among sexually active adolescents and young adults (Maticka-Tyndale, 1997 as cited in McKay, 2000), consistency of use is sporadic and well below what would be adequate for optimal levels of STI prevention (Fisher & Boroditsky, 2000; McCreary Centre Society, 1999; Thomas, Dicenzo, & Griffith, 1998 as cited in McKay, 2000). Indeed, the results of the 1996-97

National Population Health Survey suggest that many Canadians are at risk for acquiring HIV and other sexually transmitted infections as a result of their sexual practices (Statistics Canada, 1999). The percentage reporting that a condom was not used the last time they had sexual intercourse with a partner of less than 12 months ranged from 8% among the 50-59 year olds and 15 to 17 year olds, to 26% among the 18 to 19 year olds. Among sexually active 15 to 19 year old women, 51% reported having sex without a condom in the past year (Statistic Canada, 1999).

There were 38,502 teenage pregnancies (births, abortions, stillbirths) in 1995, which depicts a slight increase since the low incidence in 1993 (Statistics Canada, 1999). Adolescent mothers (and older mothers) are most likely to have low birth weight babies (less than 2, 500 grams), which can result in mental and physical disabilities. Further, not only is young parenthood a risk to the newborn, but it also increases the chances of single-parent status and the low income that single-parent status often implies (Statistics Canada, 1999). Many adolescent mothers are already poor when they become parents. If impoverished mothers delayed the birth of their child until their income rose above the poverty level, most could never afford to give birth (Jencks & Edin, 1995 as cited in Kissman, 1998). Indeed, teenage pregnancy has become a gender-specific consequence, significantly increasing the risk of being discriminated against both on a moral and financial level. It may also be important to note that the risk of teenage pregnancy among Black adolescents is significantly higher as compared to White adolescents, adding to the many struggles faced by persons of an ethnic minority (Kissman, 1998). Clearly, adolescent mothers have a number of characteristics playing against them, making it hard to be successful according to the norms and standards established by the

dominant discourse. Further, in light of the devastating consequences of the AIDS epidemic, children of teen mothers are more likely to become orphaned (Kissman, 1998).

The repercussions of becoming infected with any major STI can be severe; infections can result in infertility, severe illness, and death (Statistics Canada, 1999). Chlamydia can cause non-specific urethritis; gonorrhea can lead to prostate inflammation in men; and both chlamydia and gonorrhea can lead to pelvic inflammatory disease and eventually tubal infertility in women. Syphilis has the ability to damage tissues and organs, including the brain, spinal cord, and heart valves (Statistics Canada, 1999). In Canada the rates of STIs are at epidemic levels (Hyde, DeLamater, & Byers, 2001), and the chances of acquiring an STI other than AIDS are highest among youth aged 15 to 24 (Statistics Canada, 1999). More specifically, rates of chlamydia and gonorrhea are highest among females between the ages of 15 and 19, while the highest male incidence is among 20 to 24 year olds (Statistics Canada, 1999). Syphilis infection, while low in incidence, is most common in persons between the age of 20 and 24 years. The most common STIs in Canadian universities include chlamydia, genital warts, and herpes (Hyde et al., 2001). Given the almost causal association between acquiring STIs and HIV/AIDS (Braverman & Strasburger, 1994; Crosby, Leichter, & Brackbill, 2000), concern about the health and well being of adolescents is significantly raised.

Meschke, Bartholomae, and Zentall (2000) note that a report released in 1998 revealed that worldwide, five adolescents are infected with HIV every minute, resulting in 2.6 million new cases every year. In addition, these figures are thought to be conservative estimates due to the number of youth unaware of their infection as well as the long incubation period between HIV and AIDS (Meschke et al., 2000). Canada's

cumulative rate of AIDS cases is 511.8 per 1 million persons, which puts Canada in the middle of a group of industrial nations, among whom the reported rates range widely (Statistics Canada, 1999). It is estimated that up to 15,000 Canadians are HIV positive but unaware of it (Health Canada, 2000a as cited in McKay, 2000). HIV prevalence among inner-city intravenous drug users (IDUs) has increased dramatically in many Canadian cities and estimated HIV incidence is high. Aboriginal persons are over-represented in inner-city IDU communities, and AIDS cases attributed to intravenous drug use in this group are more likely than non-aboriginal cases (Statistics Canada, 1999). The latter may certainly reflect the structural oppressive mechanisms that Canada continues to reproduce with First Nation individuals – an aspect that seems often overlooked and even arguably denied. Of the 15,528 Canadian AIDS cases reported at the end of 1997, 15,358 (99%) were diagnosed among adults and 170 (1%) were among children less than 15 years of age. Among the 11,373 reported AIDS deaths, 105 (1%) were among children (Statistics Canada, 1999).

Factors that put youth “at risk” for developing an STI, including HIV/AIDS

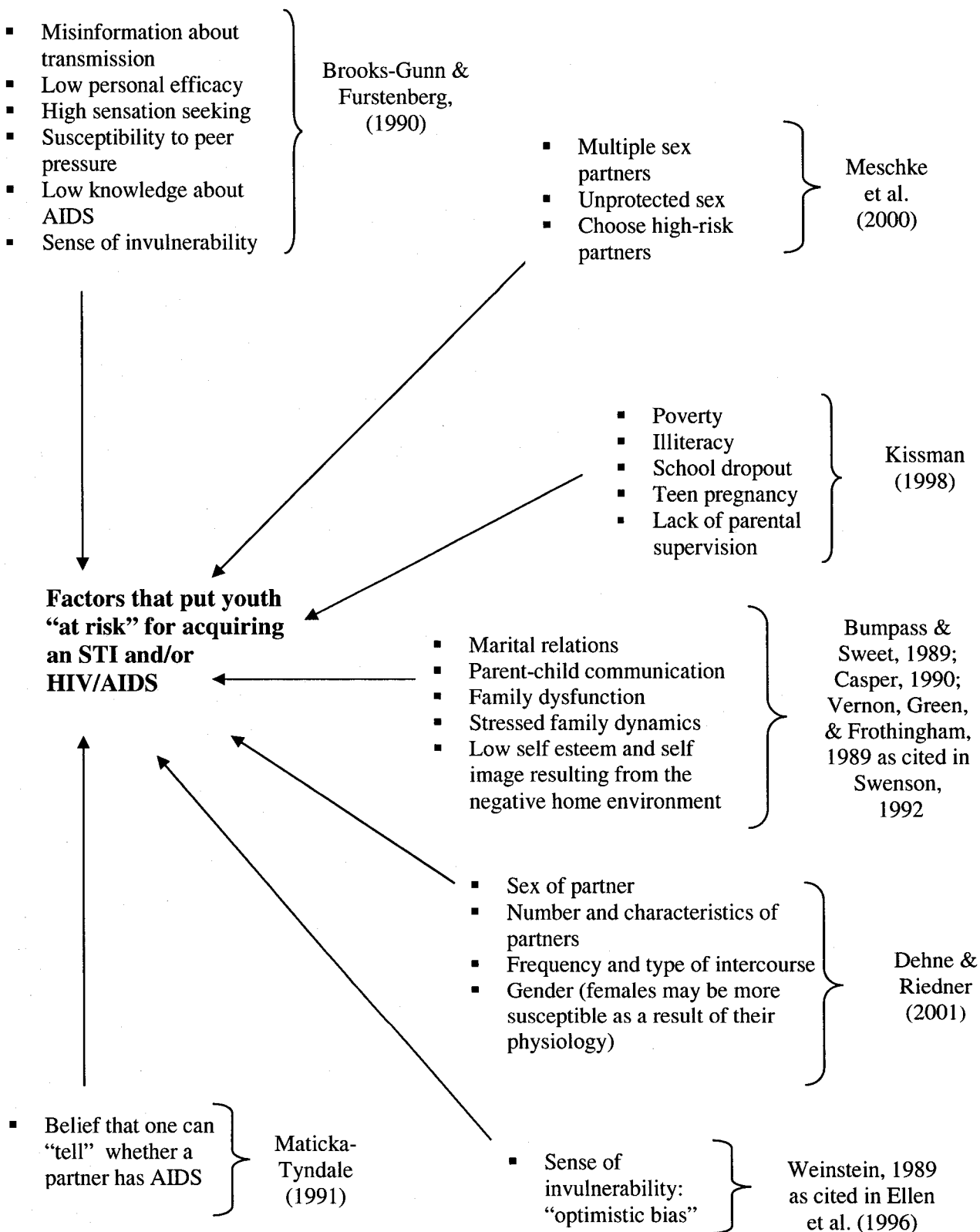
Evidently, in today's society, attitudes about STIs, including HIV/AIDS and its prevention are a salient social issue (Moore & Barling, 1991) especially with young adults being identified as a segment of the general population at great risk for HIV infection (Maticka-Tyndale, 1991). Indeed, in making sexual choices today, young people must seriously consider the growing danger of STIs, including HIV/ AIDS. In relation to adolescent behaviour, the term “high risk” is defined as an inconsistent use of contraceptives (Farber, 1989 as cited in Kissman, 1998). It may also be important to note that some authors refute this term as they see it as a label, promoting class and racial

segregation, prejudices, stigma, and a self-fulfilling prophecy of failure (Swartz, 1991 as cited in Windborne & Dardaine-Ragguet, 1993). This rather philosophical issue is certainly one worth exploring further. However, in the interest of time and space, this will not be undertaken here. Rather, the term will be employed throughout the course of the paper to indicate those adolescents who are vulnerable to acquiring an STI, and/or HIV/AIDS.

A number of studies have been conducted in an attempt to better understand adolescent sexuality and potential risk factors. In essence, these studies emphasize the fact that adolescent sexuality is very different from that of adult sexuality, as young adults are faced with additional struggles seemingly associated with identity. Indeed, a large array of factors have been identified as putting youth at risk for acquiring an STI and/or HIV/AIDS. It may be important to note that these factors don't only include elements of sexual practices (e.g., type of sex, number of partners, use of condom, etc.) but also include personal characteristics, socio-economic status, school and family-related difficulties. The latter are portrayed in greater detail in Figure 1.

Figure 1. Summary of Factors that Put Youth “at Risk” for Acquiring an STI or

HIV/AIDS



Clearly, a number of factors come into play in this complex equation for adolescent sexual risk taking, which cannot be made out to be a simple cause and effect scenario. If the solution were that trivial, the rate of STIs and HIV/AIDS among youth would be dramatically lower than currently reported rates. It is arguable that the establishment of an identity at this stage of the game influences adolescents' actions in either engaging in protective or high-risk sexual practices. Alas, the search for answers will go on until the fight against STIs and HIV/AIDS becomes a matter of the past and a healthy and brighter future is ahead.

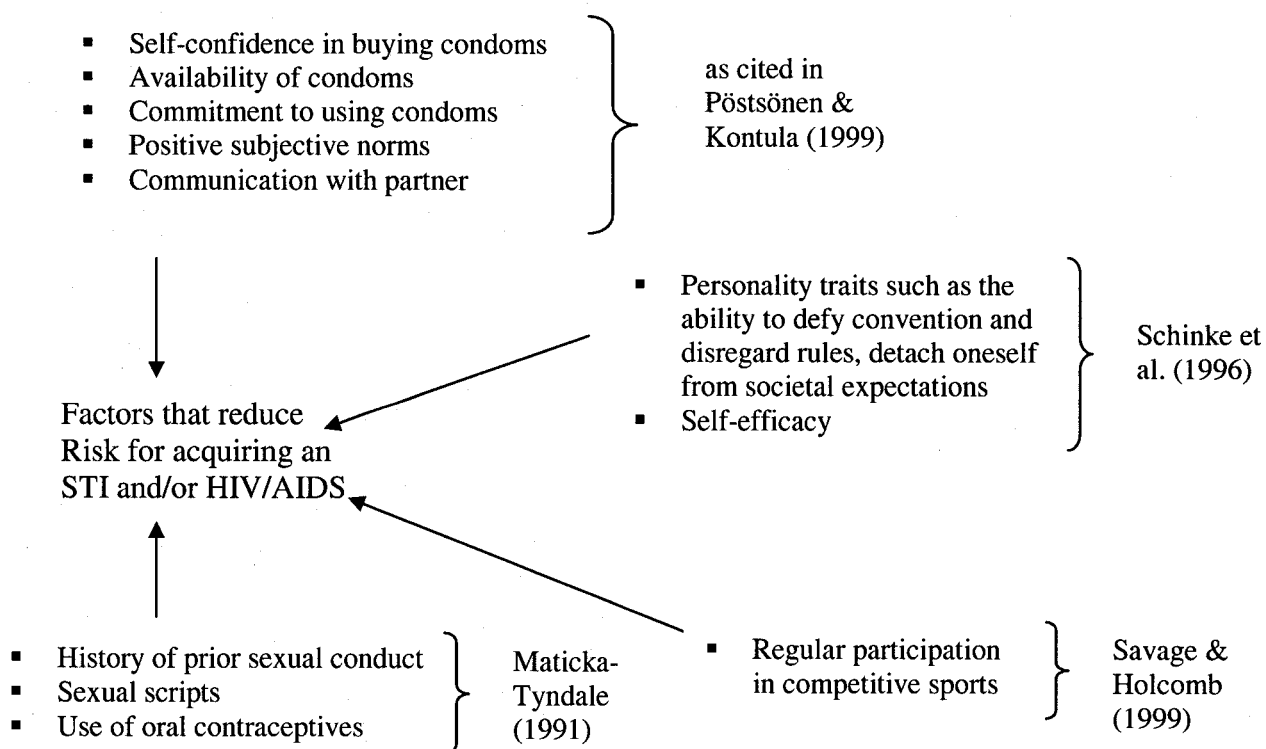
Factors that reduce the "risk" of STI infection, including HIV/AIDS

The risk of STI is not evenly distributed among all young people who engage in sexual activity (Dehne & Riedner, 2001). This raises the questions of what factors are associated with active risk reduction through condom use – a question that is briefly explored below.

In essence, personal characteristics seem to be integral in reducing one's risk to acquiring an STI and/or HIV/AIDS. Some of these include self-confidence regarding the ability to purchase and use condoms (Hingson et al., 1990; MacDonald et al., 1990), general commitment to using condoms (Catania et al., 1990), positive subjective norms (Ross and McLaws, 1992) and communication with partner (Pendergrast et al., 1992 as cited in Pöstsönen & Kontula, 1999). Moreover, personality traits have also been associated with effective contraceptive use, which include an ability to defy convention and disregard rules, to detach themselves from societal expectations, and to possess self efficacy – the belief that one has the capability to alter one's health habits (Schinke, Forgey, & Orlandi, 1996).

Other factors identified as potentially reducing one's risk in acquiring an STI and/or HIV/AIDS include availability of condoms (Freimuth et al., 1992 as cited in Pötsönen & Kontula, 1999) and regular participation in competitive high school sports (Savage & Holcomb, 1999). Further, history of prior sexual conduct and sexual scripts together with the use of oral contraceptives have also been identified as predominant influences on condom use and perception of susceptibility to HIV infection (Maticka-Tyndale, 1991). A summary of the latter is depicted in Figure 2.

Figure 2. Factors that Reduce Risk of Acquiring an STI and/or HIV/AIDS



Personal characteristics seem to be especially important in potentially reducing the risk of acquiring an STI and/or HIV/AIDS. Seeing that identity is very much part of ongoing internal mechanisms, it is likely that identity plays a major role in shaping these

characteristics, potentially rendering identity an essential tool in our fight for a disease free future generation.

Identity

Identity status

For over 35 years, Marcia's model has captured the attention of researchers, students, and practitioners interested in how adolescents develop meaningful vocational aspirations, ideological values, and forms of sexual expression appropriate within given social contexts (Kroger, 2000). Prior to this time, Erik Erikson (1968) had conceptualized the principal task of adolescence as finding an optimal balance between identity achievement and role confusion ("Identity vs. Role confusion," the fifth stage in Erikson's epigenetic sequence of personality development over the lifespan) (Erikson, 1968). Therefore, to Erikson, identity was something one possessed to a greater or lesser degree (Kroger, 2000). Marcia, however, suggested the possibility of qualitatively different styles of identity formation (called identity statuses) (Kroger, 2000).

A thriving body of research on identity formation has been inspired and sustained by Marcia's (1966) Identity Status Paradigm (Berzonsky, 1989; Berzonsky & Neimeyer, 1994). Within this scheme, identity status is operationalized by simultaneously considering two dimensions known as crisis and commitment (Berzonsky, 1989). Marcia's model suggests that adolescents may adopt one of four identity statuses characterized by the presence or absence of a crisis (exploration) and a commitment to occupational choices, political beliefs, and religious attitudes (Craig-Bray, Adams, & Dobson, 1988). Crisis/exploration refers to the questioning of parentally defined goals and values, while commitment is the selection of personal goals and values (Bilsker,

Schiedel, & Marcia, 1988). It is the interaction between these variables that defines the four categories of identity status.

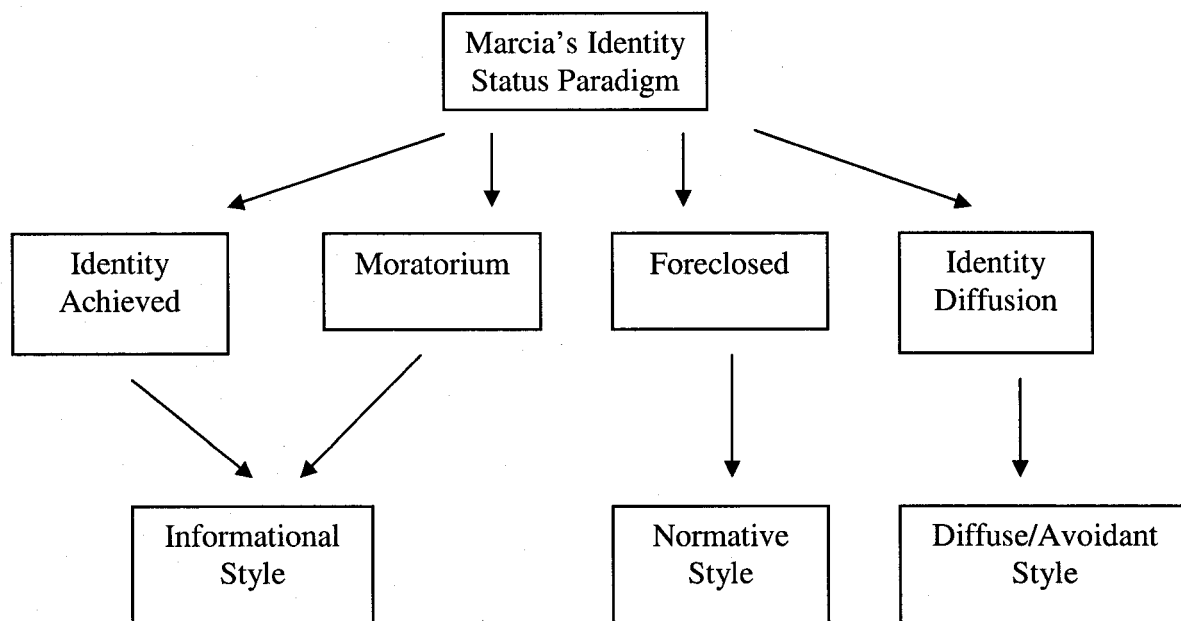
The four identity statuses are as follows: *Identity-diffused* status is considered the least mature of all the statuses and is uncommitted and uninterested in actively exploring options (Imbimbo, 1995). In addition past exploration of alternatives (or the experiencing of a crisis) may or may not have occurred (Kroger, 1993). The *identity-foreclosed* is a committed status but refers to a person who has not gone through a period of active exploration, making their commitments without serious consideration of possible alternatives (Kroger, 1993). This is perhaps tied to earlier parental expectations and identifications (Imbimbo, 1995). An individual who is in the *moratorium* status is one who is uncommitted but actively involved in a crisis (exploring) while struggling to clarify vague commitments (Craig-Bray et al, 1988). *Identity-achieved* individuals have made meaningful commitments to vocational, ideological, and sexual values on their own terms (Kroger, 1993), following a period of active questioning and successful resolution of those questions (Prager, 1986). In essence, Marcia's ego identity status paradigm is widely used as a means by which to describe and assess adolescent identity formation (Yoder, 2000).

Identity Style

Berzonsky (1988, in press-a as cited in Berzonsky, 1989) proposed that Marcia's (1966) four outcomes might reflect, or perhaps be associated with, differences in the process by which personal decisions are made and problems are solved (Berzonsky, 1989). Indeed, research findings have suggested that the statuses may employ three different social-cognitive approaches to personal decision-making and problem solving

(Berzonky, 1989). The latter is considered to be entrenched in a critical constructivist approach as the model focuses on the contribution of personal orientations to identity formation (Berman, Schwartz, Kurtines & Berman, 2001). In this manner, self-explorers, achieved and moratorium individuals may use an *Information Orientation*; they actively seek out, process and evaluate pertinent information before coming to a decision (Berzonky, 1989). They are skeptical about self-constructs, open to new information and alternatives, and willing to revise and alter their self-views in response to discrepant feedback (Nurmi, Berzonky, Tammi & Kinney, 1997). Individuals who are foreclosed should rely on a *Normative Orientation*, as they will be more concerned with conforming to the normative standards and prescriptions held by authority-type figures such as parents (Berzonky, 1989). Uncommitted, diffuse individuals are likely to avoid facing and dealing with presenting problems and decisions. They may thus utilize a *Diffuse/Avoidant Orientation* that includes the tendency to delay and procrastinate until situational consequences and rewards dictate a particular course of action (Berzonky, 1989). In this manner, they readily accommodate to situation specific demands and consequences (Berzonky & Neimeyer, 1994) and thus are characterized by behavioural compliance as opposed to long-term commitments and life choices (Berzonky 1994b as cited in Nurmi et al., 1999) (see figure 3).

Figure 3. Identity Styles in Relation to Marcia's Identity Status Paradigm



These orientations embody the mechanisms by which self-relevant information and experiences is encoded, processed, organized and revised (Berzonsky, 1989). The process differences are perceived as operating on at least three levels: (1) cognitive and behavioural responses that persons perform in their day-to-day lives; (2) social-cognitive strategies, which are organized collections of the cognitive and behavioural elements; and (3) identity style, which pertains to the strategy that persons typically use or would prefer to use (Berzonsky, 1989). Despite potential developmental constraints in relation to strategic competence, it is expected that by at least late adolescence, all three social cognitive strategies would be available. Individual differences in the strategy usage will therefore tend to be mainly motivational in nature, thus reflecting stylistic preferences and/or environmental demands, incentives, and consequences (Berzonsky, in press-a as cited in Berzonsky, 1989). Indeed, it is important to note that identity styles may be influenced by situational as well as dispositional variables. In this manner, the specific

environmental demands, the particular identity domain, and the associated personal consequences all may override style preferences and thus influence the social-cognitive style being used (Berzonsky, 1989). Mead (1970 as cited in Berzonsky & Neimeyer, 1994) speaks to the latter in that she recognizes that adolescents live in a world of constant change and flux, a phenomenon coined as a prefigurative culture. With this in mind, optimal identity development is thought to undergo an ongoing dialectical interchange between assimilative processes driven by the identity structure as well as context-driven accommodative processes aimed at revisiting that structure.

Identity Status and Styles

Research on the correlation between the identity statuses and identity styles has been encouraging. For instance, self-reported use of normative style has been reported to be associated with identity foreclosure (Berzonsky, 1989; Berzonsky, 1990 as cited in Berzonsky, 1992). Similarly, reported use of diffuse/avoidant style has been found to be positively correlated with diffusion status scores, external control expectancies, and debilitating anxiety reaction (Berzonsky, 1989), and in turn, negatively associated with introspectiveness and an openness to personal feelings (Berzonsky, 1990 as cited in Berzonsky, 1992). The relationship between an information-oriented style and identity status has been found to be moderated by identity commitment (Berzonsky, 1992). More specifically, when commitment was statistically controlled in two distinct studies (Berzonsky, 1989, 1990 as cited in Berzonsky, 1992), significant correlations between the moratorium status and the informational style was reported.

Furthermore, Berzonsky and Neimeyer (1994) also investigated the hypothesized linkage between identity status and processing orientation. The authors report that the

identity statuses reflect three different social-cognitive processing orientations. More specifically, persons classified in the moratorium status reportedly attempt to make decisions and negotiate identity crises in an information-oriented style; they will seek out and consciously process and evaluate self-diagnostic information (Berzonky & Neimeyer, 1994). Those classified in a foreclosed status were found to rely on a normative approach to personal problem solving and decision-making, whereas identity diffusions were most apt to avoid dealing with identity issues and conflicts (Berzonky & Neimeyer, 1994). It is important to note that, in accordance with previous research, the correlation between identity statuses and process orientation were moderated by the strength of identity commitments (Berzonky & Neimeyer, 1994).

Identity Styles Research

Since Berzonky's (1989) conceptualization of the identity styles, a number of studies were undertaken in an attempt to add to the characteristics of each of the three identity styles. These studies are reported below and summarized in table 1.

Berzonky and Sullivan (1992) attempted to explore the potential social-cognitive aspects of identity style, namely the need for cognition, experiential openness and introspection. The authors found that an informational style of dealing with personal decisions, problems, and identity issues was associated with a need to engage in cognitive activities and a willingness to consider alternative ideas. The normative-oriented identity style showed evidence of being rigid and closed when considering the "core" areas of the self, such as values and actions (Berzonky & Sullivan, 1992). Identity diffuseness was found to be geared toward hedonistic satisfaction and the experiencing of positive affective states, seeking accreditation from external social sources (Berzonky &

Sullivan, 1992). Indeed, the social identity of the diffuse individual was associated with a situation-specific approach to problem solving and decision-making (Berzonsky, 1989, 1990 as cited in Berzonsky & Sullivan, 1992). It may be important to note that an exclusively female sample was used for this study, which hampers findings from being generalizable to the population at large.

To complement the latter findings, Berzonsky (1993) undertook a study to evaluate whether the different styles of resolving identity questions could be differentiated along various social-cognitive dimensions and whether gender differences moderates these. The results of this investigation emitted very similar results to those of Berzonsky and Sullivan (1992) despite the addition of a male sample. It could therefore be concluded that late adolescent males and females are equally likely to use each of the three identity styles (Berzonsky, 1993). It may be important to note, however, that the sample consisted of college students, again hindering results from being generalizable to the population at large. Indeed, it is arguable that individuals who attend a college/university possess somewhat different characteristics than others in terms of socioeconomic status, values, and beliefs.

Nurmi et al. (1997) investigated interrelationships among the identity negotiation styles and the cognitive behavioural strategies they use in addition to their sense of subjective well-being. The authors state that, in accordance with previous research, the results indicate that the way in which individuals deal with identity issues and self-relevant information is associated with their self-conceptions and sense of personal well-being. Indeed, the three identity processing styles depicted different patterns of associations with one another (Nurmi et al., 1997). More specifically, the information-

oriented style reported the highest levels of self-esteem, probably as a result of their style leading to success and positive feedback in achievement contexts (Berzonsky, 1996 as cited in Nurmi et al., 1997). Those with a normative style had the most stable self-conceptions (Nurmi et al., 1997), probably related to their ability to preserve their collective self-definitions by being closed to information and experiences that may threaten central values and beliefs (Berzonsky, 1994a; Berzonsky & Sullivan, 1992 as cited in Nurmi et al., 1997). Diffuse/avoiders showed the highest level of depressive symptomatology, most likely related to their tendency to utilize self-handicapping techniques to later use that aspect as an excuse for failure, which in turn, leads to lowered levels of well-being and self esteem (Nurmi et al., 1997). These findings support the hypothesis that the relationship between identity style and well-being is mediated by the cognitive strategies one deploys (Nurmi et al., 1997). It may be important to note that samples were collected in both the U.S. and Finland and found to be analogous (Nurmi et al., 1997), potentially ruling cultural differences out of the identity formation equation, at least for people from Western cultures.

Speaking of cultural differences, identity style has also been explored in different contextual settings. For example, Berzonsky, Nurmi, Kinney, and Tammi (1999) investigated the relationship between identity style and the specific cognitive and attributional strategies youth deploy in achievement and affiliative contexts. Two samples were collected – an American and Finnish sample of youths. In the American sample, it was found that diffuse/avoiders relied on the least effective and adaptive strategies and had the lowest expectation for success and feelings of self-mastery when specifically compared to the other identity styles (Berzonsky et al., 1999). In addition,

they displayed the least strategic planning and the most task irrelevant behaviours, therefore feeling incapable of succeeding in achievement situations. Instead of strategically planning a course of action, they focused more on creating excuses, which they could use to explain their poor performance (Berzonsky et al., 1999). On the other hand, informational and normative types seemed to be equally adaptive in the strategies they selected (Berzonsky et al., 1999). The informational types, however, engaged in significantly more reflective planning than normative youths. Results in the Finnish sample were virtually the same as those found in the American sample in terms of strategy use in achievement contexts. The only deviation from the American sample was in relation to the success expectations of diffuse/avoidant students not being significantly lower than those of normative students (Berzonsky et al., 1999). The latter may certainly reflect cultural differences in the way that youth are encouraged to succeed. More specifically, it is arguable that failure is less acceptable for Finnish youth than American youth, thus propelling Finnish youth to be more persistent in their efforts despite their diffuse classification.

Moreover, the association between identity style and cognitive strategy in affiliative situations obtained in the American sample was not replicated in the Finnish sample. This reinforces the idea that cultural differences in the nature, rigidity, and importance of socialization rules and interactional patterns may be pertinent (Berzonsky et al., 1999) – findings that contradict those of Nurmi et al. (1997). As Winborne and Dardaine-Raguet (1993) assert: “Individuals are inseparable from their cultural and social environments” (p. 196). Indeed, differences may account for some of the cultural variation, namely in terms of the role that identity style plays in interpersonal contexts.

As mentioned above, identity style may very well be overridden by other, more salient, environmental factors (Berzonsky, 1989). Clearly the issue of ethnicity/culture has become quite salient in the academic world and must not be ignored in relation to identity. After all, it would seem naïve to think that a sense of identity and culture develop simultaneously and separately, without any influencing taking place.

Table 1.

Summary of Identity Style Research

Informational Style	<ul style="list-style-type: none"> ▪ Need to engage in cognitive activities (Berzonsky & Sullivan, 1992) ▪ Willingness to consider alternative ideas (Berzonsky & Sullivan, 1992) ▪ Highest levels of self-esteem among the styles (Berzonsky, 1996 as cited in Nurmi et al., 1997) ▪ Engage in significantly more planning than other styles (Berzonsky et al., 1999) ▪ Utilize adaptive cognitive strategies (Berzonsky et al., 1999)
Normative Style	<ul style="list-style-type: none"> ▪ Rigid and closed when considering core areas of the self such as values and beliefs (Berzonsky & Sullivan, 1992) ▪ Most stable self conceptions as compared to other styles, probably as a result of their ability to preserve self-definition in an attempt to avoid feeling threatened (Berzonsky, 1994a; Berzonsky & Sullivan, 1992 as cited in Nurmi et al., 1997) ▪ As adaptive as the informational style in the cognitive strategies they select (Berzonsky et al., 1999)
Diffuse Style	<ul style="list-style-type: none"> ▪ Geared toward hedonistic satisfaction and the experiencing of positive affective states (Berzonsky & Sullivan, 1992) ▪ Seek accreditation from external sources (Berzonsky & Sullivan, 1992) ▪ Associated with situation-specific approach to problem solving and decision-making (Berzonsky, 1989, 1990 as cited in Berzonsky & Sullivan, 1992) ▪ Highest level of depressive symptomatology (Nurmi et al., 1997) ▪ Tendency to utilize self-handicapping techniques as an excuse for failure or poor performance (Berzonsky et al., 1999; Nurmi et al., 1997) ▪ Lowered levels of well-being and self-esteem (Nurmi et al., 1997) ▪ Compared to other styles, they utilize the least effective and adaptive strategies and hold the lowest expectation for success and feelings of self-mastery (Berzonsky et al., 1999) <hr/>

Identity and Intimacy

No studies have been undertaken specifically exploring issues of intimacy and identity styles. However, the relationship between intimacy and identity status has been observed by a number of investigators and will thus be presented below.

After adolescents achieve an identity, they are faced with yet another stage resolution – “Intimacy vs. Isolation” (Erikson, 1968 as cited in Kacerguis & Adams, 1980). Erikson (1968) defines intimacy as a “fusing of identities” (p. 135). He explains that it is “the capacity to commit [oneself] to concrete affiliations and partnerships and to develop the ethical strength to abide by such commitments even though they may call for significant sacrifices and compromises” (Erikson, 1963, p. 263 as cited in Kacerguis & Adams, 1980). Erikson contends that those who fail to establish these relationships suffer from a fear of loss of identity (Raskin, 1986) or impersonal or superficial interpersonal relationships are believed to be formed (Kacerguis & Adams, 1980). Therefore, according to Erikson's stage theory, identity is thought to influence a sense of intimacy and in turn, intimacy is thought to influence identity (Dyk & Adams, 1990).

The study of intimacy has been considerably advanced due to the development of the model of intimacy status (Raskin, 1986). Based on Erikson's formulation, three major criteria are used to establish an individual's intimacy status as described by Fitch and Adams (1983): (a) the presence or absence of close relationships with the same sex or opposite-sex peer, (b) the presence or absence of an enduring relationship with a sexual partner, and (c) the depth versus the superficiality in the relationship (Orlofsky, 1976 as cited in Fitch & Adams, 1983). Five basic styles of interpersonal contact are possible in this conception (Raskin, 1986). The *intimate-status* individuals form deep friendships

with both genders and are involved in committed love relationships (Raskin, 1986). They also show a clear awareness of themselves (Fitch & Adams, 1983). *Preintimate* individuals also have deep peer relationships but demonstrate ambivalence about commitment in love relationships (Raskin, 1986). *Pseudointimate* individuals have committed love relationships but these, along with peer relationships, tend to lack closeness and depth (Raskin, 1986). *Stereotyped* individuals tend to have superficial relationships with peers and tend to be uncommitted to a significant other (Raskin, 1986). They are also likely to treat others as objects to fulfill personal needs (Fitch & Adams, 1983). Finally, the *isolate* individual seems unable to make an interpersonal commitment due to the lack of maturity and confidence, and appear the least likely to develop and maintain social contacts (Fitch & Adams, 1983). Consequently, no casual acquaintances are established with peers or potential partners (Raskin, 1986). In congruence with Erikson's notion of identity and intimacy, several studies have reported that individuals high in identity statuses (moratorium and identity achievement) tend to have more advanced intimacy statuses (Fitch & Adams, 1983). For example, Whitbourne and Tesch (1985) compared identity and intimacy statuses among college students and alumni. They found that young adults who had graduated from university were characterized by more mature psychosocial development in both the identity and intimacy statuses than were their younger counterparts still in school. Therefore, Erikson's view on identity and intimacy was supported. It is important to note, however, that the study was cross-sectional in nature and may thus suffer cohort effects.

Dyk and Adams (1990) also supported Erikson in that they reported that identity predicts intimacy development for males. As for females, a fusion between identity and

intimacy was found. The latter also supports Erikson's theory since he contends that girls emphasize the "inner space," which, he argues, predisposes them to activities marked by harmony, relative passivity, and union (as cited in Hodgson & Fisher, 1979). To this, Erikson adds that their identity development appears to be fused with intimacy formation (Dyk & Adams, 1990). The sampling procedure, however, was not randomly chosen and data may therefore not be generalizable to the greater population.

Furthermore, when Kacerguis and Adams (1980) investigated the relationship between identity and intimacy, they found that identity achieved male and females were observed to have more depthful and committed intimate relationships than their diffused, foreclosed, and moratorium peers. Once again, this finding is concurrent with Erikson's view on identity and intimacy. In addition, the authors reported that occupation identity was predictive of the development of strong interpersonal commitments for both genders. One must be cautious, however, in interpreting these results for a number of reasons. Indeed, the data were gathered during a historical period in which women's role was still in question and in a state that had rejected the proposed Equal Rights Amendment twice. Consequently, these results may not be generalizable to the rest of the population at large due to the unique area where the sample was gathered, as well as the historical period during which this study was conducted (over 20 years ago).

In a similar investigation, Fitch and Adams (1983) report an association between identity status and intimacy. Like Kacerguis and Adams (1980), they found an association between higher levels of intimacy and advanced identity statuses. More specifically, they noted that moratorium and achievement groups experience deeper levels of intimacy, regardless of sex. However, gender differences emerged when

categories were taken into consideration. For males, low occupational identity was predictive of low levels of intimacy. The reverse was not true of women. Rather, they found that religious identity was predictive of females' intimacy levels. The gender differences emerging on identity and intimacy seem to infer that there are differing concerns thought to exist for men and women. Men are believed to be more instrumental and achievement oriented, being concerned with occupational decisions, while women are seen as being more concerned with interpersonal issues of affiliation and with becoming better people (Josselson, 1973; Lavoie, 1976 as cited in Fitch & Adams, 1983).

Following this line of thinking, it would appear that the findings in the above study provide support for gender differences in the development of identity and intimacy. One should note, however, that there were twice as many females as there were male participants in the Fitch and Adams (1983) study, which is not an accurate distribution of the population at large. On the other hand, the study's strength is the fact that it is longitudinal in nature, enabling the researchers to witness the process in development of identity and intimacy. In sum, it appears that Erikson's argument that intimacy requires a strong identity is widely supported in the literature - an individual high in identity seems more likely to be high in intimacy status.

Having said this, one can begin to systematically see how identity and sexuality are very much related and in need of concurrent exploration given the health risks youth face. To date, virtually no research examining both identity and sexuality has been conducted. The little that is reported in the literature is described below.

Identity and Sexuality

Erikson himself saw the establishment of a close, usually sexually based relationship with another as the central task of young adulthood (Moore & Barling, 1991). Therefore, for adolescents, sexual activity is a key marker into adulthood and entering a sexual relationship means that one is no longer a child (Netting, 1992). The past four decades, however, have been a period of great change in adolescent sexual activity and its consequences. As seen above, identity is a major issue in young adults' lives. Sexuality, however, is arguably of equal importance and may play a substantial role in youths' lives. Nonetheless, unlike identity related research, next to no empirical research has been conducted on identity and sexuality. The few that have addressed both of these integral elements have used Marcia's (1966) conceptualization of the four identity statuses. None were found to discuss Berzonsky's (1989) identity styles in relation to any component of sexuality.

Moore and Barling (1991) state that personal views about appropriate sexual behaviour in light of the AIDS epidemic can be seen as part of the ideological development postulated by both Erikson (1959) and Marcia (1966) in regards to identity formation. In this manner, the researchers conceptualized attitudes toward AIDS within Erikson's (1959, 1968) and Marcia's (1966) frameworks by developing items reflecting diffusion, foreclosure, moratorium, and identity achievement statuses, and assessed their relationship to identity and intimacy. Moore and Barling (1991) concluded that few relationships existed between psychosocial development and AIDS attitudes. However, both attitudes and developmental variables (i.e., sense of self) were predictive of intention to use a condom. It should be noted, however, that measures of actual sexual

behaviour were not collected in this study. Instead, respondents were asked whether they intended to use a condom in their next sexual encounter. Some argue that intention and behaviour do not always reflect one another. Therefore, the data may very well be misrepresentative of actual behaviour.

Marcia's model of identity development has also been used to challenge the view of lesbianism as a pathology (Ellis, 2000). Ellis (2000) states that lesbians seem to predominantly qualify as identity achieved. She explains that due to the fact that we live in a heterosexist society, women who choose to be a lesbian never do so without thinking. In other words, lesbians have had to pass through a period of exploration in order to reach the point of acceptance and commitment to being lesbian (Ellis, 2000). Ellis (2000) argues that heterosexuals might adopt their sexual identity through identity foreclosure and diffusion while lesbians might disproportionately become lesbian through moratorium and identity achievement. The author concludes that it could therefore be claimed that lesbians appear to be better adjusted in terms of sexual identity development as compared to their heterosexual peers. One must be very vigilant in interpreting the latter conclusions as Ellis' (2000) statements are based on opinion and not on empirical work.

In an alternative perspective, Eliason (1995) investigated sexual identity formation in heterosexual students. In congruence with Ellis' (2000) contention, the author reported that many heterosexual students were unaware of what it means to be heterosexual in this society, and had experienced much uncertainty about themselves. These results, however, must be interpreted with caution due to a small sample which may have prevented a detailed analysis of issues such as race, class, ethnicity and other

factors that may come into play with sexuality. Clearly, more research is needed to explore identity status in homosexuals as compared to their heterosexual counterparts. In any case, the literature presented thus far certainly continues to build the case for more research needing to be conducted between identity and sexuality.

Sexual Communication

Sexual Communication and Safe Sex Practices

Is sexual communication related to increased condom use? Some authors assert that sexual communication allows partners to share information about attitudes toward and expectations of condom use, thus allowing sex partners to acknowledge their sexual choices (Edgar, 1992; Fullivole et al., 1990 as cited in Zamboni, Crawford, & Williams, 2000). Indeed, a number of researchers¹ have found that sexual communication with one's partner predicts contraceptive use (Catania et al., 1989; Weisman et al., 1989 as cited in Poppen, 1994; Burger & Inderbitzen, 1985; Shoop & Davidson, 1994 as cited in Zamboni et al., 2000). Exchange about sexual histories (Rickman et al., 1994) and about AIDS (DiClemente, 1991) has also been reported as predictors to condom use (as cited in Zamboni et al., 2000). Moreover, Poppen (1994) states that couples with the best communication patterns are more likely to practice effective contraception (Poppen, 1994). Other authors go as far as to state that adolescents who do not engage in sexual communication with their partners are putting themselves at risk for unintended pregnancy and STI and/or HIV infection (Lear, 1995; Rickman et al., 1994; Wenger et al., 1992 as cited in Lock, Ferguson, Wise, & Kennedy, 1998). It should be noted, however, that some authors have found sexual communication to be unrelated to condom

¹ Canadian studies on sexual communication are sparse and mostly conducted within the context of marriage. For this reason, studies presented in this section are mostly from American sources.

use (e.g., Zamboni et al., 2000). It may be important to note that a great limiting factor in research on sexual communication and its relation to safe sex practices may be the differing measures employed, varying psychometric properties, which evidently limit the validity of the findings (Zamboni et al., 2000).

Sexual Communication: Now and Then

There has been an increased urgency about the need for adolescents to alter their sexual risk taking behaviours in order to shield themselves from potential disease (Poppen, 1994). As a result, significant efforts to disseminate information about safe sex practices have been made, including the importance of sexual communication. Unfortunately, the translation into practice has not been encouraging (Poppen, 1994). To measure whether a decade of such efforts had an effect, Poppen (1994) examined the sexual histories of a group of college students in 1979 and 1989 to measure changes in partner communication (especially in regards to contraception and its use). Both cohorts (1979 and 1989) were similar in that discussing contraception was more common with current than first partner (Poppen, 1994). The latter can be explained by the fact that the first intercourse is unplanned in many instances, which makes it awkward for many adolescents to discuss issues of contraception. Evidently, the lack of sexual communication continues to be problematic between partners, especially the very first time an adolescent has sex (Poppen, 1994). Therefore, despite the cohort effects, sexual communication among college students remained stagnant over the course of ten years. It may also be important to note that over another decade has past since this data was reported, making the result relevant solely to that point in time.

A more recent study by Koch, Palmer, Vicary, and Wood (1999) reports that college students are not likely to discuss HIV concerns, past sexual histories, and related topics with their sexual partners, making the results congruent with Poppen's (1994). More specifically, the authors found that, while about one-half of the male and female respondents reported discussing birth control, less than one-third of the males and females discussed STIs and HIV. No gender differences were found. Koch et al. (1999) note that those who discussed these topics with their partner were 3-4 times more likely to use a condom as compared to those who did not engage in sexual communication.

Sexual Communication across gender and culture

Although the existing literature on sexual communication generally predicts safer sex practices, little is known about the nature of the discussion (Lock et al., 1998). Nonetheless, sexual communication has been found to differ across both gender and cultural affiliations. Studies addressing the latter are presented below. A summary of these is provided in table 2.

In examining this issue, Lock et al. (1998) found that the more participants trusted their partners, the more likely they were to talk with them about sexual risk behaviours. The authors also found that women in their study were more likely than men to initiate conversations around sexual risk behaviour, but men were willing to engage in the discussion if it was first brought up by their female partners. Lock et al. (1998) assert that understanding circumstances that facilitate or hinder discussion about sexual risk behaviour is integral for the development of effective strategies to promote adequate sexual communication skills between adolescent partners.

Along the same lines, in examining gender differences in the initiating of sexual communication, Murphy, Rotheram-Borus, and Reid (1998) state that males perceive less positive peer norms for safe sex than did females. The authors propose that male adolescents may be especially reluctant to initiate a discussion around condom use for fear that this will inhibit their chances of obtaining consent for intercourse. This suggestion may in fact provide some understanding for Lock et al.'s (1998) finding of males' willingness to engage in sexual communication as long as the females brought it up first. Females, however, were more likely to believe that their partner's subjective norms were less favorable toward condom use, leading them to hesitate bringing up and negotiating condom use (Lock et al., 1998).

McQuiston and Gordon (2000) further examined the issue of gender differences in the way one approaches sexual communication among a Hispanic sample. For women, communication in itself was equated with having safe sex, and for men, trust was considered to be safe sex (McQuiston & Gordon, 2000). In essence, the women needed to communicate to trust and the men needed to trust to communicate. In addition, communication and trust were reported as being dependent on the timing of the relationship (McQuiston & Gordon, 2000). These findings demonstrate that, in effect, the timing for condom use was never right. The time for talking and the time for trusting for the women and the men were not congruent (McQuiston & Gordon, 2000). Therefore, condoms could not be introduced into a relationship until one had been with someone long enough to feel comfortable discussing condoms and infections, yet introducing condoms in an established relationship was a sign of distrust (McQuiston & Gordon, 2000). In this way, it seems that Hispanic persons are potentially compromising

their health for the sake of socially-cultural appropriate behaviour, which may be considered to be integral in the Hispanic community. It should be noted that the sample utilized for this study was made up of 20-29 year old Hispanic individuals, who identify as Mexican, use Spanish as their primary language, and immigrated to the United States in the past year. Clearly, results can only be generalizable to this specific population. Nonetheless, findings provide some good insight as to how important social prescriptions (in the Hispanic community) are in relation to other elements.

In looking at Haitian women, Malow, Cassagnol, McMahon, Jennings, and Roatta (2000) reported that they only sometimes engage in sexual communication and have limited confidence in their ability to negotiate enactment of such behaviours (safe sex). The authors found that more than half of the sample indicated that they were not confident enough to suggest condom use to their primary partner. In addition, they did not feel capable of refusing intercourse with their male counterparts if they refused condom use (Malow et al., 2000). It would seem that in this population, men hold the power in the relationship, leaving women feeling disempowered. Indeed, research has documented that Haitian women are fearful of male retaliation and evidently, loss of financial support due to conflicts regarding sexual practices. In this manner, Haitian women believe that men determine condom use (Adrien & Cayemittes, 1991; Ullin et al., 1993 as cited in Malow et al., 2000). Alas, condom use is likely to be discouraged by several cultural norms among Haitian women (Malow et al., 2000). Once more, results are uniquely applicable to this specific population (Haitian women over the age of 18), which hinders generalizability but provides an interesting glance at some of the hardships and oppressive mechanisms in place that specifically disempower minority women and

putting them at risk. Indeed, it seems as if sociocultural factors prescribed for minority women (i.e., limited empowerment in heterosexual relationships, male resistance to using condoms, traditional socialized sex roles, financial dependence on males, and other day-to-day problems associated with poverty) increases the risk of HIV infection (Malow et al., 2000).

Some authors, however, have reported power differences in sexual communication within a “White” population (i.e., Australian women). More specifically, the role of communication variables (difficulty in assertion and attitudes in speaking about AIDS) was found to be reliable for males only (Feeney et al., 1999), potentially reflecting men’s greater access to social power (Noller, 1993 as cited in Feeney et al., 1999). Indeed, it has been argued that they are perceived to be the experts on problems, that their use of language is more dominant, and that topics initiated by women may not become the focus of conversation (Henley & Kramarae, 1991 as cited in Feeney et al., 1999). In explaining why assertion and favorable attitudes toward AIDS-related talk predicted safer sex practices for men only, it was noted that men who wish to be assertive about safe sex have the power to implement the decision to use a condom unilaterally, whereas women cannot (Feeney, 1999). Indeed, sexual practices cannot be examined and understood independently of other social factors (Moore, 1988). Researchers often do not recognize the complex ways in which sexual behaviour is intertwined with issues of gender and ethnicity in addition to education, economics, politics, and employment (Moore, 1988). Furthermore, the issue of patriarchy potentially remains prominent in most women’s lives and may not only affect women of minority backgrounds, but women from all walks of life. Despite that the fact that this may vary in degree among

minority and White women, the fight for gender equality seems far from over. Efforts must double, especially in terms of getting a better understanding of how power differences in both culture and gender impact on women's health and well-being.

Table 2.

Summary of Findings in regards to Sexual Communication across Gender and Culture

	Findings	Culture
Men	▪ Perceive less positive peer norms in regards to safe sex practices (Murphy et al., 1998)	▪ Western culture (sample of heterosexual youth living in the U.S.)
	▪ May be reluctant to initiating sexual communication for fear of not obtaining consent for sexual intercourse (Murphy et al., 1998)	▪ Western culture (sample of heterosexual youth living in the U.S.)
	▪ Trust is considered safe sex (McQuiston & Gordon, 2000)	▪ Hispanic sample
	▪ Men have greater access to power and can thus easily be assertive in regards to safe sex practices (Feeney, 1999)	▪ Australian sample
	▪ Willing to engage in sexual communication if first initiated by their female partner (Lock et al., 1998; Murphy et al., 1998)	▪ Western culture (sample of heterosexual youth living in the U.S.)
Women	▪ More likely to perceive their male partners' subjective norms around condom use as less favorable, which leads them to hesitate initiating sexual communication (Murphy et al., 1998)	▪ Western culture (sample of heterosexual youth living in the U.S.)
	▪ Communication represents a way of practicing safe sex (McQuiston & Gordon, 2000)	▪ Hispanic sample
	▪ Lack confidence in negotiating sex (Malow et al., 1998)	▪ Haitian sample
	▪ Don't feel capable of refuting sexual intercourse (Malow et al., 1998)	▪ Haitian sample

Sexual Communication: Enhancing factors

What about factors that enhance partner sexual communication? Crosby, Diclemente, Wingood, Cobb, Harrington, Dacies, Hook, and Oh (2001) examined STI/HIV protective variables among high risk African American female teens and found that a supportive family environment might be beneficial. More specifically, the authors found that female adolescents residing with their mothers in a perceived supportive family were more likely to communicate with their sex partners about sexual risk - a finding that echoes previous research (e.g., Dittus, Jaccard, & Gordon, 2000; Durta, Miller, & Forehand, 1999; Romer, et al., 1999 as cited in Crosby et al., 2001). In addition, female adolescents living with their mothers in a perceived supportive family were more likely to have positive attitudes toward condom use (Crosby et al., 2001). It should be noted, however, that the study was cross-sectional in nature – a design that potentially suffers differing cohort effects. Moreover, the sample is limited to economically disadvantaged African American adolescents, rendering generalizability limited to this specific population.

In accordance with the latter, and in using African American adolescent females, Crosby, DiClemente, Wingood, Cobb, Harrington, Davies, Hook, and Oh (2002) found that teens' communication with their parents about sex-related issues such as STIs and pregnancy prevention may be the single most important correlate of communication frequency with the sex partners in regards to these issues. These findings suggest that adolescent females learn comfort for discussing sex-related issues and modeling for sexual communication in the relative security of the parent-adolescent relationship – skills that are extended to the sex partner (Crosby et al., 2002). Crosby et al. (2002) state

that the findings suggest that teenagers' infrequent sexual communication may be a function of intrapersonal factors as well as interpersonal factors. Once more, findings can only be generalizable to African American adolescent females.

In examining the relationship between attachment style, assertive communication, and safe-sex behaviour, Feeney et al. (1999) suggest that individuals who are less anxious about their relationship may be more willing to persist in the negotiation of safe-sex behaviour. In this manner, such individuals may feel less fearful that such talk negatively impacts on the quality and stability of the relationship (Feeney et al., 1999). In this manner, it sounds as if the quality of the relationship acts as a potential mediator to sexual communication.

In conclusion, adolescents today seem to continue to struggle with consistent practice of sexual communication and variables such as gender, culture, patriarchy, family support, and sense of security within a relationship may somehow moderate the likelihood of sexual communication. However, much of our knowledge to date on sexual communication has been seemingly accumulated from adult samples, or with specific groups of adolescents (i.e., ethnic minorities; females). As a result, adolescent sexual communication remains unclear and understudied despite its reported prediction of safe sex practices. Clearly, further investigation including a more representative sample of North American adolescents need to be undertaken so that a more comprehensive understanding of both the facilitative and hindering factors to sexual communication is achieved. For this reason, it is the intent of the present study to further examine the role that sexual communication plays in relation to sexual practices. In addition, given the

argued salience of identity on personal characteristics, it will also be interesting to observe the relationship between sexual communication and identity.

Conclusion

In the first section on adolescent sexuality, alarming data such as lack of condom use, teenage pregnancies, STI and HIV/AIDS infection, and characteristics of high-risk sexual behaviour were discussed. Clearly, adolescents are engaging in behaviours that potentially compromise their health, and evidently their future. Indeed: "The HIV/AIDS epidemic threatens the viability, perhaps the very existence, of this next generation. The social and economic well-being of this first 'AIDS generation' may very well predict the future well-being of this nation as a whole in the next century" (Hein, 1992, p. 3).

Unfortunately, a comprehensive understanding of the complex mechanisms by which adolescents are more likely to acquire an STI or HIV/AIDS has yet to be disentangled. Therefore, there is an urgency to double efforts in this respect in order to implement appropriate prevention and intervention techniques to assure the well-being of future generations.

In the second section on identity, a number of components were discussed in relation to identity. In essence, it appears as if an enormous body of literature was propelled from Marcia's (1966) conception of the Identity Status Paradigm, including the identity statuses and identity styles. In turn, many researchers have used these identity classification tools to explore innumerable variables such as intimacy, cognitive style, sense of well-being, etc. The latter has enabled researchers and clinicians alike to gain a better understanding of both the formation and influence that one's identity exerts on people's day-to-day living.

Finally, the section on sexual communication generally indicates that effective sexual communication is correlated with safe sex practices. Despite the number of studies available on the topic, however, little is known in regards to adolescents' communication around safe sex practices, including partners' sexual histories, intention to use contraception, or even around issues of STI or HIV/AIDS. Questions thus remain. How do adolescents come to agree (or not) on safe sex practices? What factors facilitate sexual communication for this population? Do adolescents have adequate knowledge about STIs, namely HIV/AIDS to accurately communicate about sex? By answering the latter, more effective campaigns for safe sex practices could be implemented.

Clearly, many adolescents of this nation are in danger. To date, we have failed to adequately understand the factors that reinforce adolescents' decisions to practice safe sex (DiClemente, 1992). It is therefore our duty as researchers and clinicians to come to a comprehensive understanding of adolescents and STI or HIV/AIDS infection so that more effective prevention and intervention programs are designed and implemented. As it stands, it is widely known that both identity and sexuality are of equal salience in the adolescent stage, and that sexual communication (with accurate HIV/AIDS transmission knowledge) can potentially influence safe sex practices. Despite this, identity, sexual communication, and HIV/ AIDS knowledge have never been concurrently explored to date. It is therefore proposed that this be done in order to examine whether these prominent elements are related to one another, and evidently, whether they moderate safe sex practices.

Chapter 2: Methods

Objectives

The introduction argues that adolescents' sexual practices are of great concern, with their especially high risk in contracting an STI, including HIV/AIDS. With this in mind, there is an urgent need to come to a better understanding of adolescent sexuality, specifically what variables may facilitate or hinder safe sex practices. Despite the fact that sexual communication seems to be identified as a predictor of condom use, this type of interaction remains unclear within an adolescent population. Seeing that identity and sexuality are an integral part of adolescents' development it is expected that aspects of identity influence HIV/AIDS knowledge, sexual communication and evidently, safe sex practices. Berzonsky's identity styles are used to measure identity, as they are based on decision-making style, which concurs with the process of practicing safe sex (i.e., deciding whether or not to practice safe sex by initiating a conversation around sexual histories, deciding to use contraceptive methods to prevent conception and disease, and seek out the necessary knowledge around STI and/or HIV/AIDS). Indeed, some authors contend that addressing adolescent developmental issues that affect decisions to engage in risk-taking behaviour is crucial (Braverman & Strasberger, 1994). With this in mind, the following is expected (see figure 4):

General Hypothesis

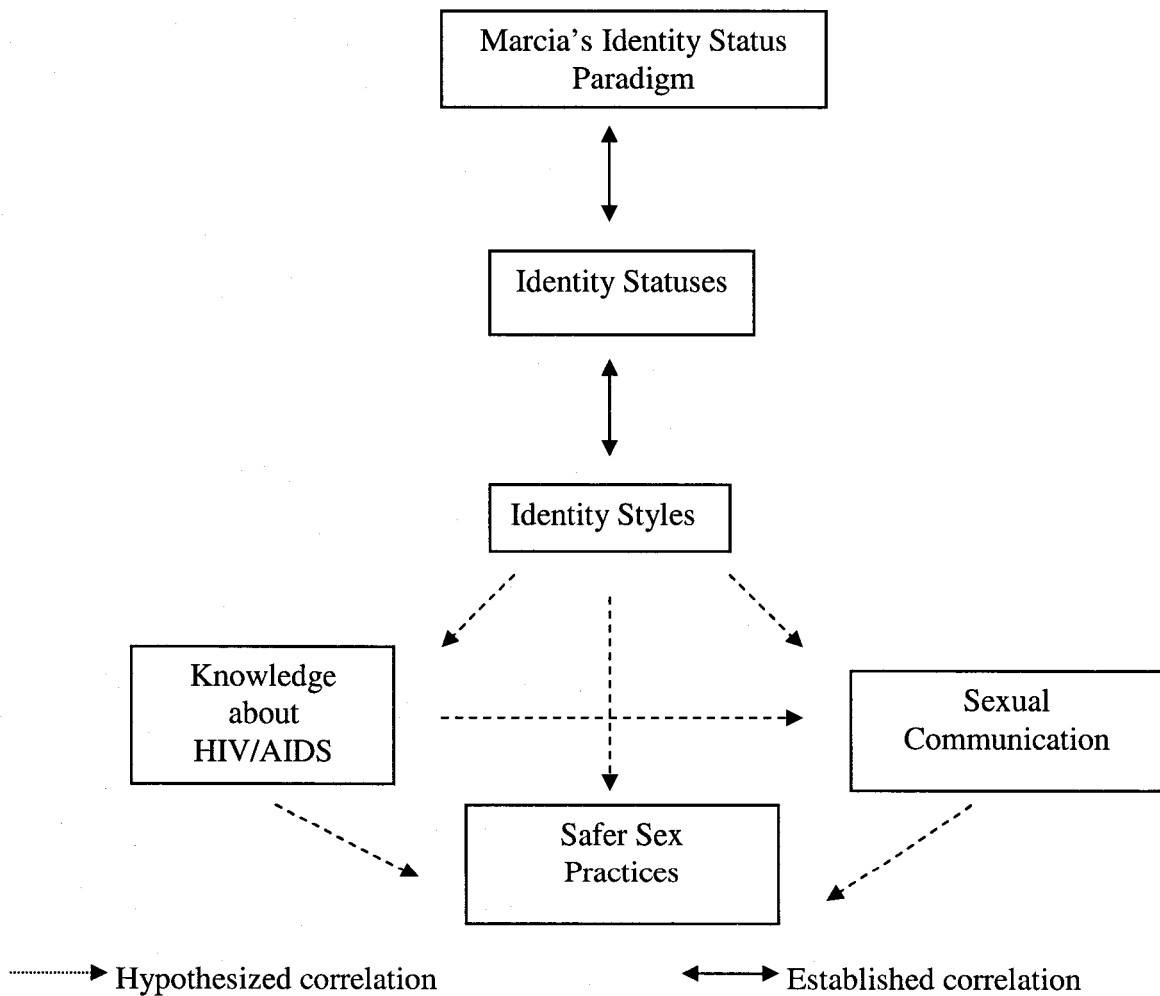
- Identity style, sexual communication, and HIV/AIDS knowledge influence sexual practices

Specific Hypotheses

- Individuals with an information orientation practice safer sex than other styles

- Individuals with an information orientation engage in more sexual communication than other styles
- Individuals with an information orientation have more accurate knowledge about HIV/AIDS as compared to other styles
- Sexual communication is associated with safer sex practices
- Accurate HIV/AIDS knowledge is associated with safer sex practices
- Accurate HIV/AIDS knowledge is associated with sexual communication

Figure 4. Theoretical Framework



Design

This study was quantitative in nature, relying on standard statistical analyses (Rubin & Babbie, 1993). More specifically, the study design is a cross-sectional survey of selected University populations (Rubin & Babbie, 1993). Predetermined hypothesis were established and used as a guide for the analyses. The study was designed to evaluate the explanatory power of the hypothesized model of safe sex practice (see figure 4). Indeed, participants between the age of 18 and 22, inclusively, were asked to complete a self-administered questionnaire and ballot, and return it via internal university mail at both institutions (University of Guelph and Wilfrid Laurier University). One should keep in mind that a self-report measure has inherent limitations (Berzonky, 1989). Nonetheless, it provided the possibility of rapid and convenient sampling, which was especially important in this particular study given the political changes related to individual privacy that came about during the course of the project (January 2004).

Sampling

Selected participants were in the late stages of adolescence with ages ranging from 18 to 22, inclusively. This age range was specifically chosen because it is thought to be crucial to an individual's identity development, particularly as it relates to one's sexuality. In addition, this age segment falls into the age bracket (15 to 24) identified as being most at risk to acquire and STI (Statistics Canada, 1999). University students in particular were not only sampled for convenient reasons, but also because they are believed to be at particular risk for developing an STI (Huba, Melchior, Panter, Trevithick, Woods, Wright, Feudo, Tierney, Schneir, Tenner, Remafedi, Greenberg, Sturdevant, Goodman, Hodgins, Wallace, Brady, & Singer, 2000).

The research project was reviewed and approved by the University of Guelph Research Ethics Board in January, 2004. At that point, the agreement was that the researcher would obtain a random, representative sample of 600 individuals (list), equally divided between males and females across programs. Indeed, with the list of students, the researcher planned on sending a package containing an information letter (see appendix A), a demographics sheet (see appendix B), the survey (see appendix C), resources in the Guelph area (see appendix D), the ballot form (see appendix E), and two envelopes to send the ballot and questionnaire separately through internal mail. When the necessary steps to proceed with this plan were enabled, however, other means by which to collect data had to be devised as a result of the new Privacy Act coming into effect in January 2004, which prohibits institutions from giving out any identifying information about individuals.

It was therefore decided that the best way to collect data under the new legislation was to physically hand out survey packages to interested students around the school. A non-probability sample based on available subjects was therefore undertaken at the University of Guelph. In this manner, the researcher approached University of Guelph students, explained who she was, what the study was about, what was entailed in participating, and the potential cash rewards they could incur as a result of participating (draws). Interested students, who provided consent to participate, were given a package including the items mentioned above. In this manner, 520 packages were given out on February 26th and 27th, 2004, and another 80 on March 18th, 2004 amounting to a total of 600 surveys at the University of Guelph.

Because there was a fear of a low return rate at the University of Guelph, it was decided to send out questionnaires to Wilfrid Laurier University. With the approval of Wilfrid Laurier Research Ethics Board, 500 packages were sent out, which included an information letter (see appendix F), a demographics sheet (see appendix B), the survey (see appendix C), resources in the Kitchener-Waterloo area (see appendix H), and two envelopes to send the survey and ballot (see appendix G) in separately. These were inserted into resident students' mailboxes on March 1st, 2004. More specifically, 200 went to the King Street Residence, while the remaining 300 went to Bricker Residence. Again, a non-probability sample based on available subjects was used.

It is important to outline that because neither of the samples was collected in a randomized fashion, results cannot be generalizable to a university population. This is particularly true at the University of Guelph where it is arguable that students who consented to partake in the study did so because of having experience with sex, potentially skewing results. In addition, with such a low return rate at Wilfrid Laurier University (9.8%), generalizability is further hindered. In any case, results were certainly interesting and valuable in providing the researcher and others alike with an idea of students' identity, sexual practices, sexual communication and knowledge about HIV/AIDS.

A total of 264 surveys were returned to the researcher, including 73 (27.7%) from males and 191 (72.3%) from females, 240 of which report being born in Canada. There were 215 (81.3%) from the University of Guelph making up a return rate of 35.8% and 49 (18.6%) from Wilfrid Laurier University, making up a return rate of 9.8%.

Because of the large number of reported programs, the researcher collapsed majors into larger categories. In this manner, Bachelor of Science includes Bachelor of Engineering, Bachelor of Horticultural Science, Bachelor of Agriculture, and Bachelor of Landscape Architecture. Bachelor of Arts includes Bachelor of Arts (Honors), Bachelor of Commerce, and Bachelor of Music. Bachelor of Business Administration includes Bachelor of Economics, while Bachelor of Applied Science and Bachelor of Arts and Science remain independent categories. Approximately half of the sample reported being in a Bachelor of Arts (51.9%), while a little over a third reported being in a Bachelor of Science program (36.4%) (see table 3).

Table 3.

Distribution of Program Enrolment

Program of Enrolment					
B.SC.	B.A.	B.A.Sc.	B.A.S.	B.B.A.	Total
36.4% (96)	51.9% (137)	5.7% (15)	11.1 (3)	4.9% (13)	100% (264)

Measures

Identity Style

In an effort to explore the identity orientations, Berzonsky (1989) developed a self-rating inventory by uncoupling the commitment and exploration components that are confounded in objective measures of identity status (Berzonky, 1989). This self-report measure of identity processing style specifically taps into content relevant information to identity issues (Berman et al., 2001). These styles parallel an aspect of Marcia's (1966) identity status paradigm in terms of depicting self-reported differences in the way that

persons approach (or manage to avoid) the task of personally forming a sense of self-identity (Berzonsky & Neimeyer, 1994). The self-report, called the Identity Style Inventory (see appendix C, Section 2) was revised in 1992 (see Berzonsky, 1992 as cited in Berzonsky et al., 1999) and asks participants to provide ratings (on a five-point Likert rating scale) of how they generally tend to handle identity-related problems as they come up (Berman et al., 2001). It contains a ten-item diffuse/avoidant-style, an eleven-item informational-style, a nine-item normative style, and a ten-item identity commitment scale (Berzonsky, 1993). Each of the three ISI scale scores is converted into a z score, and the scale with the highest z score is used to classify the respondent in the appropriate identity style (White, Wampler, & Winn, 1998). Under that procedure, the ISI categorizes virtually all subjects into one of the three identity styles: information, normative, and diffuse/avoidant (Berzonsky & Sullivan, 1992 as cited in White et al., 1998) – a procedure that was employed for the subjects in this study.

Reported test-retest reliabilities are as follows: diffuse/avoidant – 0.71; informational - 0.75; normative – 0.74 (Berzonsky et al., 1999). Internal reliabilities (coefficient alpha) have been reported as follows: informational – 0.73; diffuse/avoidant - 0.78; normative – 0.68 (Berzonsky, 1993). Berzonsky (1989) examined the validity of a self-report measure of the identity styles in two studies. He compared the identity styles to the identity statuses. Results indicate that the style measures were related to identity-status scores as well as other personality measures in a theoretically consistent fashion. The fact that there was a relationship found between the identity styles and the identity statuses is a validation in itself (Berzonsky, 1990).

Safe Sex Practices

The Sexual History Questionnaire (SHQ) (see appendix C, Section 3) was developed by Cupitt (1992, as cited in Cupitt, 1998) and was devised to assess the degree to which the participant puts himself or herself at risk of infection for HIV, the virus that leads to AIDS. Therefore, the SHQ's main goal was to extract information on the sexual practices of each respondent, and assess whether these practices put them at risk for HIV. The questionnaire is not specifically scored but contains a combination of multiple-choice, yes/no, 5-point scale, and numerical questions. By nature, the behaviour this questionnaire seeks to measure is ever changing. Nonetheless, most of the questions are considered to have a high face validity. To ensure that the respondents share the same understanding of the different sexual practices mentioned, a summary of definitions is included at the start of the questionnaire to increase the validity of the tool. It is important to note, however, that several questions were omitted, while others added for the purpose of time and relevance to the study.

Sexual Communication

The AIDS-related Concern, Beliefs, and Communication Behaviour Inventory (AIDS CBCI) was developed in 1991 to assess audience responses to an AIDS prevention campaign designed to increase concern about AIDS, knowledge of the disease, and communication behaviour regarding HIV/AIDS (Brown & Bocarnea, 1991, as cited in Brown & Bocarnea, 1998). The AIDS CBCI consists of three scales: 5 items measure concern about AIDS, 14 items measure beliefs about AIDS, and 4 items measure AIDS-related communication behaviour. For the purpose of this study, only questions around sexual communication were included. Other questions in this regard were also

added to the section in order to render the section highly relevant to the study. The concern scale and communication behaviour scale are both interval scales that use a 7-point Likert-type format (Brown & Bocarnea, 1991 as cited in Brown & Bocarnea, 1998). The concern scale yielded a reliability coefficient of .65, and the communication behaviour scale yielded a reliability coefficient of .84 (Brown, 1992 as cited in Brown & Bocarnea, 1998).

Construct validity of the AIDS CBBI was also evaluated by testing hypothesized relationships between the measured variables and several related variables and by exploring correlations among related variables. Regression analyses indicate concern about AIDS with others, including open discussions with sexual partners ($\beta = .22, p < .05$). Accurate beliefs about AIDS is also a significant predictor of interpersonal communication about the disease ($\beta = .67, p < .01$). Concern about AIDS is highly correlated with having accurate knowledge of the disease ($r = .67, p < .001$) and with taking precautions to protect oneself against the disease ($r = .63, p < .001$). Openly talking with actual or potential sexual partners about AIDS is also highly correlated with taking precautions to protect oneself against the disease ($r = .48, p < .001$). Accurate knowledge of AIDS is highly correlated with taking precautions to prevent exposure to HIV infection ($r = .48, p < .001$). All of the latter regression and correlational analyses support the predictive validity of the AIDS CBCI. (Brown & Bocarnea, 1991, as cited in Brown & Bocarnea, 1998).

It is also important to note that this part of the questionnaire was modified to include STI and HIV communication (see appendix C, Section 4) to once again render the section highly relevant to the study at hand.

HIV/AIDS Knowledge

It was also important to measure knowledge and beliefs about HIV/AIDS. For this reason, the participants were asked to fill out the Assessment of Knowledge and Beliefs about HIV/AIDS Among Adolescents questionnaire (See appendix C, Section 5). Cheryl Koopman and Helen Reid (1990, as cited in Koopman & Reid, 1998) developed this questionnaire so that it could tap into the understanding that adolescents hold about the different aspects of HIV and AIDS. Knowledge items tap into seven domains: definitions, risk behaviour, transmission of the virus, outcomes of HIV infection, HIV testing, prevention, and distinguishing safer from less safe sexual behaviours. Beliefs items were created to tap into five domains: perceived threat, peer support for safe acts, self-efficacy, self-control in high-risk sexual situations, and expectations to prevent pregnancy. The revised measure used in the present study includes 45 items for the AIDS Knowledge Test, 7 items for the Safer Alternatives Test, and 36 items for the Beliefs About Preventing AIDS Test. For the purpose of this study, only the items on HIV/AIDS knowledge was utilized. The latter is made up of three knowledge areas: (1) medical/scientific knowledge, (2) myths about HIV transmission, and (3) knowledge of high/risk/prevention behaviours.

In the interest of time, each of the knowledge areas was reduced. More specifically, out of the 23 items representing medical/scientific knowledge, 12 were randomly selected. This was done by selecting every second item of the knowledge area. Similarly, out of the 9 items in the myths of HIV transmission knowledge area, 6 were selected. Again, this was done randomly by eliminating every third item of the knowledge area. Finally, out of the 13 items in the knowledge of high risk/prevention

behaviours, 9 were randomly selected. This was done by eliminating every fourth item in the knowledge area (starting with the elimination of the first item).

Because only selected knowledge items were used from this questionnaire, it cannot be presumed that its psychometric properties would be unaffected. Indeed, our reliability test (coefficient alpha = .18) showed the measure to be unreliable. In addition, there was limited variance in response to these knowledge questions with approximately 85% of respondents correctly answering most questions. Consequently, this questionnaire could not be used as an outcome indicator in the analyses. The only useful conclusion is that this information is well known to this student population and cannot be used to distinguish their sexual practices.

Data Analysis

A series of analyses were conducted to observe the relationship between the variables, including frequency counts, cross-tabs, chi-squares, ANOVAs, correlations, Mann-Whitney U-Tests, Kruskal-Wallis analyses, and reliability statistics. Frequency counts were essentially used to describe the various characteristics of the sample (e.g., gender, age, program, etc.). Further, frequencies provided the researcher with rich information on the number of participants engaging or not engaging in certain behaviours (i.e., sexual behaviours, sexual communication, etc.). Cross-tabs were mainly used to observe patterns emerging between two variables (i.e., age and identity styles). ANOVAs, qui-square, Mann-Whitney U-Tests, Kruskal-Wallis analyses and correlations were used with the purpose of observing an association between variables (i.e., identity styles and sexual communication). More specifically, ANOVAs were conducted between two independent groups and interval scales, qui-square between two categorical

variables, Mann-Whitney U-test and Kruskal-Wallis between independent groups and rank-order data (i.e., frequency of a physical barrier, sexual communication scales), and correlations between two interval or ratio variables. Finally, reliability tests were run in order to see quality of the scales (consistent). In this manner, the researcher was able to determine whether or not a scale could be used in the analyses in a meaningful fashion.

With the above in mind, the researcher was able to provide evidence against or for the various study hypotheses and evidently, the study's theoretical framework (see figure 4, p. 48). It is important to note that given the study's correlational nature, no direct causality could be inferred.

Alpha Cronbach reliability tests were run in order to determine the internal consistency of the scales. In terms of the Identity Style Interview 3, reliability for the three identity styles is as follows: information -- .68; normative -- .63; and diffuse -- .76. Reliability for the sexual communication is reported at .73, while the knowledge and beliefs about the HIV/AIDS scale is reported at .18. As a result of the low reliability statistic for the HIV/AIDS knowledge and beliefs scale, its use in the analyses is omitted.

Strengths and Limitations

It is important to remember that the non-probability samples and the low return rates make statistical generalizations to broader university populations in this study inappropriate. However, given the large number of surveys analyzed, it is reasonable to assume that the behaviours documented in this study are typical of a substantial proportion of university students between the ages of 18 and 22 at these two institutions. This is particularly likely to be the case at University of Guelph as a result of the much higher return rate.

It may also be important to note that the survey was limited in gathering some of the data, especially data related to sexual practices (see appendix C, section 3). More specifically, there should have been a question asking which behaviour the respondent had ever engaged in (vaginal, anal, and/or oral sex). In this manner, the researcher would have been clearly able to determine the number of participants having engaged in the respective sexual behaviours. Further, question 4 (see appendix C, section 3) asked respondents to check off either “yes” or “no” to having ever engaged in unprotected vaginal, anal and oral sex. Unfortunately, those respondents who ticked off “no,” may have either always used protection for the respective sexual behaviour or have not engaged in that behaviour at all. In this manner, a third “N/A” option should have been added to the “yes/no” choice for those participants who had not engaged in a particular sexual behaviour in the past. Indeed, this would have helped the researcher to obtain more accurate results on the sexual practices reported by subjects. Similarly, when asking about the frequency of use for a physical barrier, (see appendix C, section 3, question 5) an “N/A” option should have been added to the four-level Likert scale (always to never) to ensure that respondents were actually answering to sexual behaviours they had previously engaged in.

In terms of sexual communication (see appendix C, section 4, question 3), there shouldn't have been any restriction (subjects asked to respond only if they were currently practicing unprotected sex). Indeed, it seems that many respondents who were not currently practicing unsafe sex (as evidenced from previous answers) chose to answer the question, perhaps because the question applied to all persons with sexual experience. Indeed, whether one practices protected sex or not, discussing each other's sexual

histories may be important information to gather. Data from all persons responding to this question was therefore utilized in the analyses.

As a result of these survey weaknesses, the researcher and readers alike should be cautious regarding the interpretations of results, specifically those related to the above.

In addition, when interpreting results, it is important to note that a draw for cash prizes was used to entice individuals to participate. Indeed, it is arguable that particular individuals were more apt to participate as opposed to others with the draw being at play, potentially leading to a response bias (Rubin & Babbies, 1993). In any case, three names were drawn from each University at the end of March 2004 and the researcher subsequently contacted the winners and mailed the cheques out in early April 2004.

Another limitation relates to the use of a standardized questionnaire which may provide superficial information, especially in relation to complex topics (Rubin & Babbin, 1993) like understanding the factors that contribute to safe sex practices. In this manner, the context of social life is seldom dealt with (Rubin & Babbin, 1993). Finally, survey research cannot measure social action; they only have the ability to collect self-reports of recalled past action, which can certainly taint the results and weaken validity (Rubin & Babbin, 1993). In this manner, it is important to remember that student self-reports of sexual behaviours in this study may not precisely indicate their actual practices.

A strength includes the relatively large sample of the study, which is particularly important for studies with several variables at play (Rubin & Babbin, 1993) Other strengths relate to the use of a standardized questionnaire, which provides flexibility in the analyses and reinforces reliability by surveying all respondents in the same fashion (Rubin & Babbin, 1993).

Chapter 3: Results

Several types of analyses were conducted throughout this section in order to understand the relationships between the study's variables. The results are organized under five major headings including: (1) Overall Patterns and Gender Differences, (2) Age, (3) Identity Style, (4) Sexual Communication, and (5) Medical Check-Ups and Sexual Behaviours. Indeed, each of these is examined against one another and against sexual behaviours in an attempt to observe how variables relate to one another, and whether these relationships (or lack thereof) are in congruence with the study's hypotheses. In addition, a section entitled "Pure Identity Style" further explores the relationship between identity style and safe sex practices. A final section is added in order to examine the characteristics of individuals who practice safe sex and individuals who engage in high risk sexual behaviours.

Overall Patterns and Gender Difference

This section presents the overall behaviours reported by both males and females. Indeed, understanding the differences and similarities between the genders is an important endeavor that has been explored for decades. Assumptions about how males differ from females (and vice versa) have certainly been made, especially with regards to sexually related issues (e.g., Murphy, Rotherman-Borus & Reid 1998; Werner-Wilson & Vosburg, 1998). Having said this, it was the expectation of the researcher to find differing patterns between males and females with respect to sexual behaviour, and sexual communication. In addition, it was important to note the patterns of identity style between males and females.

Before exploring overall behaviours and gender patterns, it was important to note whether males and females in the sample reported being similar in age to ensure that it did not emerge as a potential confounding variable. The age of the sample ranges from 18 to 22 years, inclusively, with both genders mostly reporting being between 19 and 21 years old. According to table 4, small differences in age are evident between the genders, but these are not enough to produce a statistically significant relationship as evidenced by ANOVA ($F = 2.43 (1), p = .120$).

Table 4.

Gender	Age in Years					Total
	18	19	20	21	22	
Males	11% (8)	20.5% (15)	19.2% (14)	30.1% (22)	19.2% (14)	73
Females	13.6% (26)	26.2% (50)	24.1% (46)	20.4% (39)	15.7% (30)	191
Total	12.9% (34)	24.6% (65)	22.7% (60)	23.1% (61)	16.7% (44)	264

No overall statistically significant relationship is reported between gender and the identity style categories as demonstrated by chi-square ($\chi^2 = 3.46 (2), p = .177$). Some differences, however, specifically with respect to the diffuse and normative orientations are apparent (see table 5). Table 5 depicts more males (41.1% - 30) than females (33.5% - 64) categorized as having a diffuse orientation, while more females (36.6% - 70) than males (24.7% - 18) are categorized as having a normative orientation.

Table 5.

Gender and Identity Style Categories

Identity Style Categories	Males	Females
Diffuse Orientation	41.1% (30)	33.5% (64)
Normative Orientation	24.7% (18)	36.6% (70)
Information Orientation	34.2% (25)	29.8% (57)
Totals	100% (73)	100% (191)

When ANOVA is run between the genders and the individual identity scales, however, a statistically significant relationship is noted between gender and the diffuse scale ($F = 12.91 (1), p = .000$) (see table 6). Means are reported at .35 for males and -.13 for females, indicating that males score higher on the scale than females.

Table 6.

Gender and Individual Identity Scales

Individual Style Scales	Means (SD)		F (DF)	p
	Males	Females		
Diffuse orientation	.35 (1.17)	-.13 (.89)	12.91 (1)	.000
Normative orientation	-.08 (1.17)	.03 (.93)	.68 (1)	.411
Information orientation	.18 (1.03)	-.07 (.98)	3.39 (1)	.067

Most respondents (86.7% - 229) report having engaged in vaginal, anal, and/or oral sex, including 87.7% (64) of males and 86.4% (165) of females (sexual experience). No statistically significant relationship ($\chi^2 = .07$ (1), $p = .783$) is thus reported between the genders and the likelihood to report sexual experience. It may be important to note, however, that if the types of sexual experience (vaginal, anal and oral sex) had been asked for in a manner that broke down the level of experiences, some differences between males and females may have emerged. In any case, the rest of the analyses on sexual behaviours are conducted on the 229 respondents that report having sexual experience.

Out of the 229 persons who report having engaged in oral, vaginal and/or anal sex, 95.6% (219) report having sex with people of the opposite sex, indicating that the results of the study are solely applicable to a heterosexual population (as defined by respondent's reported sexual partners). Indeed, 97% (160) of females report only having sex with men, 1.8% (3) only with other women, 0.6% (1) mostly with men, and 0.6% (1) equally with men and women. Similarly, 92.2% (59) males report only having sex with women, 4.7% (3) only with men, 1.6% (1) mostly with women, and 1.6% (1) equally with men and women (see table 7).

Table 7.

Gender and Who One with Engages in Vaginal, Anal and/or Oral Sex

Gender	Who Have Sex With N = 229					Totals
	Only Men	Only Women	Mostly Women	Mostly Men	Equally men & Women	
Men	4.7% (3)	92.2% (59)	1.6% (1)	0	1.6% (1)	100% (64)
Women	97% (160)	1.8% (3)	0	0.6% (1)	0.6% (1)	100% (165)

Nearly three-quarters of respondents with sexual experience (72.2% - 164) report having engaged in unprotected vaginal sex, including 73.4% (74) of males and 71.8% (117) of females. Nearly all respondents report having ever engaged in unprotected oral sex (97.2% - 210), including 100% (60) of males and 96.2% (50) of females.

Unprotected anal sex, however, was reported at much lower rates (14.7% - 29) among both genders (see table 8). No statistically significant relationship between the genders and reports of unprotected vaginal, anal, or oral sex is reported.

Table 8.

Gender and Having Ever Engaged in Unprotected Vaginal, Anal, or Oral Sex

Genders	Have Ever Engaged In...		
	Unprotected Vaginal Sex	Unprotected Anal Sex	Unprotected Oral Sex
Males	73.4% (47)	18.2% (10)	100% (60)
Females	71.8% (117)	13.4% (19)	96.2% (150)
Total	72.2% (164)	14.7% (29)	97.2% (210)

Unprotected vaginal sex, vaginal sex with a condom, and unprotected oral sex are reported by both genders as the most frequently practiced sexual behaviours during the last sexual encounter. Indeed, approximately one half (49% - 101) of respondents report having engaged in unprotected vaginal sex and another half, in vaginal sex with a condom (55% - 104). An overwhelming majority of respondents report having engaged in unprotected oral sex (87.2% - 170) (see table 9). Very few, on the other hand, report having engaged in unprotected anal sex (4% - 7), anal sex with a condom (1.8% - 3), and oral sex with a dental dam or condom (3.6% - 6). Given the similarity of reports between males and females, no statistically significant relationship is reported between gender and any of the sexual behaviours engaged in during the last sexual encounter.

Table 9.

Gender and Last Sexual Encounter

Gender	Last Sexual Encounter		
	Unprotected Vaginal Sex	Vaginal Sex with a Condom	Unprotected Oral Sex
Males	50% (29)	51.9% (27)	91.1% (51)
Females	48.6% (72)	56.2% (77)	85.7% (119)
Totals	49% (101)	55% (104)	87.2% (170)

Note: The sexual behaviours during the last sexual encounter are not mutually exclusive. In this manner, both unprotected and protected vaginal sex was reported by some during the last sexual encounter.

With both genders reporting relatively high levels of unprotected sexual activity (in the past and during the last sexual encounter), it was important to explore whether males and females use a physical barrier as frequently. Two hundred and ten respondents (92.2% of males and 91.5% of females) answered the question regarding how often a physical barrier is used during vaginal sex. Over 70% (152) of both males and females report “never,” “sometimes,” or “almost always” using a physical barrier for vaginal sex. Only about a quarter (27.6% - 58) of both genders report “always” using a physical barrier for vaginal sex (see table 10). No statistically significant relationship ($\chi^2 = .563$ (3), $p = .905$) is noted between the genders and the frequency of a physical barrier for vaginal sex.

Table 10.

Gender and How Often a Physical Barrier is Used for Vaginal Sex

Genders	Physical Barrier for Vaginal Sex (N = 210)			
	Never	Sometimes	Almost Always	Always
Males	10.2% (6)	33.9% (20)	28.8% (17)	27.1% (16)
Females	13.2% (20)	29.8% (45)	29.1% (44)	27.8% (42)
Total	11.4% (26)	31% (65)	29% (61)	27.6% (58)

Seventy nine respondents (43.7% of males and 30.9% of females) answered the question regarding how often a physical barrier is used for anal sex, leading to the conclusion that about a third of the sample (29.9%), including both males and females, is engaging in anal sex. Over half of respondents report either “never” (36.7% - 29), “sometimes” (11.4% - 9), or “almost always” (6.3% - 5) using a physical barrier for anal sex. Indeed, only 45.6% (36) of respondents report “always” using a physical barrier for anal sex. Despite some differences between males and females’ use of a physical barrier for anal sex apparent in table 11, there is no statistically significant relationship noted ($\chi^2 = 3.44 (3), p = .328$) as demonstrated by chi-square.

Table 11.

Gender and How Often a Physical Barrier is Used for Anal Sex

Genders	How often a Physical Barrier is used for Anal Sex (N = 79)			
	Never	Sometimes	Almost Always	Always
Males	25% (7)	14.3% (4)	10.7% (3)	50% (14)
Females	43.1% (22)	9.8% (5)	3.9% (2)	43.1% (22)
Total	36.7% (29)	11.4% (9)	6.3% (5)	45.6% (36)

Two hundred and fourteen (93.7% of males and 93.3% of females) participants responded to how often a physical barrier is used for oral sex, with 92.5% (198) of participants reporting “never” using a physical barrier for oral sex. No respondent report “always” using a physical barrier, as few as 0.9% (2) report “almost always,” and only 6.5% (14) report “sometimes” using a physical barrier for oral sex. Frequencies between the genders and the use of a physical barrier for oral sex are very similar (see table 12), which is confirmed by the lack of statistically significant relationship ($\chi^2 = 1.12 (3)$, $p = .566$). Evidently, the fact that both males and females use a physical barrier for oral sex equally often is confirmed.

Table 12.

Gender and How Often a Physical Barrier is Used for Oral Sex

Genders	How often a Physical Barrier is Used for Oral Sex (N = 214)			
	Never	Sometimes	Almost Always	Always
Males	95% (57)	5% (3)	0% (0)	0 (0%)
Females	91.6% (141)	7.1% (11)	1.3% (2)	0 (0%)
Total	92.5% (198)	6.5% (14)	0.9% (2)	0 (0%)

Two hundred and twenty eight subjects (100% of males and 99.4% of females) responded to the question about having engaged in unprotected vaginal or anal sex in the past year. More specifically, 64.9% (148) said they had done so, including 68.8% (44) of males and 63.4% (104) of females. Again, with the similarities between males and females, no statistically significant relationship ($\chi^2 = 5.75 (1)$, $p = .448$) is reported between gender and the likelihood of having engaged in unprotected vaginal or anal sex in the past year. It may also be important to note that out of 72.9% (167) of those reporting having ever engaged in unprotected vaginal or anal sex, 86.2% also report engaging in unprotected vaginal or anal sex in the past year. This includes 87.8% (43) of males and 85.6% (101) of females. This finding suggests that regardless of gender, one who reports having engaged in unprotected vaginal and/or anal sex in the past, is more likely to report this in the past year (considering that reports of these took place on different occasions).

With high reports of unprotected sexual activity, namely in the past year, it was important to examine how many males and females reported having medical check ups for STIs, including HIV/AIDS before engaging in unprotected vaginal or anal sex in the past year. One hundred and forty seven respondents (67.2% of males and 63% of females) answered the question about medical check ups. The highest reported medical check-up option by both genders is having “neither oneself nor one’s partner” (54.8% - 80) medically checked. Indeed, only 18.4% (27) of the sample reports having “themselves” medically checked, including 11.6% (5) of males and 21.2% (22) of females. As few as 6.1% (9) report that their “partner” got medically checked, including 11.6% (5) of males and 3.8% (4) of females. Approximately a fifth (21.1% - 31) of both males and females report having had “both themselves and their partner” medically checked (see table 13).

Table 13.

Gender and Medical Check Up for STIs, Including HIV/AIDS Before Engaging in Unprotected Vaginal or Anal Sex in the Past Year

Genders	Medical Check-Ups (N = 147)			
	Myself	My Partner	Both	Neither
Males	11.6% (5)	11.6% (5)	20.9% (9)	55.8% (24)
Females	21.2% (22)	3.8% (4)	21.2% (22)	53.8% (56)
Total	18.4% (27)	6.1% (9)	21.1% (31)	54.8% (80)

Despite some apparent differences between the genders and the medical check-up options, no overall statistically significant relationship ($\chi^2 = 4.53$ (3), $p = .209$) is reported. Because of these apparent trends, however, it seemed valuable to compare gender against each of the medical check up options. A weak statistically significant relationship ($\chi^2 = 3.63$, (1), $p = .057$) is noted between gender and reports of “one’s partner” getting medically checked for STIs, including HIV/AIDS. Indeed, according to frequencies, males report “their partner” getting medically checked before engaging in unprotected vaginal or anal sex more often than females. Caution should be used when interpreting reports of having “one’s partner” medically checked, because females’ count is less than 5, which is less than what is needed for reliable analysis.

A total of 81 respondents (32.8% of males and 36.4% of females) report no unprotected vaginal or anal sex in the past year. Of these, 60.5% (49) report “always using a condom” and 39.5% (32) report “no vaginal or anal sex at all” in the past year. Similarities between males and females continue to emerge as evidenced by the lack of statistically significant relationships between gender and reports of “always using a condom” in the past year ($\chi^2 = .038$ (1), $p = .846$) and reports of “no vaginal or anal sex at all” ($\chi^2 = .128$ (1), $p = .721$) (see table 14).

Table 14.

No Unprotected Vaginal or Anal Sex in the Past Year

Genders	Not Engaged in Unprotected Vaginal or Anal Sex in the Past Year (N = 81)	
	No Vaginal or Anal Sex at All	A Condom was Always Used
Males	38.1% (8)	61.9% (13)
Females	40% (24)	60.0% (36)
Total	39.5% (32)	60.5% (49)

There is no statistically significant relationship between gender and the sexual communication scale (Mann-Whitney $U = 4500.00$, $z = -1.73$, $p = .083$). Because a level of .083 is arguably approaching significance, Mann-Whitney U tests were conducted for each of the 7 items in the scale, to see whether the genders potentially differed on the various aspects of sexual communication (see table 15). Table 15 depicts a statistically significant relationship between gender and particular aspects of sexual communication. Indeed, males differ significantly from females with respect to “discussing safe sex practices before engaging in sex” (Mann-Whitney $U = 4286$, $z = -1.996$, $p = .046$), with males speaking more openly about this with their partners. A statistically significant relationship (Mann-Whitney $U = 4238.5$, $z = -2.293$, $p = .022$) between gender and how much one “talks to those of the same sex about STIs and HIV/AIDS” is also reported, with males discussing this more openly with other males. “Speaking about each others’ sexual histories” is arguably approaching a statistically significant relationship (Mann-

Whitney U = 2292, $z = -1.772$, $p = .076$), with females reporting somewhat higher levels of this compared to males.

Table 15.

Gender and Sexual Communication

Sexual Communication Items	Mean Rank		Mann-Whitney U	Z Score	P
	Males	Females			
How much do you talk to your sexual partner(s) about STIs and HIV/AIDS?	121.58	109.74	4521	-1.239	.215
Have you and your partner ever discussed safe sex practices before engaging in sex?	125.97	107.96	4286	-1.996	.046
Have you and your partner spoken about each other's sexual histories before engaging in sex?	73.33	86.74	2292	-1.772	.076
How much have you discussed STIs and HIV/AIDS with others in the last month?	120.87	109.94	4607	-1.165	.244
How much do you talk to those of the opposite sex about STIs and HIV/AIDS?	108.63	115.38	4827.5	-.710	.478
How much do you talk to the same sex about STIs and HIV/AIDS?	130.27	108.34	4238.5	-2.293	.022
How openly do you discuss issues around sex (i.e., desires, preferences, worries, concerns, etc.)?	117.08	110.71	4783	-.730	.466

As mentioned above, the scale measuring respondents' knowledge and beliefs about HIV/AIDS could not be used in the analyses due to low reliability. What can be

determined, however, is that participants generally hold an accurate knowledge about the medical/scientific aspect of the disease, the mode of transmission, and about high-risk prevention. Indeed, 85% of respondents correctly answered between 24 and 27 questions out of the 27-item scale.

Summary

In essence, it seems that unsafe sexual practices is highly reported as evidenced by reports from the last sexual encounter; reports of having ever engaged in unprotected vaginal, anal and/or oral sex; frequency of a physical barrier for vaginal, anal, and oral sex; reports of unprotected vaginal or anal sex in the past year; and the low level of medical check-up options. Particularly striking, is the level of anal sex being practiced among the sample (one third). Also striking and unanticipated, is the fact that virtually no difference was found between the genders and sexual behaviour. Indeed, both males and females in the sample are approximately the same age, report engaging in similar sexual behaviours at similar rates, and with the same amount of protection. The only statistically significant relationship found is in relation to the diffuse scale, on some aspects of sexual communication, and in reports of having “one’s partner” medically checked for STIs, including HIV/AIDS before engaging in unprotected sex in the past year (see table 16 for main findings).

Table 16.

Summary of the Main Findings on Gender

Variables	Significance	Comments
Gender x Identity Style Categories	<i>NS</i>	
Gender x Diffuse Scale	.000	Males score higher on the diffuse scale
Gender x sexual experience	<i>NS</i>	
Gender x unprotected vaginal, anal, and oral sex	<i>NS</i>	
Gender x frequency of a physical barrier for vaginal, anal, and oral sex	<i>NS</i>	
Gender x medical check-ups for "one's partner"	.057	Males report their partners getting checked more often than females
Gender x always used a condom in past year	<i>NS</i>	
Gender x sexual communication scale	<i>NS</i>	
Gender x discusses safe sex practices before engaging in sex	.046	Males report discussing safe sex practices before engaging in sex more often than females
Gender x how much discusses STIs and HIV/AIDS with same sex	.022	Males report discussing STIs and HIV/AIDS with the same sex more openly than women

Note: NS = Non Significant.

Age

Development is certainly a function of one's age, as it evidently influences every aspect of one's life, namely identity and behaviour. In this manner, it was reasonable to expect that age would affect identity style, sexual behaviours, and sexual communication. Table 17 depicts the fact that approximately 70% (65) of people categorized with a diffuse style are between 18 and 20 years of age, while only 25% (11) of 22 year olds are categorized as having a diffuse style. Conversely, 71% of those categorized with an information orientation are between 20 and 22 years old, while only 14.7% (5) of the 18 year olds are categorized with an information style. In congruence with these trends, the ANOVA reveals a statistically significant relationship between age and the identity style categories ($F = 3.041 (2), p = .049$). Means are reported at 19.84 for the diffuse, 20.06 for the normative, and 20.32 for the information orientation, indicating that the younger one is, the more likely they might be to have a diffuse orientation. In turn, the older one is, the more likely might be to have a normative orientation, followed by an information orientation (see table 17).

Table 17.

Identity Style Categories and Age

Identity Style	Age N = 264					Total
	18	19	20	21	22	
Diffuse	41.2% (14)	41.5% (27)	40% (24)	29.5% (18)	25% (11)	35.6% (94)
Normative	44.1% (15)	30.8% (20)	28.3% (17)	27.9% (17)	43.2% (19)	33.3% (88)
Information	14.7% (5)	27.7% (18)	31.7% (19)	42.6% (26)	31.8% (14)	31.1% (82)
Total	100% (34)	100% (65)	100% (60)	100% (61)	100% (44)	100% (264)

When age is compared against the individual identity scales, a negative correlation ($r = -.130$, $p = .034$) between age and the diffuse style is reported, further emphasizing the relationship between these variables.

With respect to having had vaginal, anal and/or oral sex (sexual experience), table 18 clearly depicts that the older one is, the more likely they are to report having had sexual experience, and vice versa, the younger one is the likelier they are to report no sexual experience. Indeed, 95.5% (42) of the 22 year olds report sexual experience compared to 58.8% of 18 year olds. Conversely, 41.2% (14) of the 18 year olds and 4.5% (2) of the 22 year olds report having no sexual experience. ANOVA confirms this pattern ($F = 23.615$ (1), $p = .000$), with means of 20.20 for those with sexual experience and 19.11 for those with no sexual experience.

Table 18.

Age and Sexual Experience

Engaged in Vaginal, Anal, and/or Oral Sex	Age in Years					Total
	18	19	20	21	22	
Has Sexual Experience	58.8% (20)	85.9% (56)	86.4% (52)	96.7% (59)	95.5% (42)	229
Has no Sexual Experience	41.2% (14)	14.1% (9)	13.3% (8)	3.3% (2)	4.5% (2)	35
Total	100%	100%	100%	100%	100%	264

With age playing a factor in sexual experience, it was interesting to note whether a relationship would also emerge in terms of reports of having ever engaged in unprotected vaginal, anal and/or oral sex. According to ANOVA, a statistically significant relationship ($F = 12.004 (1), p = .001$) between age and reports of having ever engaged in unprotected vaginal sex is reported (see table 19). Means are reported at 20.37 for those who report having engaging in unprotected vaginal sex and 19.75 for those who have not, indicating that the older one is, the more likely they might be to have engaged in unprotected vaginal sex.

Table 19.

Age and Having Ever Engaged in Unprotected Vaginal, Anal, and/or Oral Sex

Ever Engaged in Unprotected...	N		M (SD)		F (DF)	p
	Yes	No	Yes	No		
Vaginal sex	164	63	20.37 (1.22)	19.74 (1.20)	12.004 (1)	.001
Anal sex	29	168	20.41 (1.15)	20.14 (1.25)	1.182 (1)	.278
Oral sex	210	6	20.21 (1.25)	19.83 (1.47)	.536 (1)	.465

Table 20 represents frequencies of ages within reports of unprotected vaginal, anal and oral sex. Age is clearly depicted as an influential factor for reports of unprotected vaginal sex with only 50% (10) of the 18 year olds and 88.1% (37) of the 22 reporting this. Clearly, age has little to do with reports of unprotected oral sex with all ages reporting this at similar rates.

Table 20.

Age and Having Ever Engaged in Unprotected Vaginal, Anal or Oral Sex

Ever Engaged in Unprotected...	Age					Total
	18	19	20	21	22	
Vaginal sex	50% (10)	64.3% (36)	73.1% (38)	75.4% (43)	88.1% (37)	164
Anal sex	5.9% (1)	10.2% (5)	22.9% (11)	10.6% (5)	19.4% (7)	29
Oral sex	95% (19)	96.1% (49)	98% (50)	98.1% (52)	97.6% (40)	210

In order to examine whether age is related to various sexual behaviours, ANOVA analyses were conducted between age and the behaviours reported during the last sexual encounter. A statistically significant relationship is noted between age and unprotected vaginal sex ($F = 6.057 (1)$, $p = .015$), with means reported at 20.45 for those reporting unprotected vaginal sex and 20.03 for those not reporting this. This indicates that the older one is, the more likely they might be to report having engaging in unprotected vaginal sex during the last sexual encounter (see table 21).

Table 21.

Age and Last Sexual Encounter

Sexual Behaviour	N		M (SD)		F (DF)	p
	Yes	No	Yes	No		
Unprotected Vaginal Sex	101	104	20.45 (1.21)	20.03 (1.27)	6.057 (1)	.015
Vaginal Sex with a Condom	104	85	20.12 (1.28)	20.27 (1.22)	.630 (1)	.428
Unprotected Anal Sex	7	166	20.29 (1.25)	20.20 (1.27)	.027 (1)	.869
Anal Sex with a Condom	3	167	20.00 (1.73)	20.20 (1.26)	.076 (1)	.784
Unprotected Oral Sex	171	25	20.25 (1.27)	20.28 (1.24)	.011 (1)	.916
Oral Sex with a Dental Dam or a Condom	6	161	20.33 (.82)	20.20 (1.28)	.059 (1)	.808

In order to get a thorough detailed analysis of the distribution of age in sexual behaviours during the last encounter, a table of frequencies was constructed (see table 22). During the last sexual encounter, the 18 year olds reported unprotected vaginal

(27.8% - 5) sex at much lower rates compared to the 22 year olds (63.4% - 26).

Unprotected oral sex was the most striking sexual behaviour engaged in at similar rates by all ages, while anal sex with or without a condom and oral sex with a dental dam/condom were reported at low rates by all ages. Protected vaginal sex during the last sexual encounter was practiced fairly equally among the 19 to 22 year olds, and somewhat at an increased rate in the 18 year old.

Table 22.

Age and Last Sexual Encounter

Last sexual Encounter	Age					Total
	18	19	20	21	22	
Unprotected Vaginal Sex	27.8% (5)	40.8% (20)	56.5% (26)	46.2% (24)	63.4% (26)	101
Protected Vaginal Sex	66.7% (12)	55.6% (25)	53.5% (23)	53.1% (26)	52.9% (18)	104
Unprotected Anal Sex	0% (0)	5.1% (2)	7.3% (3)	0% (0)	6.1% (2)	7
Anal Sex with a Condom	0% (0)	5.1% (2)	0% (0)	0% (0)	3.1% (1)	3
Unprotected Oral Sex	88.9% (16)	86.4% (38)	90.7% (39)	82.7% (43)	89.7% (35)	171
Oral Sex with a Dental dam	0% (0)	2.7% (1)	5.3% (2)	6.8% (3)	0% (0)	6

With an idea of what ages tend to report having engaged in the protected and unprotected sexual behaviours during the last encounter, it was important to explore whether age also played a role in how often a physical barrier is used. In congruence

with above findings, a statistically significant relationship is reported by ANOVA between age and how often a physical barrier is used for vaginal sex ($F = 5.600 (3)$, $p = .001$). Means are reported at 20.30 for those who “never” use a barrier, 20.65 for those who “sometimes” use a barrier, 20.23 for those who “almost always” use a barrier and 19.76 for those who “always” use a barrier. The latter signifies that the younger one is, the more likely they might be to “always” use a condom for vaginal sex (see table 23).

Table 23.

Age and How Often a Physical Barrier is Used for Vaginal, Anal and Oral Sex

Physical Barrier	M (SD)				F (DF)	p
	1	2	3	4		
Vaginal Sex N = 210	20.30 (1.22)	20.64 (1.11)	20.23 (1.3)	19.75 (1.19)	5.60 (3)	.001
Anal Sex N = 79	20.48 (1.3)	20.78 (1.09)	20.00 (1.22)	20.03 (1.23)	1.318 (3)	.275
Oral Sex N = 214	20.17 (1.27)	20.64 (1.01)	20.50 (.71)	N/A	.984 (3)	.375

Note: 1 = Never; 2 = Sometimes; 3 = Almost Always; 4 = Always.

In order to get a detailed analysis of the distribution of age and how often a physical barrier is used for vaginal, anal and oral sex, a frequency table was constructed (see table 24). Indeed, table 24 depicts that 47.1% (8) of 18 year olds and only 10% (4) of 22 year olds report “always” using a physical barrier for vaginal sex, further emphasizing findings reported by ANOVA analyses.

Table 24.

Age and How Often a Physical Barrier is Used for Vaginal, Anal and Oral Sex

Physical Barrier for...	Age				
	18	19	20	21	22
Vaginal sex					
Never	11.8% (2)	7.8% (4)	21.3% (10)	7.3% (4)	15% (6)
Sometimes	11.8% (2)	19.6% (10)	27.7% (13)	43.6% (24)	40% (16)
Almost	29.4% (5)	31.4% (16)	29.8% (14)	21.8% (12)	35% (14)
Always always	47.1% (8)	41.2% (21)	21.3% (10)	27.3% (15)	10% (4)
Anal sex					
Never	50% (3)	15.8% (3)	47.1% (8)	33.3% (7)	50% (8)
Sometimes	0% (0)	5.3% (1)	17.6% (3)	9.5% (2)	18.8% (3)
Almost	0% (0)	10.5% (2)	11.8% (2)	0% (0)	6.3% (1)
Always always	50% (3)	68.4% (13)	23.5% (4)	57.1% (12)	25% (4)
Oral sex					
Never	100% (19)	96.2% (50)	89.8% (44)	88.9% (48)	92.5% (37)
Sometimes	0% (0)	3.8% (2)	8.2% (4)	9.3% (5)	7.5% (3)
Almost always	0% (0)	0% (0)	2% (1)	1.9% (1)	0% (0)

To date, age seems to emerge as a strong influential factor to reports of unprotected sexual activity, namely vaginal sex. According to ANOVA analyses age remains an influential factor in reports of unprotected vaginal or anal sex in the past year ($F = 4.976 (1), p = .027$). Means are reported at 20.34 for those who engaged in unprotected vaginal or anal sex in the past year and 19.96 for those who did not.

Distribution of ages and reports of unprotected sex in the past year are depicted in table 25 in order to observe patterns in greater detail. The age differences in unprotected sex is very clear with under half (45%) of 18 year olds and over three-quarters (76.2%) of 22 year olds report unprotected vaginal or anal sex in the past year, certainly emphasizing the fact that age potentially plays a significant role in safe sex practices. This method of

examining the impacts of age on sexual practices is maintained throughout the analyses in this section.

Table 25.

Age and Unprotected Sex in the Past Year

Sex in Past Year	Age					Total
	18	19	20	21	22	
Unprotected Vaginal or Anal Sex*	45% (9)	61.8% (34)	65.4% (34)	66.1% (39)	76.2% (32)	148
A Condom was Always Used	20.6% (7)	18.5% (12)	18.3% (11)	21.3% (13)	13.6% (6)	49
No Vaginal or Anal Sex at all	11.8% (4)	13.8% (9)	11.7% (7)	13.1% (8)	9.1% (4)	32

Note: *** $p \leq .001$; ** $\leq .01$; * $p \leq .05$.

With the knowledge that the older one is, the more likely they are to report unprotected sexual activity, it was important to examine whether age also played a role in reporting medical check ups for STIs, including HIV/AIDS in the past year. No overall statistically significant relationship is reported between age and medical check-ups ($F = 1.485 (3), p = .221$). In order to look more closely at whether age plays a role between the individual medical check up options, a series of ANOVA analyses were conducted. Indeed, a statistically significant relationship ($F = 8.615 (1), p = .004$) between age and reports of getting “oneself” medically checked is noted. Means in this regard are 20.74 for those who reported having “themselves” medically checked and 19.98 for those who did not. The latter demonstrates that the older one is, the more likely they might be to

report having gotten “themselves” medically checked for STIs, including HIV/AIDS before engaging in unprotected vaginal or anal sex in past year (see table 26).

Table 26.

Age and Medical Check Ups

Medical Check Up for STIs & HIV/AIDS	M (SD)		F (DF)	p
	Yes	No		
I Got Myself Checked	20.74 (.90)	19.98 (1.3)	8.61 (1)	.004
My Partner Got Checked	20.56 (1.33)	20.04 (1.29)	1.376 (1)	.242
We Both Got Checked	20.13 (1.12)	20.05 (1.31)	.099 (1)	.754
Neither Got Checked	20.28 (1.33)	19.97 (1.26)	3.248 (1)	.073

Up to this point, results consistently demonstrate that the younger one is, the more likely they are to practice safe sex. Getting “oneself” medically checked for STIs, including HIV/AIDS before engaging in unprotected vaginal or anal sex is an element of safe sex practice. The fact that this is reported in older respondents, suggests an opposing direction of findings to date with respect to age and safe sex practices. This, however, may largely be due to the finding that sexual experience – unprotected sexual experience increases with age, potentially providing older participants with the incentive and motivation to get themselves medically checked for STIs, including HIV/AIDS. In any case, table 27 depicts the frequencies of ages in the various medical check-up options and clearly demonstrates that the pattern reported by the ANOVA analyses. Indeed, no 18 year old and 3.1% (2) 19 year olds reports getting “themselves” medically checked while

15% (9), 16.4% (10) and 13.6% (6) of the 20, 21 and 22 year olds respectively, report this. This reiterates the fact that the older one is, the more likely they are to report getting “themselves” medically checked for STIs.

Table 27.

Frequencies of Age and Medical Check Ups

Medical Check Ups for...	Age N = 146					Total
	18	19	20	21	22	
Oneself	0% (0)	3.1% (2)	15% (9)	16.4% (10)	13.6% (6)	27
One's partner	2.9% (1)	0% (0)	6.7% (4)	1.6% (1)	6.8% (3)	9
Both	2.9% (1)	15.4% (10)	13.3% (8)	13.1% (8)	9.1% (4)	31
Neither	20.6% (7)	32.3% (21)	21.7% (13)	31.1% (19)	43.2% (19)	79

No correlation ($r = .054$, $p = .413$) between age and sexual communication is noted, leading to the conclusion that sexual communication does not change significantly with age (18 to 22).

Summary

This section suggests that age is related to identity style with older individuals more likely to be categorized as having an information orientation, and younger ones, a diffuse orientation. Older participants report more sexual experience (vaginal, anal, and/or oral sex) and less safe sex practices with the exception of getting “themselves” medically checked for STIs, including HIV/AIDS. Younger respondents report less unprotected vaginal sex during the last encounter; more frequent use of a physical barrier for vaginal

sex; less experience with unprotected vaginal, anal or oral sex; and less unprotected vaginal or anal sex in the past year. It is important to note, however, that the difference in group means is not large or useful for practically distinguishing student groups.

Despite this, the pattern suggesting that the older one is, the more likely they might be to report unprotected sexual activity remains consistent throughout the analyses.

Nonetheless, a more careful analysis of this data is required. Further, the small difference in group mean might partially be explained by the narrow age margin of 18 to 22, potentially outlining this period as integral in determining the likelihood of engaging in safe sex practices. Age, on the other hand, is not reportedly related to sexual communication (see table 28 for a summary of the main findings).

*Table 28.***Summary of the Main Findings on Age**

Variables	Significance	Comments
Age x identity styles	.049	The younger respondents were more likely to be categorized as having a diffuse style
Age x diffuse scale	.034	The younger respondents were more likely to score higher on the scale
Age x sexual experience	.000	The older respondents were more likely to report sexual experience
Age x unprotected vaginal sex	.000	The older respondents were more likely to report having ever engaged in unprotected vaginal sex
Age x unprotected vaginal sex during the last sexual encounter	.015	The older respondents were more likely to report unprotected vaginal sex during the last sexual encounter
Age x physical barrier for vaginal sex	.001	The older respondents were more likely to report using a physical barrier at lower rates
Age x unprotected vaginal or anal sex in the past year	.027	The older respondents were more likely to report unprotected vaginal or anal sex in the past year
Age x getting "oneself" medically checked	.004	The older respondents were more likely to report getting "themselves" medically checked

Identity Style

Identity style, which is based in how one makes decisions, seems particularly relevant to sexually related issues, namely safe practices. Indeed, the use of a physical barrier, the decision to get medically checked and communicate about issues related to

safe sex practices, are all arguably driven by one's identity style. Hypotheses in this regard include persons categorized with an information orientation engage in safer sex practice and communicate more openly around sexually related issues. It is therefore the intention of this section to examine the accuracy of these hypotheses.

As mentioned above, the 264 respondents were categorized as diffuse, normative, or information using the highest z score.

Because the theory of identity style would expect the information and diffuse styles to be in opposition, it was important to note whether such a relationship was present in the study. Indeed, a negative correlation between the information and the diffuse scales ($r = -.231$, $p = .000$) is reported, not only providing support for the theoretical model, but also strengthening the reliability of the tool in the study.

The sample is spread out relatively equally among the identity style categories. More specifically, 35.6% (94) respondents are categorized as having a diffuse orientation, 33.3% (88) a normative orientation, and 31.1% (82) an information orientation, certainly fostering more accurate analyses.

When the identity style categories are compared against sexual experience, no statistically significant relationship is reported between the orientations and sexual experience as demonstrated by chi-square ($\chi^2 = .601$ (2), $p = .740$). This seems reasonable with 85.1% (80), 86.4% (76), and 89 % (73) of the diffuse, normative, and information orientations, respectively reporting sexual experience. When an ANOVA is run against the individual identity scales, however, a statistically significant relationship is reported between the normative scale and sexual experience ($F = 5.366$ (1), $p = .021$)

with means reported at -.05 for those reporting sexual experience and .36 who report none. This indicates that those with sexual experience score lower on the scale.

In order to examine whether identity style plays a role in unprotected sexual activity (i.e., vaginal, anal, and/or oral sex), chi-square analyses were run. A statistically significant relationship is reported between the identity style categories and reports of having ever engaged in unprotected oral sex ($\chi^2 = 6.190(2)$, $p = .045$). It is important to note, however, that with the low levels of individuals reporting never having engaged in unprotected oral sex, results may be unreliable (3 cells with expected counts of less than 5). When ANOVA analyses are run between the identity scales and reports of unprotected vaginal, anal and or sex, no statistically significant relationship is reported.

In order to get an idea of the distribution between the various orientations and reports of unprotected vaginal, anal, and oral sex, a frequency table was constructed (see table 29). Persons categorized with a diffuse orientation report having engaged in vaginal (65% - 52), anal (13% - 9), and oral (93.6% - 73) sex the least frequently as compared to the other styles. Specifically in terms of oral sex, 93.6% (73) of those categorized with a diffuse style report having ever engaged in unprotected oral sex compared to 98.7% (74) and 100% (63) of those categorized with a normative and information style, respectively. It is arguable, however, that age may be acting as a confounding variable given the finding that 18 year olds are more likely to be categorized with a diffuse orientation, and consequently also report less sexual experience – less unprotected sexual experience.

Table 29.

Identity Style Categories and Reports of Unprotected Vaginal, Anal and/or Oral Sex

Identity Style Categories	Ever Engaged in Unprotected...		
	Vaginal sex	Anal Sex	Oral Sex*
Diffuse	65% (52)	13% (9)	93.6% (73)
Normative	78.7% (59)	16.4% (11)	98.7% (74)
Information	73.6% (53)	14.8% (9)	100% (63)
Total	72.2% (164)	14.7% (29)	97.2% (210)

Note: *** $p \leq .001$; ** $\leq .01$; * $p \leq .05$.

With respect to the last sexual encounter no statistically significant relationship is found between the identity style categories and sexual behaviours. Analyses between the identity style categories and reports of “vaginal sex with a condom,” however, depicts a statistically significant relationship ($\chi^2 = 4.987 (2), p = .040$), with more persons in the diffuse orientation (67.7% - 44) reporting vaginal sex with a condom during the last sexual encounter compared to the normative (47.7% - 41) or information (49.2% - 29) orientations. When ANOVA is run between the individual identity scales and the sexual behaviours engaged in during the last sexual encounter, no statistically significant relationship is noted. It may be important to note the small sample numbers specifically for unprotected anal sex (7), anal sex with a condom (3) and oral sex with a dental dam or condom (6), which may render above analyses unreliable.

To date, the identity style categories make little difference on sexual experience, reports of unprotected vaginal, anal and/or oral sex, and on the sexual behaviours

engaged in during the last sexual encounter. It was thus important to examine the consistency of the latter with respect to how often a physical barrier is used for vaginal, anal and oral sex. Kruskal-Wallis depicts a weak statistically significant relationship between the identity style categories and the frequency of a physical barrier for vaginal sex ($\chi^2 = 5.83 (2), p = .054$). Mean ranks are reported at 117.19 for those categorized with a diffuse orientation, 93.58 for those categorized with a normative orientation, and 104.35 for those categorized with an information style (see table 30). This indicates that persons categorized with a diffuse orientation are more likely to report greater use of a physical barrier for vaginal sex, which remains consistent with above findings.

Table 30.

Identity Style Categories and the Use of a Physical Barrier

Identity Style	Physical Barrier for Vaginal Sex				Physical Barrier for Anal Sex				Physical Barrier for Oral Sex			
	MR	χ^2	DF	<i>p</i>	MR	χ^2	DF	<i>p</i>	MR	χ^2	DF	<i>p</i>
Diffuse N = 94	117.19	5.83	2	.054	41.41	.958	2	.62	103.95	2.04	2	.36
Norma- tive N = 87	93.58				37.05				108.3			
Infor- mation N = 83	104.35				42.33				110.57			

Again, results seem to align with the fact that those categorized with a diffuse orientation tend to be younger, and in turn, use safer sex practices for vaginal sex. When ANOVA analyses are conducted between the individual scales and how often a physical barrier is used for vaginal, anal and oral sex, no statistically significant relationship is reported.

To get a better idea of the distribution of the various orientations and how often a physical barrier is used for vaginal, anal and oral sex, a frequency table was constructed (see table 31). In congruence with the Kruskal-Wallis analyses, persons categorized with a diffuse orientation report “almost always” (33.3% - 25) or “always” (33.3% - 25) using a physical barrier for vaginal sex more often than the other orientations.

Table 31.

Identity Style Categories and the Use of a Physical Barrier

Physical Barrier	Identity Style Categories		
	Diffuse Orientation	Normative Orientation	Information Orientation
Vaginal sex			
Never	8% (6)	19.4% (13)	10.3% (7)
Sometimes	25.3% (19)	32.8% (22)	36.9% (24)
Almost always	33.3% (25)	25.4% (17)	27.9% (19)
Always	33.3% (25)	22.4% (15)	26.5% (18)
Total	100% (75)	100% (67)	100% (68)
Anal sex			
Never	32.1% (9)	46.7% (14)	28.6% (6)
Sometimes	10.7% (3)	10% (3)	14.3% (3)
Almost always	10.7% (3)	0% (0)	9.5% (2)
Always	46.4% (13)	43.3% (13)	47.6% (10)
Total	100% (28)	100% (30)	100% (21)
Oral sex			
Never	96% (72)	91.7% (66)	89.6% (60)
Sometimes	1.3% (1)	8.3% (6)	10.4% (7)
Almost always	2.7% (2)	0% (0)	0% (0)
Total	100% (75)	100% (72)	100% (67)

When the identity style categories are compared against reports of unprotected vaginal or anal sex in the past year, no statistically significant relationship is noted ($\chi^2 = 1.360$ (2), $p = .507$). Indeed, 60% (48) of those with a diffuse orientation, 66.7% (50) of those with a normative orientation and 68.5% (50) of those with an information orientation report unprotected vaginal or anal sex in the past year. When ANOVA analyses are conducted between the individual identity scales and reports of unprotected vaginal or anal sex in the past year, no statistically significant relationship is noted.

No statistically significant relationship is reported between the identity style categories and reports of “always using a condom” for vaginal or anal sex in the past year ($\chi^2 = 3.702 (2), p = .157$), or between reports of “no vaginal or anal sex at all” in the past year ($\chi^2 = 1.154 (2), P = .562$). Frequencies between the orientations and reports of “always using a condom” and reports of “no vaginal or anal sex” in the past year are depicted in see table 32. Despite the lack of statistically significant relationships, individuals categorized with a diffuse orientation tend to report “always using a condom” more often but report “no vaginal or anal sex” in the past year the least often.

Table 32.

Identity Style Categories and Reports of No Unprotected Vaginal or Anal Sex in the Past Year

Identity Style Categories	No Unprotected Vaginal or Anal Sex in Past Year N = 81	
	A Condom was Always Used	No Vaginal or Anal Sex at all
Diffuse	24.5% (23)	9.6% (9)
Normative	13.6% (12)	14.8% (13)
Information	17.1% (14)	12.2% (10)
Total	18.6% (49)	12.1% (32)

When ANOVA analysis was run between the individual scales and reports of “always using a condom” for vaginal or anal sex in the past year, a weak statistically significant relationship was reported for the information scale ($F = 3.645 (1), p = .057$). Means are reported at .24 for those who “always used a condom” for vaginal or anal sex in the past

year, and -.06 for those who did not, leading to the conclusion that among those categorized with an information style, those with who “always used a condom” in the past year score higher on the scale than those who did not report this.

In order to examine whether the identity style categories are related to reports of medical check-ups for STIs, including HIV/AIDS before engaging in unprotected sex in the past year, a series of chi-squares were run. No statistically significant relationship is reported between the identity style categories and any of the medical check-up options, leading to the conclusion that deciding to get medically checked is not influenced by one’s orientation. ANOVA analyses, however, reveals a statistically significant relationship between the information scale and reports of having “neither oneself nor one’s partner” medically checked ($F = 7.065 (1), p = .008$). Means are reported at -.25 for those categorized with an information style who report having “neither oneself nor one’s partner” medically checked, and .11 for those categorized with an information style who do not. This leads to the conclusion that among those categorized with an information style, those who report having “neither themselves nor their partner” medically checked, score lower on the scale which seems consistent with the above finding.

There is a weak statistically significant relationship between the normative scale and reports of having “both oneself and one’s partner” medically checked” ($F = 3.515 (1), p = .062$). Means are reported at -.31 for those who report having both “themselves and their partner” medically checked and .04 for those who do not. This leads to the conclusion that among those categorized with a normative style, those who report having “both themselves and their partner” medically checked tend to score lower on the scale.

In order to get a better understanding of the distribution of orientation among the medical check up options, a frequency table was constructed (see table 33). Despite the lack of statistically significant relationship, those in the information orientation report having gotten “themselves,” (15.7% - 13) and “both themselves and their partner” (15.7% - 13) medically checked more frequently than the other orientations. Evidently, those in the information style are the least likely (22.9% - 19) to have reported having “neither oneself nor one’s partner” medically checked for STIs, including HIV/AIDS, which is consistent ANOVA analyses.

Table 33.

Identity Style Categories and Medical Check Ups

Identity Style Categories	Medical Check Ups for STIs/HIV before Engaging in Unprotected Vaginal or Anal Sex in the Past Year			
	I got checked	My partner did	We both did	Neither of us did
Diffuse	12.5% (6)	4.2% (2)	22.9% (11)	60.4% (29)
Normative	16% (8)	8% (4)	12% (6)	64% (32)
Information	26.5% (13)	6.1% (3)	28.6% (14)	38.8% (19)

With the identity style categories playing somewhat of a role on safe sex practices, it was important to examine whether it also played a role on sexual communication. Kruskal-Wallis analysis reports no overall statistically significant relationship ($\chi^2 = 5.015$ (2), $p = .081$) between the identity style categories and sexual communication. With a significance level of .081 arguably approaching significance, it

was important to observe the difference between the orientations and the various aspects of sexual communications. In this manner, Kruskal-Wallis analyses were conducted between the identity style categories and the 7 aspects of the sexual communication scale (see table 34).

Table 34 depicts a statistically significant relationship between the identity style categories and “discussing STIs and HIV/AIDS with one’s partner” ($\chi^2 = 6.869 (2), p = .032$), with mean ranks reported at 120.12 for those categorized with a diffuse style, 121.09 a normative style, and 96.53 an information style. This indicates that those with a normative style speak more openly to their partners about STIs and HIV/AIDS, specifically compared to those with an information orientation. “Discussing safe sex practices before engaging in sex” is also reported to be statistically related to the identity style categories ($\chi^2 = 8.052 (2), p = .018$). Mean ranks are reported at 121.88 for those categorized with a diffuse style, 119.59 a normative style, and 96.13 a information style, indicating that those categorized with a diffuse style are more likely to discuss safe sex practices with their partner before engaging in sex especially compared to those with an information orientation. A statistically significant relationship is also noted between the identity styles and “discussing sexual histories with one’s partner” ($\chi^2 = 12.651 (2), P = .002$). Mean ranks are reported at 67.29 for those categorized with a diffuse style, 86.69 a normative, and 96.43 an information style, indicating an opposing change of the findings thus far. Indeed, those categorized in the information style are the most likely to discuss their sexual histories with their partner. “Discussing sexual issues” is also arguable approaching significance level ($\chi^2 = 5.546 (2), P = .062$), with mean ranks reported at 125.03 for those categorized with a diffuse style, 105.53 a normative style,

and 105.82, an information style. Despite statistical significance, those categorized with a diffuse style are more likely to be open about sexual issues with their partners.

Table 34.

Identity Style Categories and Aspects of Sexual Communication

Sexual Communication Items	Identity Style Categories			χ^2 (DF)	<i>p</i>
	Diffuse Style	Normative Style	Information Style		
	MR				
How much do you talk to your sexual partner(s) about STIs and HIV/AIDS?	120.12	121.09	96.53	6.869 (2)	.032
Have you and your partner ever discussed safe sex practices before engaging in sex?	121.88	119.59	96.13	8.052 (2)	.018
Have you and your partner spoken about each other's sexual histories before engaging in sex?	67.29	86.69	96.43	12.651 (2)	.002
How much have you discussed STIs and HIV/AIDS with others in the last month?	108.45	113.95	117.06	.719 (2)	.698
How much do you talk to those of the opposite sex about STIs and HIV/AIDS?	109.31	124.36	106.75	3.284 (2)	.194
How much do you talk to the same sex about STIs and HIV/AIDS?	108.60	124.29	105.82	2.591 (2)	.274
How openly do you discuss issues around sex (i.e., desires, preferences, worries, concerns, etc.)?	125.03	105.53	105.82	5.546 (2)	.062

Correlational analyses were also conducted to observe the relationship between the individual identity styles and sexual communication. A negative association is noted between the information scale and sexual communication ($r = -.217, p = .001$), indicating that respondents with high score on the information scale tend to have lower score on the sexual communication scale.

Summary

In essence, there is no clear relationship between identity style and sexual behaviours. Some statistically significance relationships, however, emerged and are worth re-iterating. Those with an information style tend to score higher on the scale for having “always used a condom.” Those with an information style also tend to score lower on the scale in terms of having “neither oneself nor one’s partner” medically checked, while those with a normative orientation tend to score lower on the scale in terms of having “both themselves and their partner” medically checked in the past year. Those with a diffuse orientation, report using a condom during the last sexual encounter and use a physical barrier for vaginal sex more often than the other styles. The hypothesis around the information orientation engaging in safer sex practices is marginally supported in terms or reports of condom use in the past year and reports of medical check-ups. It seems that those with a diffuse orientation (who are younger) engage in higher levels of safe sex practices, reinforcing suspicion of age acting as a confounding variable.

Identity style also played a role in some aspects of sexual communication. Indeed, those with an information style speak more openly about their sexual histories, while those with a normative orientation speak more openly about STIs and HIV/AIDS with their partners, especially compared to those with an information style. Those

categorized with a diffuse style speak more openly to their partners about safe sex practices especially compared to those with an information orientation, and are more open with regards to sexually related issues. The hypothesis around those with an information orientation being more open with sexual communication is only supported with regards to speaking about sexual histories. Again, those with a diffuse orientation are emerging as the most open with regards to sexual communication, given the fact that speaking about safe sex practices is a key factor to open sexual communication. It may be important to note with the strong relationship between age and sexually behaviours, age may be acting as a confounding variable and masking some of the patterns of identity style (see table 35 for a summary of the main findings).

Table 35.

Summary of the Main Findings on Identity Style

Variables	<i>p</i>	Comments
Identity style category x sexual experience	<i>NS</i>	
Normative scale x sexual experience	.021	Respondents categorized with a normative style who have sexual experience were most likely to score lower on the scale
Identity style category x unprotected oral sex	.045	Respondents with a diffuse style were less likely to report having ever engaged in unprotected oral sex the least frequently
Identity style category x vaginal sex with a condom during the last sexual encounter	.040	Respondents categorized with a diffuse style were more likely to report vaginal sex with a condom during the last sexual encounter

Identity style category x physical barrier for vaginal sex	.054	Respondents categorized with a diffuse style were more likely to use a physical barrier more frequently
Information scale x "always used a condom" in the past year	.057	Respondents categorized with an information style who report always using a condom in the past year scored higher on the information scale
Information scale x getting "neither themselves nor their partner" medically checked	.008	Respondents categorized with an information style who report having "neither themselves nor their partner" medically checked were more likely to score lower on the information scale
Normative scale x getting both "themselves and their partner" medically checked	.062	Respondents categorized with an normative style who report having both "themselves and their partner" medically checked were more likely to score lower on the normative scale
Identity style category x discussing STIs and HIV/AIDS with partner	.032	Respondents with a normative style were more likely to speak more openly about STIs and HIV/AIDS to their partners (especially compared to those with an information style)
Identity style category x discussing safe sex practices	.018	Respondents with a diffuse style were more likely to speak more openly about safe sex practices before engaging in sex (especially compared to those with an information style)
Identity style category x discussing sexual histories	.002	Respondents with an information style were more likely to discuss sexual histories with their partner before engaging in sex
Information scale x sexual communication scale	.001	The higher the score on the information scale, the lower the score on the sexual communication scale

Note: NS = Non Significant.

Sexual Communication

Thus far, it appears as if age is the strongest influencing factor in sexually related issues (i.e., behaviours and communication). Identity style seems to have a weak influence in this regard, while gender proved to be inconsequential. At this point, it was

important to observe the patterns between sexual communication and sexual behaviours in order to examine the potency of sexual communication as a measure of safe sex.

When sexual communication is compared to reports of having ever engaged in unprotected vaginal, anal, and/or oral sex, no statistically significant relationship is reported by Mann-Whitney U analyses. This leads to the conclusion that sexual communication has little impact on whether one reports having ever engaged in unprotected vaginal, anal, and/or oral sex.

When sexual communication is compared against each of the sexual behaviours during the last sexual encounter, a statistically significant relationship is reported between sexual communication and vaginal sex with a condom (Mann-Whitney U = 3538.000 (-2.359), $p = .018$). Means ranks are reported at 86.52 for those who report vaginal sex with a condom during the last sexual encounter and 105.38 for those who do not, indicating that those who engaged in vaginal sex with a condom during the last sexual encounter speak less openly about sexually related issues.

Because there is some evidence that sexual communication is integral to safe sex practices, it was important to observe whether sexual communication was related to the use of a physical barrier for vaginal, anal and oral sex. No statistically significant relationship is reported by Kruskal-Wallis analyses. In this manner, there is no relationship between sexual communication and how often a physical barrier is used for vaginal, anal or oral sex.

Because a substantial proportion of respondents (64.9%) with sexual experience report having engaged in unprotected vaginal or anal sex in the past year, it was important to observe whether these persons also report higher rates of sexual

communication. According to Mann-Whitney U analysis, no statistically significant relationship (Mann-Whitney U = 5354.500 (-1.190), $p = .234$) is reported between sexual communication and reports of unprotected vaginal or anal sex in the past year.

To date, it seems that those who engage in safe sex practices tend to speak less openly about sexually related issues. To examine the consistency of this pattern, Mann-Whitney U analysis was conducted between sexual communication and reports of “always using a condom” in the past year. A statistically significant relationship is reported (Mann-Whitney U = 2830.500 (-3.844), $p = .000$) between sexual communication and reports of “always using a condom” for vaginal or anal sex in the past year, with mean ranks reported at 82.77 for those who report this, and 123.78 for those who do not. This certainly seems consistent with previous reports that those who practice safe sex speak less openly with respect to sexual communication.

Deciding whether to have “oneself,” “one’s partner,” “both oneself and one’s partner,” or “neither oneself nor one’s partner” before engaging in unprotected vaginal or anal sex in the past year, arguably takes some level of communication. For this reason, it was important to examine whether a relationship between sexual communication and medical check ups exists. According to Mann-Whitney U analysis, a statistically significant relationship (Mann-Whitney U = 1870.0 (-3.498), $p = .000$) is reported between sexual communication and reports of having both “oneself and one’s partner” medically checked for STIs, including HIV/AIDS in the past year before engaging in unprotected vaginal or anal sex. Mean ranks are reported at 76.32 for those who report medical check up for both “themselves and their partner,” and 121.06 for those who do not report this report. This leads to the conclusion that sexual communication was less

open for those who reported medical check ups for “themselves and their partner.” A statistically significant relationship (Mann-Whitney $U = 4773.5$ (-2.418), $p = .016$) is also reported between sexual communication and reports of medical check up for “neither oneself nor one’s partner” with mean ranks reported at 129.58 for those who report this and 107.32 for those who do not. This demonstrates that those who report medical check up for “neither themselves nor their partner” tend to be more open about sexual communication about sexually related issues (see table 36).

Table 36.

Sexual Communication and Medical Check Ups

Medical check ups	N		MR		Mann-Whitney U	Z Score	p
	Yes	No	Yes	No			
I got myself checked	27	202	122.83	113.95	2515.500	-.655	.513
My Partner got checked	9	220	138.22	14.05	781.000	-1.074	.283
We Both got checked	31	198	76.32	121.06	1870.000	-3.498	.000
Neither of us got checked	79	150	129.58	107.32	4773.500	-2.418	.016

Summary

Results indicate that sexual communication is practiced less openly by those reporting having used a condom during the last sexual encounter, those reporting always using a condom for vaginal or anal sex in the past year, and for those reporting having both “themselves and their partner” medically checked. In turn, those who report having “neither themselves nor their partner” medically checked speak more openly about sexually related issues. This suggests that sexual communication might be used as a

substitute for safe sex practices (i.e., condom use) (see table 37 for a summary of the main findings).

Table 37.

Summary of the Main Findings on Sexual Communication

Variables	<i>p</i>	Comments
Sexual Communication x unprotected vaginal, anal, and oral sex	<i>NS</i>	
Sexual Communication x vaginal sex with a condom during the last sexual encounter	.018	Respondents who report engaging in vaginal sex with a condom were more likely to score lower on the sexual communication scale
Sexual Communication x physical barrier for vaginal, anal and oral sex	<i>NS</i>	
Sexual Communication x always used a condom in the past year	.000	Respondents who reported always using a condom during in the past year were more likely to score lower on the sexual communication scale
Sexual Communication x having both "oneself and one's partner" medically checked	.000	Respondents who report having both "themselves and their partner" checked were more likely to score lower on sexual communication
Sexual Communication x having "neither themselves nor their partner" medically checked	.016	Those who reported having "neither themselves nor their partner" medically checked were more likely to score higher on the sexual communication scale

Note: *NS* = Non Significant.

Medical Check-ups and Sexual Behaviours

Up to this point, gender, age, identity style and sexual communication have been examined in relation to safe sex practices. The literature to date measures safe sex practices with the use of a condom (or other physical barrier). Indeed, the role of medical check-ups is often ignored as a safe sex practice measure. Having said this, it was important to observe the role medical check-ups given the respondents high reports of unprotected sexual activity.

As mentioned above, a substantial proportion of respondents report having engaged in unprotected vaginal, anal and/or oral sex (64.9%). It was thus important to examine whether such reports of unprotected sexual activity was related to medical check ups. Chi-square analyses report a statistically significant relationship between having engaged in unprotected vaginal sex and reports of having gotten “oneself” ($\chi^2 = 8.840$ (1), $p = .003$), “both oneself and one’s partner” ($\chi^2 = 13.792$ (1), $p = .000$) and “neither oneself nor one’s partner” ($\chi^2 = 33.873$ (1), $p = .000$) medically checked. In addition, a weak statistically significant relationship is reported between unprotected vaginal sex and reports of having “one’s partner” ($\chi^2 = 3.600$ (1), $p = .058$) medically checked. Statistically significant relationship is also reported between unprotected anal sex and having “oneself” ($\chi^2 = 5.122$ (1), $p = .024$) and “neither oneself nor one’s partner” ($\chi^2 = 6.467$ (1), $p = .011$) medically checked (see table 38). Although these results seem logical in nature, they are telling with respect to responsible behaviour following unprotected sexual activity.

Table 38.

Reports of Unprotected Vaginal, Anal and Or Oral Sex and Medical Check-Ups

Medical Check Ups	Ever Engaged in Unprotected...			
	Vaginal Sex		Anal sex	
	χ^2 (DF)	<i>p</i>	χ^2 (DF)	<i>p</i>
I got checked	8.840 (1)	.003	5.122 (1)	.024
My partner did	3.600 (1)	.058	1.439 (1)	.230
We both did	13.792 (1)	.000	.172 (1)	.678
Neither did	33.873 (1)	.000	6.467(1)	.011

In order to get an idea of the distribution between reports of unprotected vaginal, anal and oral sex, a frequency table was constructed (see table 39). As is clearly depicted in table 39, persons reporting unprotected vaginal sex are more likely to report all medical check-up options. Again, it is important to note that 45.7% of those who report unprotected vaginal sex in the past also report having “neither oneself nor one’s partner” medically checked, which continues to highlight high risk sexual behaviours.

With respect to reports of unprotected anal sex, 12 individuals out of 29 (41.4%) who report engaging in unprotected anal sex also report having either “themselves” (24.1% - 7) or “both themselves and their partner” (17.2% - 5) medically checked. Again, as much as 51.7% (15) of those who report unprotected anal sex, also report having “neither themselves nor their partner,” further emphasizing high-risk sexual behaviours. Reports of unprotected oral sex do not seem to be related to reports of medical check-ups (see table 39).

Table 39.

Ever Engaged in Unprotected Vaginal, Anal, and/or Oral Sex and Medical Check-Ups

Ever Engaged in Unprotected...	Medical Check Ups for STIs, including HIV/AIDS before Engaging in Unprotected Vaginal or Anal Sex in the Past Year							
	I Got Checked		My Partner Did		We Both Did		Neither Did	
	Yes	No	Yes	No	Yes	No	Yes	No
Vaginal Sex								
Yes	15.9% (26)	84.1% (138)	5.5% (9)	94.5% (155)	18.9% (31)	81.1% (133)	45.7% (75)	54.3% (89)
No	1.6% (1)	98.4% (62)	0% (0)	100% (63)	0% (0)	100% (63)	4.8% (3)	95.2% (60)
Anal Sex								
Yes	24.1% (7)	75.9% (22)	0% (0)	100% (29)	17.2% (5)	82.8% (24)	51.7% (15)	48.3% (14)
No	9.5% (16)	90.5% (152)	4.8% (8)	95.2% (160)	14.3% (24)	85.7% (144)	28% (47)	72% (121)
Oral Sex								
Yes	11.9% (25)	88.1% (185)	3.8% (8)	96.2% (202)	14.3% (30)	85.7% (180)	35.2% (74)	64.8% (136)
No	16.7% (1)	83.3% (5)	0% (0)	100% (6)	16.7% (1)	83.3% (5)	33.3% (2)	66.7% (4)

The results noted above certainly depict that reports of unprotected sexual activity, namely unprotected vaginal sex is related to reports of medical check-ups for STIs, HIV/AIDS in the past year before engaging in unprotected vaginal or anal sex. Having said this, it was important to note whether a relationship also existed between medical check-ups and how often a physical barrier is used in order to determine whether

medical check-ups are being used as a safe sex practice measure. Statistically significant relationship is reported between how often a physical barrier is used for vaginal sex and having “oneself” medically checked (Mann-Whitney $U = 1701.5$ (-2.716), $p = .007$), with mean ranks at 77.02 for those who got medically checked and 109.70 for those who did not. This indicates that a physical barrier is used more often by those who do not report getting “themselves” medically checked for STIs, including HIV/AIDS before engaging in unprotected vaginal or anal sex in the past year. It may be important to note that a weak statistically significant relationship is reported between how often a physical barrier is used for anal sex and getting “oneself” medically checked (Mann-Whitney $U = 300.5$ (-1.838), $p = .066$), with mean ranks at 30.12 for those who did get checked and 41.95 for those who did not. Similarly to vaginal sex, those who report having gotten “themselves” medically checked use a physical barrier for anal sex less often than those who do. There is no statistically significant relationship between reports of having “one’s partner” medically checked and the use of a physical barrier for vaginal sex (see table 40a).

Table 40a.

Medical Check Up for “Oneself” and “One’s Partner” and the use of a Physical Barrier

Physi- cal Barrier	Medical check Ups for STIs, including HIV/AIDS before Engaging in Unprotected Vaginal or Anal Sex in the Past Year									
	I Got Checked					My Partner Got Checked				
	Mean Rank		Mann-Whitney U	Z Score	P	Mean Rank		Man Whitney U	Z Score	P
	Yes	No				Yes	No			
Vaginal Sex	77.02	109.70	1701.5	-2.716	.007	81.56	106.57	689.0	-1.26	.208
Anal Sex	30.12	41.95	300.5	-1.838	.066	38.24	40.09	143.0	-.169	.889
Oral Sex	104.11	107.91	2118.5	-.610	.542	112.75	107.30	782.0	-.54	.592

A statistically significant relationship between the use of a physical barrier for vaginal sex and reports of having both “oneself and one’s partner” (Mann-Whitney U = 1662 (-3.707), $p = .000$) is reported with mean ranks at 69.61 for those reporting both “themselves and their partner” getting medically checked and 111.72 for those who did not. This indicates that individuals who report both “themselves and their partner” getting medically checked, use a physical barrier less often than other who do not report this. A statistically significant relationship is also reported between how often a physical barrier is used for vaginal sex and reports of having “neither oneself nor one’s partner” (Mann-Whitney U = 3343 (-4.302), $p = .000$) medically checked, with mean ranks at 82.49 for those who did not get “themselves or their partner” medically checked and 118.55 for those who do not report having “neither themselves nor their partner”

medically checked. This indicates that those who report having “neither themselves nor their partner” medically checked use a physical barrier for vaginal sex less often than others who do not report this, again outlining some high risk-behaviours (see table 40b).

Table 40b.

Medical Check Up for “Both Oneself and One’s Partner” and “Neither Oneself nor One’s Partner” and the Use of a Physical Barrier

Physical Barrier	Medical check up for STIs, including HIV/AIDS before engaging in unprotected vaginal or anal sex in the past year									
	We Both Got Checked					Neither of use Got Checked				
	Mean Rank		Mann-Whitney U	Z Score	p	Mean Rank		Mann-Whitney U	Z Score	p
Yes	No	Yes				No				
Vaginal Sex	69.61	111.72	1662.0	-3.707	.000	82.49	118.55	3343	-4.302	.000
Anal sex	42.58	39.54	371.0	-.458	.647	35.24	42.47	573.5	-1.437	.151
Oral sex	106.34	107.70	2800.5	-.248	.804	103.68	109.60	4954	-1.468	.142

In essence, it appears that one who reports having either “themselves,” or “both themselves and their partner” medically checked, is more likely to report less use of a physical barrier for vaginal sex. It is interesting, however, to note that those who report having “neither themselves nor their partner” medically checked also use a physical barrier less often than others who don’t report this, which certainly suggests high-risk sexual behaviour.

In order to get a more detailed analysis of the relationship between medical check-up and the use of a physical barrier for vaginal, anal and oral sex, a frequency table was constructed (see table 41). In congruence with Mann-Whitney analyses, 7.4% (2) of respondents who report getting “themselves” medically checked, report “always” using a physical barrier for vaginal sex compared to 30.6% (56) of those who do not report getting medically checked. Similarly, no participant reporting that “both themselves and their partner” got medically checked reports “always” using a physical barrier for vaginal sex, compared to 32.4% (58) who report don’t report getting both themselves and their partner medically checked. Only 6.6% (5) of those reporting having had “neither themselves nor their partner” medically checked report “always” using a physical barrier for vaginal sex, compared to 39.6% (53) of those who do not report having “neither themselves nor their partner medically checked. As much as 17.1% (13) of those who report having “neither themselves nor their partner” also report “never” using a physical barrier for vaginal sex, which continues to raise some serious concerns around risky behaviours.

With respect to anal sex, as much as 53.8% (7) of those reporting having “themselves” medically checked report “never” using a physical barrier, compared to 33.3% (22) who don’t report getting medically checked. No pattern is noted at all between medical check-ups and the frequency of a physical barrier for oral sex. This seems logical given the fact that the vast majority of respondents are engaging in unprotected oral sex on a regular basis (see table 41).

Table 41.

Frequencies of Medical Check-Ups and How Often a Physical Barrier is Used for Vaginal, Anal, and Oral Sex

Physical Barrier	Medical Check Up for STI, including HIV/AIDS before Engaging in Unprotected Sex in the Past Year							
	I got checked		My partner did		We both did		Neither did	
	Yes	No	Yes	No	Yes	No	Yes	No
Vaginal Sex								
Never	11.1%(3)	12.6%(23)	11.1%(1)	12.4%(25)	25.8%(8)	10.1%(18)	17.1%(13)	9.7%(13)
Sometimes	59.3%(16)	26.8%(49)	55.6%(5)	29.9%(6)	38.7%(12)	29.6%(53)	39.5%(30)	26.1%(35)
Almost always	22.2%(6)	30.1%(55)	22.2%(2)	29.4%(69)	35.5%(11)	27.9%(50)	36.8%(28)	24.6%(33)
Always	7.4%(2)	30.6%(56)	11.1%(1)	28.4%(57)	0%(0)	32.4%(58)	6.6%(5)	39.6%(53)
Anal Sex								
Never	53.8%(7)	33.3%(22)	50%(2)	36%(27)	33.3%(4)	37.3%(25)	44.4%(12)	32.7%(17)
Sometimes	23.1% (3)	9.1%(6)	0%(0)	12%(9)	0%(0)	13.4%(9)	14.8%(4)	9.6%(5)
Almost always	0% (0)	7.6%(5)	0%(0)	6.7%(5)	16.7%(2)	4.5%(3)	7.4%(2)	5.8%(3)
Always	23.1%(3)	50%(33)	50%(2)	45.3%(34)	50%(6)	44.8%(30)	33.3%(9)	51.9%(27)
Oral Sex								
Never	95.7% (22)	92.1% (176)	87.5% (7)	92.7% (191)	93.5% (29)	92.3% (169)	96.1% (73)	90.6% (125)
Sometimes	4.3%(1)	6.8%(13)	12.5%(1)	6.3%(13)	6.5%(2)	6.6%(12)	3.9%(3)	8%(11)
Almost always	0%(0)	1%(2)	0%(0)	1%(2)	0%(0)	1.1%(2)	0%(0)	1.4%(2)

Summary

Results suggest that those who report unprotected anal and especially vaginal sex, tend to report medical check-ups for STIs, including HIV/AIDS before engaging in unprotected vaginal or anal sex in the past year. Similarly, reports of medical check-ups seem to decrease the frequency of a physical barrier for anal and especially vaginal sex. The latter suggests two themes. First, respondents may be aware of their high-risk sexual activity and seek medical testing thereafter. Second, respondents might be using medical check-ups as a safe sex measure by getting tested for STIs, including HIV/AIDS before engaging in unprotected sex. Results, however, demonstrate that a group of respondents

may be engaging in unsafe sexual behaviours (e.g., no physical barrier or medical check ups) (see table 42 for a summary of the main findings).

Table 42.

Summary of the Main Findings on Medical Check-Ups

Variables	<i>p</i>	Comments
Having “oneself” medically checked x ever engaged unprotected vaginal sex	.003	Respondents who report this were more likely to report having engaged in unprotected vaginal sex
Having “one’s partner” medically checked x ever engaged unprotected vaginal sex	.058	Respondents who report this were more likely to report having engaged in unprotected vaginal sex
Having both “oneself and one’s partner” medically checked x ever engaged in unprotected vaginal sex	.000	Respondents who report this were more likely to report unprotected vaginal sex
Having “neither oneself nor one’s partner” medically checked x ever engaged in unprotected vaginal sex	.000	Respondents who report this were more likely to report having engaged in unprotected vaginal sex
Having “oneself” medically checked x ever engaged in unprotected anal sex	.024	Respondents who report this were more likely to report unprotected anal sex
Having “neither oneself nor one’s partner” medically checked x ever engaged in unprotected anal sex	.011	Respondents who report this were more likely to report having engaged in unprotected anal sex
Having “oneself” medically checked x physical barrier for vaginal sex	.007	Respondents who report this were less likely to report frequent use of a physical barrier for vaginal sex
Having both “oneself and one’s partner” medically checked x physical barrier for vaginal sex	.000	Respondents who report this were less likely to report frequent use of a physical barrier for vaginal sex
Having “neither oneself nor one’s partner” medically checked x physical barrier for vaginal sex	.000	Respondents who report this were less likely to report frequent use of a physical barrier for vaginal sex

Pure Identity Style

Identity style did not predict safer sex practices or sexual communication, which was not expected. It is arguable that the lack of associations could be due to other confounding variables such as age. In addition, while respondents are assigned an identity, the latter may not always be clear. Indeed, often times, respondents are assigned an identity style based on a z score that is only minutely higher than one or both of their other scores. An extra analysis was therefore undertaken using individuals with a “pure” identity style – those with a z score at least one whole point larger than the other two scores. In this manner, the researcher could more clearly examine the effect of identity style on sex practices and sexual communication.

Eighty seven respondents out of 264 (32.9%) met this criteria and were consequently included in the analyses. In terms of the distribution, 40.2% (35) respondents were classified with a diffuse orientation, 26.4% (23), a normative orientation, and 33.3% (29) an information orientation.

When the pure identity styles are compared against age, no statistically significant relationship ($F = 14.035$ (8), $p = .081$) is noted, meaning that age is not a determining factor in the categorization of one’s pure orientation. In this manner, age was controlled in analyses involving the pure identity styles. In any case, a distribution of these is presented in table 43.

Table 43.

Pure Identity Style Categories and Age

Style	Age N = 87					Total
	18	19	20	21	22	
Diffuse	36.4% (4)	52.4% (11)	54.5% (12)	24% (6)	25% (2)	40.2% (35)
Normative	54.5% (6)	23.8% (5)	18.2% (4)	24% (6)	25% (2)	26.4% (23)
Information	9.1% (1)	23.8% (5)	27.3% (6)	52% (13)	50% (4)	33.3% (29)
Total	100% (11)	100% (21)	100% (22)	100% (25)	100% (8)	100% (87)

Interestingly, the analyses between the pure identity styles and various sexual behaviours provided no statistically significant relationship between the orientations and any of the reported sexual behaviours engaged in during the last sexual encounter. These include sexual experience; behaviours engaged in during the last sexual encounter; reports of unprotected vaginal, anal, and oral sex; the use of a physical barrier for vaginal, anal and oral sex; reports of unprotected vaginal or anal sex during the last year; reports of always using a condom in the past year; and reports of no vaginal or anal sex at all in the past year.

A statistically significant relationship, however, was reported between the pure identity styles and overall reports of medical check-ups for STIs, including HIV/AIDS before engaging in unprotected vaginal or anal sex in the past year ($\chi^2 = 15.196$ (6), $p = .019$). A distribution between the pure identity styles and overall medical check-ups is depicted in table 44. Persons categorized with a pure information orientation are the

most likely to report having “themselves” (50% - 8) and “both themselves and their partner” (31.3% - 5) medically checked compared to the other pure orientations. Persons categorized with a pure normative orientation are the most likely to report their “partner” (9% - 1) as well as having “neither themselves nor their partner” (72.7%) medically checked.

Table 44.

Identity Style Categories and Medical Check Ups

Identity Style Categories	Medical Check Ups for STIs/HIV before Engaging in Unprotected Vaginal or Anal Sex in the Past Year N = 46			
	I got checked	My partner did	We both did	Neither of us did
Diffuse	15.8% (3)	0% (0)	26.3% (5)	57.9% (11)
Normative	18.2% (2)	9.1% (1)	0% (0)	72.7% (8)
Information	50% (8)	0% (0)	31.3% (5)	18.8% (3)
Totals	28.3% (13)	2.2% (1)	21.7% (10)	47.8% (22)

No statistically significant relationship is noted between the pure identity styles and the individual medical check-up options with the exception of a weak statistical significance between the pure styles and having “oneself” medically checked ($\chi^2 = 5.472$ (2), $p = .065$). Patterns for those reporting getting medically checked include 23.1% (3) of those with a pure diffuse orientation, 15.4% (2) a pure normative style and 61.5% (8) a pure information orientation. This indicates that, despite the weak statistical significance, those with a pure information style seem to report getting “themselves” medically

checked for STIs, including HIV/AIDS more frequently than other pure orientations. The latter arguably provides some explanation as to the trend of those categorized with an information style being less likely than those with a diffuse orientation to practice safe sex. Indeed, as mentioned above, medical check-ups may be highly used as a safe sex method.

A statistically significant relationship is also noted between the pure identity styles and sexual communication as evidenced by Kruskal-Wallis ($\chi^2 = 7.524 (2)$, $p = .023$). Mean ranks are reported at 41.64 for those categorized with a pure diffuse style, 50.40 a pure normative style, and 31.78 a pure information style. This indicates that respondents with a pure normative style are the most open about sexual communication. The fact that those with a pure normative style are also the most likely to report having “neither themselves nor their partner” medically checked seems to align with above findings that sexual communication is practiced among those who are less safe around sex.

To delve deeper into the matter, a series of Kruskal-Wallis analyses were conducted between the pure identity styles and the various aspects of sexual communication (see table 45). According to the table, a statistically significant relationship is reported between the pure identity styles and “how much one talks to their partner about STIs and HIV/AIDS” ($\chi^2 = 7.192 (2)$, $p = .027$) with mean ranks reported at 47.15 for those categorized with a pure diffuse style, 39.74 a pure normative style, and 31.44 a pure information style. This indicates that those with a pure diffuse style are most likely to discuss STIs and HIV/AIDS with their partner as compared to the other pure styles.

A statistically significant relationship is also reported between the pure identity styles and “discussing safer sex practices before engaging in sex” ($\chi^2 = 9.186 (2)$, $p = .010$). Mean ranks are reported at 46.36 for those categorized with a pure diffuse style, 41.31 a pure normative style, and 29.91 a pure information style, indicating that those with a pure diffuse style are most likely to discuss safe sex practices with their partner.

“Speaking about each other’s sexual histories” was also reported to be significantly related to the pure identity styles ($\chi^2 = 10.134 (2)$, $p = .006$), with mean ranks at 21.71 for those categorized with a pure diffuse style, 34.00 a pure normative style, and 35.79 a pure information style. This indicates that those with a pure information style are most likely to discuss their sexual histories with their partners.

A statistically significant relationship is also reported between the pure identity styles and “how much one talks to the opposite sex about STIs and HIV/AIDS” ($\chi^2 = 9.798 (2)$, $p = .007$). Mean ranks are reported at 40.97 for those categorized with a pure diffuse style, 51.61 a pure normative style, and 30.65 a pure information style, indicating that those with a pure normative style are most likely to discuss STIs and HIV/AIDS with the opposite sex. Finally, a statistically significant relationship is reported between the pure identity styles and “discussing sexual issues” ($\chi^2 = 6.957 (2)$, $p = .037$), with mean ranks reported at 47.09 for those categorized with a pure diffuse style, 34.95 a pure normative style and 34.89 a pure information style, indicating that those with a pure diffuse style are more likely to discuss sexually related issues.

Table 45.

Pure Identity Styles and Aspects of Sexual Communication

Sexual Communication Items	Pure Identity Styles			χ^2 (DF)	p
	Diffuse Style	Normative Style	Information Style		
	MR				
How much do you talk to your sexual partner(s) about STIs and HIV/AIDS? N = 79	47.15	39.74	31.44	7.192 (2)	.027
Have you and your partner ever discussed safe sex practices before engaging in sex? N = 78	46.36	41.31	29.91	9.186 (2)	.010
Have you and your partner spoken about each other's sexual histories before engaging in sex? N = 58	21.71	34.00	35.79	10.134 (2)	.006
How much have you discussed STIs and HIV/AIDS with others in the last month? N = 79	37.17	48.71	37.33	3.816 (2)	.148
How much do you talk to those of the opposite sex about STIs and HIV/AIDS? N = 79	40.97	51.61	30.65	9.798 (2)	.007
How much do you talk to the same sex about STIs and HIV/AIDS? N = 79	37.39	50.08	36.09	5.027 (2)	.081
How openly do you discuss issues around sex (i.e., desires, preferences, worries, concerns, etc.)? N = 79	47.09	34.95	34.89	6.957 (2)	.037

Summary

When pure cases are taken into account, no relationships between the identity styles and sexual practices emerge, certainly increasing the likelihood that age acted as a confounding variable in previous analyses. The only significant relationships with regards to the pure identity styles are with overall medical check-ups and sexual communication. The analyses between the pure identity styles and sexual communication remained consistent with previous findings in addition to revealing an association with other aspects of sexual communication (see table 46 for a summary of the main finding).

Table 46.

Summary of the Main Findings on the Pure Identity Styles

Variables	<i>p</i>	Comments
Pure identity styles x medical check ups	.019	Respondents with a pure information style were more likely to report getting “themselves” and both “themselves and their partner” medically checked. Respondents with a pure normative style were more likely to report having “their partner” and “neither themselves nor their partner” medically checked
Pure identity styles x sexual communication scale	.023	Respondents with a pure normative style were more likely to be open about sexual communication
Pure identity styles x how much one talks to their partner about STIs and HIV/AIDS	.027	Respondents with a pure diffuse style were more likely to be open about this
Pure identity styles x discussing safe sex practices with partner before engaging in sex	.010	Respondents with a pure diffuse style were more likely be open about this
Pure identity styles x speaking about each other’s sexual histories before engaging in sex	.006	Respondents with a pure information style were more likely to be open about this
Pure identity styles x talking about STIs and HIV/AIDS with those of the opposite sex	.007	Respondents with a pure normative style were more likely to be open about this
Pure identity Styles x discuss sexually related issues	.037	Respondents with a pure diffuse style were more likely to be open about this

Safe Sex Practicers and High Sexual Risk Takers

With results indicating the strong possibility of a group of respondents engaging in high risk sexual behaviours, it was important get an idea of their characteristics. It was equally important to get an idea of the characteristics of respondents who report practicing the safest sex. In this manner, two new groups of respondents were created. The first one includes respondents, who we'll call sexual risk takers, who report "never" using a physical barrier for vaginal or oral sex, having unprotected vaginal or anal sex in the past year, and having "neither themselves nor their partner" medically checked for STIs, including HIV/AIDS beforehand. The second group, who we'll call safer sex practicers, includes those respondents who report having never engaged in unprotected vaginal or anal sex and report "always" using a physical barrier for vaginal sex. The comparison between these two groups was expected to be revealing in terms of age, identity style, sexual behaviours and sexual communications.

A total of 55 (24%) respondents met the sexual risk takers criteria while a total of 41 (18%) respondents met the safe sex practicers criteria and were subsequently included in the analyses.

No gender differences emerged from either groups, indicating that males and females are as likely to be classified as a risk taker ($\chi^2 = .037$ (1), $p = .848$) and safe sex practicers ($\chi^2 = .076$ (1), $p = .783$).

A statistically significant relationship emerged between age and the two groups ($F = 14.849$ (1), $p = .000$), with means reported at 19.63 for the safe sex practicers and 20.6 for sexual risk takers. This indicates that older individuals are significantly more likely to be classified as a sexual risk taker, which aligns with earlier results.

A statistically significant relationship is reported between the identity style categories and the two groups ($\chi^2 = 3.226$ (2), $p = .044$). A table of distributions is depicted in order to illustrate the patterns (see table 47). Respondents with a diffuse identity are more likely to be classified with as a safe sex practicer (54.1% - 20), while those with a normative orientation are the most likely to be classified as a sexual risk-taker. It is important to note, however, that age might again be acting as a confounding variable.

Table 47.

Frequencies among the Risk Takers and Safe Sex Practicers and the Identity Style Categories

Identity Style Categories	Safe Sex Practicers	Sexual Risk Takers
Diffuse Orientation	54.1% (20)	45.9% (17)
Normative Orientation	24.1% (7)	75.9% (22)
Information Orientation	46.7% (14)	53.3% (16)
Totals	42.7% (41)	57.3% (55)

No statistically significant relationship is observed when the sexual risk takers are compared to the safe sex practicers with respect to the sexual communication scale (Mann-Whitney U = 910.000 (-1.612), $p = .107$). With a level of .107 arguably approaching significance, a series of Mann-Whitney U analyses were conducted against the 7 individual aspects of sexual communication included in the scale. No statistically significant relationship is noted with either of the items, with the exception of “discussing sexually related issues with one’s partner” (Mann-Whitney U = 787.5 9 (-2.513), $p =$

.012). Mean ranks are reported at 54.81 for safe sex practicers and 42.32 for sexual risk takers, indicating that safe sex practicers are more open about sexually related issues like desires, preferences, worries, concerns, etc.

Summary

This section suggests that safe sex practicers tend to be younger in age, have a diffuse orientation, and are more open about sexually-related issues as compared to sexual risk takers who tend to be older and have a normative orientation (see table 48 for a summary of the main findings).

Table 48.

Summary of the Main Findings on Sexual Risk Takers (SRT) and Safe Sex Practicers (SSP)

Variables	<i>p</i>	Comments
SRT & SSP x gender	NS	
SRT & SSP x age	.000	The older respondents were more likely to be categorized as a sexual risk taker
SRT & SSP x identity styles	.044	Respondents categorized with a diffuse style were more likely to be categorized as a safe sex practicer
SRT & SSP x discussing sexually related issues	.012	Respondents categorized as a safe sex practicer were more likely to be open about this

Note: NS = Non Significant.

Chapter 4: Discussion

The results chapter summarized the relationship between safe sex practices and the variables of gender, age, identity style, sexual communication, medical check ups, and pure identity styles. In addition, characteristics of those who practice safe sex and those who engage in high risk sexual behaviours were presented. It is the intent of this chapter to briefly outline the main findings, discuss them in relation to the study's hypotheses, make some inferences, and to explore implications from a research, practice, and social work point of view.

Before delving into the main findings, it is important to re-iterate the factors that restrict or limit the interpretation of this study's results. First, findings cannot be generalized to the population at large as a result of surveying university students – a population that is arguably different in its socio-economic status, values, beliefs, etc. from that of the general population. Second, since 95.6% of the sample reported heterosexual activity (as indicated by choice of sexual partners), these results are solely applicable to a heterosexual population. Third, there are limitations inherent in specific survey questions related to sexual experience and data collection methodologies.

Having said this, high levels of sexual activity and occasional or frequent unprotected sexual activity are the norm. Particularly striking, is the fact that anal sex is reported by a third of the sample – a behaviour that was not anticipated and that places the receptive partner at greater risk for HIV transmission from an infected partner (Hein, 1987 as cited in Bowler, Sheon, D'Angelo, & Vermund, 1992). Further, despite high levels of unprotected sexual activity, over half of the sample reports having “neither themselves nor their partner” medically checked for STIs, including HIV/AIDS before

engaging in unprotected vaginal or anal sex in the past year. Also alarming, is the fact that a substantial proportion of individuals (24%) with sexual experience were categorized as high sexual risk takers.

The series of analyses conducted between the genders revealed that males and females have similar identity styles and are engaging in the same amount of sexual activity and with the same amount of protection. Some differences, however, with respect to sexual communication emerged, with males speaking more openly to their partners about safe sex practices and more openly with other males about STIs and HIV/AIDS.

Age was the strongest determining variable with respect to sexual behaviours. On the one hand, the younger the individual, the less likely they were to have sexual experience and unprotected vaginal sex. On the other hand, the older the individual, the more likely they were to report getting themselves medically checked for STIs, including HIV/AIDS before engaging in unprotected vaginal or anal sex in the past year. In addition, age was related to identity style, with younger individuals being more likely to have a diffuse orientation.

Identity styles predicted little with respect to sexual practices, and when they did, it was counter intuitive: e.g., persons with a diffuse orientation were most likely to report safer sex practices. No relationship to sexual practices, however, emerged when the pure identity styles were taken into account, which is indicative of a confounding variable at play (i.e., age). The identity styles were not related to sexual communication as a whole, but were related to some aspects of it. The analyses of the pure identity styles

emphasized the latter in addition to revealing relationships with other aspects of sexual communication.

Sexual communication was found to have little effect on sexual behaviours. What did emerge, however, was the negative association between sexual communication and safe sex practices.

When analyses were conducted between medical check-ups and sexual behaviours, some interesting patterns emerged. Indeed, those who reported having ever engaged in unprotected vaginal sex were more likely to get “themselves” medically checked compared to those who reported never engaging in unprotected vaginal sex. Particularly interesting is the fact that higher rates of medical check ups were associated with lower frequency levels of a physical barrier for vaginal sex. Table 49 summarizes these results.

Table 49.

Summary of Overall Results

Gender	Not related to identity style, sexual activity, or rate of protection. Some differences with regards to particular aspects of sexual communication.
Age	Related to identity style with younger individuals more likely to have a diffuse style. Also related to sexual activity – the younger the individual, the more likely they are to practice safe sex.
Identity Style	No relation to sexual activity. Related to some aspects of sexual communication.
Sexual Communication	No direct relation to sexual activity but trend emerged: the more open sexual communication, the lower the sexual protection.
Medical Check Ups	Positively related to unprotected sexual behaviour.

The results noted above do not support the study's main hypothesis that identity style, sexual communication, and HIV/AIDS knowledge affect sexual practices. The study's specific hypotheses include: (1) Individuals with an information orientation practice safer sex than other styles, (2) Individuals with an information orientation engage in more sexual communication than other styles, (3) Individuals with an information orientation have a more accurate knowledge about HIV/AIDS as compared to other styles, (4) Sexual communication is associated with safer sex practices, (5) Accurate HIV/AIDS knowledge is associated with safer sex practices, and (6) Accurate HIV/AIDS knowledge is associated with sexual communication. Evidently, none of these specific hypotheses were supported by the results especially those involving knowledge about HIV/AIDS. Indeed, with most respondents having an accurate knowledge of HIV/AIDS, this attribute could neither be used in the analyses nor support any of the hypotheses around it. In any case, findings from research to date suggest that having sufficient HIV/AIDS knowledge rarely translates into safe sex practices (Ellen et al., 1996; Johnon, Gant, Hinkle, Gilbert, Willis, & Hoopwood, 1992; Lewis, 1995; Sunenblick, 1988 as cited in Lewis, Malow, & Ireland, 1997).

With the innumerable studies conducted in the area, it seems quite clear that understanding high-risk sexual behaviour is a complex endeavor that may include a number of interrelated factors. Perhaps if other variables had been measured (i.e., religiosity, peer pressure, varsity sport participation, etc.), a comprehensive analysis could have been conducted. The fact that identity style, HIV/AIDS knowledge, and sexual communication have little to do in shaping safer sex practices, however, is an important finding in itself. Evidently, the search for answers must go on until we

discover and understand the various mechanisms in place that influence or encourage individuals to decide to engage in safe sex practices.

The study's widespread reports of inconsistency in condom use are indicative of "high risk" behaviour (Farber, 1989, as cited in Kissman, 1998). The latter is consistent with other research studies that report that condom use is sporadic and well below what is adequate for effective STI prevention among youth (Fisher & Boroditsky, 2000; McCreary Centre Society, 1999; Thomas, Dicenzo, & Griffith, 1998 as cited in McKay, 2000). Indeed, much concern is raised with over 70% of respondents with sexual experience reporting having engaged in unprotected vaginal sex and an alarming 24% of those meeting the "sexual risk taker" criteria. In addition, the widespread of STIs seems in the offing with nearly 100% of respondents engaging in unprotected oral sex on a regular basis. Indeed, gonorrhea, herpes and syphilis are transmittable through unprotected oral sex (Hyde, DeLamater, & Byers, 2001). Further concern is raised given the fact that herpes, which has no cure, is among the most common in Canadian Universities (Hyde, DeLamater, & Byers, 2001). As is well known, it only takes one occasion to get infected with an STI, including HIV/AIDS. Having said this, it is no wonder that in Canada, the chances of acquiring a sexually transmitted infection are the highest among persons between the ages of 15 and 24 (Statistics Canada, 1999).

Also surprising is the fact that results indicate both males and females being at equally high risk to developing an STI, including HIV/AIDS. Indeed, previous research indicates differences between the genders in regards to sexual experience (Maass & Volpato, 1998 as cited in Murphy et al., 1998), condom use (Pötsönen & Kontula, 1999), and safe sex practices (Werner-Wilson & Vosburg, 1998). More specifically, men have

traditionally been more sexually experienced, leaders in condom use, and practice safe sex at an increased rate within the context of a relationship. Women, however, have been reported as having more positive attitudes towards condom use (Abraham et al., 1992; Sacco et al., 1993 as cited in Pötsönen & Kontula, 1999) and to practice safer sex if they frequently engage in sexual intercourse (Werner-Wilson & Vosburg, 1998). Some authors, however, have reported that sexually related gender differences are being eroded. For instance, Maticka-Tyndale (1991) reported that there is an increased convergence in sexual practices between males and females. As such, Hawkins, Gray, and Hawkins (1995) stated that women are now reporting the same number of sexual partners as men. Along the same lines, Pötsönen and Kontula (1999) reported a change between 1990 and 1994 in regards to sexually experienced females' comfort level in purchasing condoms. Indeed, the authors reported that it was just as easy for sexually experienced women to buy or carry a condom as sexually experienced males. Being 2004, it is arguable that the gap between the genders has further narrowed leading to similar reports of sexual behaviours.

Indeed, women have fought long and hard (and continue to do so) for sexual liberation so that their sexual practices are accepted to the same degree as men's – as a natural expression of their sexuality. For this reason, it seems apparent that females have “caught up” with males in the sexual realm and evidently, patterns of sexual rates and protection. It may be important to note, however, that females are biologically more likely to get infected with HIV/AIDS as compared to men (Dehne & Riedner, 2001) and the consequences more severe as compared to males. Indeed, with most STIs being asymptomatic in women, diagnosis and treatment is more difficult (Türmen, 2003). In

addition, females have been described as having little control over sexual and reproductive decision-making, including condom use and are subject to non-consensual sex and violence, certainly making them more vulnerable to acquire an STI, including HIV/AIDS. In this manner, despite the equality between genders in relation to rates of sexual activity and protection, one wonders whether true equality in the sexual realm truly exists between the genders.

The high knowledge demonstrated by most participants is likely to be a result of the significant funding invested in public education directed in particular at young people about HIV/AIDS and about the necessary precautions to protect oneself against it. So sexual education is informing people but is not changing behaviours. Perhaps the inundation of HIV/AIDS education (i.e., through school, the media, etc.) has in effect “numbed” people from the real dangers of this disease. Alternatively, perhaps young people are still under the assumption that becoming infected with an STI including HIV/AIDS would simply never happen to them (i.e., Brooks-Gunn & Furstenberg, 1990; Ellen, Boyer, Tschann, & Shafer, 1996). Evidently sexual education in Canada is failing to effectively disseminate safe sex practices to youth. In this manner, there is an urgency to find new ways to effectively reach young people about the real threats of STIs and HIV/AIDS in a manner that affects behavioural change.

The finding that younger individuals practice safer sex was certainly not anticipated. This finding was reinforced by the fact that younger individuals were more likely to be categorized as a safe sex practicer. Naturally, the older the individual, the more likely they are to have sexual experience. Having said this, one would expect that with an increase of sexual experience and sexual partners, protection would increase

rather than decrease. It is difficult to know why this would be the case. Perhaps with all the uncertainty surrounding the first intercourse experiences, individuals are more likely to implement what they have been taught in relation to sex (i.e., safe sex practices).

Subsequent to more sexual experience, however, as worries and concerns are dispelled, individuals may be more likely to make decisions outside of external influences (sexual education). Perhaps risk-based behaviours increase with each experience that does not result in the contraction of a disease (that they know of) and fosters an invincibility bias.

Alternatively, perhaps sexual education programs remain fresh in younger individuals' minds (from secondary establishments) as opposed to older individuals, which would indicate the need for some sort of continuation to sexual education (other than the traditional classroom format) at a university level. Indeed, perhaps university health service departments could take more of an active role by somehow emphasizing the real dangers associated with acquiring an STI, including HIV/AIDS. One of the most important services that they currently have is making condoms available at no cost. The latter would be nicely complemented by other efforts promoting safe sex (i.e., safe sex fair, condom day, more aggressive advertisement of safe sex and available services, etc.).

Another explanation to younger individuals reporting safer sex practices could be due to the fact that few women report using oral contraceptives during the first coitus (i.e., Gao, Tu, & Yuan, 1997; Raboch, Raboch, & Sindelar, 1994; Talashek, Montgomery, Moran, Paskiewicz, & Jiang, 2000). Having said this and assuming that many 18 year olds are just beginning their sexual lives, it is arguable that condom use is more likely among this group with the intention to primarily avoid pregnancy, an explanation shared by other authors (e.g., Visser & Smith, 2001). With the use of oral

contraceptives increasing with age (Boelskifte, Saval, & Rasmussen, 2002), it is possible that the use of a physical barrier also decreases when the worry of pregnancy is not as great. In this manner, it would appear as if respondents might fear pregnancy more than contracting an STI, including HIV/AIDS, which seems odd given the high knowledge about HIV/AIDS transmission. Further studies examining the relationship between age and safer sex practices should certainly be undertaken and examining this relationship while considering factors such as the number of sexual partners and the use of contraceptives might be a good place to start. In this manner, a better understanding of the association between age and safe sex practices could be achieved and findings extended to older individuals. Regardless of the progression of age and sexual experience, there remains a need to educate and attempt to influence more positive behaviours with respect to safe sex practices.

Although identity style may be a valuable tool in understanding the cognition behind decision-making, it does not seem very useful in predicting decision-making around safe sex practices. One would expect that those with an information style – those who actively seek out, process and evaluate pertinent information before coming to a decision (Berzonsky, 1989), would be most apt to discuss safe sex practices and evidently implement them. One would certainly not expect that those with a diffuse orientation – those who typically procrastinate as much as possible to avoid making decisions, would be more apt to engage in safe sex practices (Berzonsky, 1989). Then again, the fact that safe sex practices is an awkward topic that is often avoided until sexual intercourse is imminent, may in reality be more convenient for someone with a diffuse orientation. Indeed, the last minute decision to use a condom (considering they would usually carry

one) might be an optimal situation for someone with a diffuse orientation. Someone with an information style, on the other hand, may have thought about safe sex practices before that point but is not apt to making such an impulsive decision to use protection without careful discussion and evaluation of alternatives.

Alternatively, as noted in the introduction, specific environmental demands, particular identity domain, and the associated personal consequences all may override style preferences (Berzonsky, 1989). Indeed, with sexuality arguably being a powerful identity domain, it is not surprising that it might override the usual decision-making patterns engaged in by respective orientations. It is certainly conceivable that hormonal drive propels someone who normally makes well-thought out decisions (information orientation) to make impulsive decisions (unprotected sexual activity).

What seems most likely, however, is the fact that people categorized as having a diffuse orientation were most likely to practice safer sex as a result of their age, which is the variable that emerged as the most determining factor to safe sex. Indeed, because those persons who were categorized with a diffuse style were also significantly younger, it is arguable that age had more to do with sex practices than actual identity style. This was certainly emphasized in the analysis of the pure identity styles, which revealed no association to sexual practices.

Unlike previous findings of the positive effects of sexual communication on safe sex (i.e., Catania et al., 1989; Poppen, 1994; Weisman et al., 1989 as cited in Poppen, 1994; Burger & Inderbitzen, 1985; Shoop & Davidson, 1994 as cited in Zamboni et al., 2000; Koch et al., 1999) sexual communication did not predict greater contraceptive use. Quite the contrary, sexual communication emerged more as a safe sex practice

mechanism, with those practicing the safest sex engaging in sexual communication the least. Perhaps training youth to communicate around sexually related issues, namely sexual histories, actually promotes less contraceptive use with individuals trusting their partner's perception of a risk-free sexual history. Given the potential sense of invincibility often reported by youth and the asymptomatic nature of several STIs (e.g., chlamydia, herpes, genital warts) (Hyde, DeLamater, & Byerly, 2001), it is arguable that those who might be infected assure their partner of the contrary and thus engage in unprotected sexual activity. In this manner, there seems to be an urgency in assuring that the intention to teach youth to be comfortable with discussing safe sex practices, does not in reality backfire and promote more unprotected sexual activity instead. Indeed, sexual communication is meant to complement safe sex practices, not replace it.

Moreover, it was the expectation of the researcher that females would report higher rates of sexual communication, especially given the fact that empirical data to date identify them as the initiators of sexually related communication (i.e., Lock et al., 1998; Murphy et al., 1998). Surprisingly, males emerged as being more open with their partner with respect to safe sex practices. Perhaps results align more with the fact that males still have greater sexual power, especially in terms of initiating and dictating issues around safe sex. Indeed, if women bring up the issue of safe sex, they run the risk of being labeled sexually promiscuous (Koniak-Griffin et al., 1994; Sacco et al., 1993 as cited in Pötsönen & Kontula, 1999; Werner-Wilson & Vosburg, 1998) – a label men hardly need to worry about. In this manner, the theory of power and gender posits that power differentials favoring men pose health risk for women as a result of how female sexuality is viewed (Crosby et al., 2002). Alternatively, perhaps males today have a heightened

sense of responsibility with respect to pregnancy and therefore take more initiative in this regard. Then again, males might fear the consequences of a pregnancy to such a degree that they are more motivated than women to open the lines of communication with regards to safe sex practices.

The fact that males reported being more comfortable speaking to the same sex about STIs and HIV/AIDS compared to females was also surprising given common stereotype that females speak more openly to other females about intimate issues. It may be that females who discuss STIs and HIV/AIDS related issues with other females are viewed more negatively (for instance, stereotyped as “sluts”), whereas males would be viewed as having sexual prowess given their risk-taking behaviour and sexual conquest (Jewkes, Levin, & Penn-Kekana, 2003 as cited in Türmen, 2003). Again, despite the fact that gender equality was observed in terms of the rate of sexual activity and protection, the attitude, self-perception and feelings around this may differ substantially among the genders.

Perhaps females are less open concerning sexually related issues for fear of being judged or due to feelings of guilt for their own sexual behaviours, significantly increasing their risk in acquiring an STI, including HIV/AIDS. This is evidenced by Tschann and Adler's (1997 as cited in Pötsönen & Kontula, 1999) finding that women who have a negative attitude towards their own sexuality are more likely to rely on men to use a contraceptive method and use condoms less frequently than other groups. The authors report that women who feel good about their sexuality, however, report discussing sex and contraceptive methods more frequently than the women who do not feel positive about their own sexuality. As a result, some authors contend that sexuality education

programs should include curricula that attend to gender differences, expectations, and social stigma rooted in western society (Werner-Wilson & Vosburg, 1998).

On the upside is the positive relationship between unprotected vaginal sex and medical check-ups for STIs, including HIV/AIDS before unprotected vaginal or anal sex in the past year. Indeed medical check-up for STIs and HIV/AIDS is considered to be an HIV prevention mechanism (Fredman, Rabin, Bowman, & Bandemer, 1989).

Unfortunately, the fact that over half reported no medical check-up despite reports of unprotected activity is disconcerting. Perhaps a reason for the low rate of reported medical check-up relates to the fact that it is discussed much less than condom use. Indeed, condom use seems to be the safe sex practice measure that is mostly talked about by educators and the media alike. Educators may be reluctant to emphasize medical check-ups as a safe sex option for fear of eroding condom use on the one hand, and perhaps too because of the associated increase to the health care system. With frequent or sporadic unprotected sexual activity, however, medical check-ups need to be emphasized so that individuals have more options for safe sex.

Implications for Research

Unfortunately, the fact that no finding to date is substantive enough in nature to satisfactorily shape effective STI and HIV/AIDS programs remains status quo. This study, however, is rich in its description of risky sexual behaviour and especially valuable in alerting us to the counter productive outcome of sexual communication, to the impact of age on safe sex practices, and to the need of emphasizing medical check-ups for STIs and HIV/AIDS as a safe sex method. Indeed, from a research point of view, efforts must continue in order to come to a comprehensive understanding of the mechanisms at play in

safe sex practices. The relationship between age, sexual communication and safer sex practices may certainly be a good place to start. With the mass amount of research conducted in the area and little light shed on the matter, it is clear that this task is no simple endeavor. It is important to note, however, that most studies on safe sex have been conducted using quantitative methodologies, which have certainly prevented us from getting a sense of the stories behind the sexual behaviours. Indeed, it might be quite useful to interview youth to get an intimate perspective of what enables safer sex practices. In this manner, some of the complex variables at play might emerge more clearly and thus be identified and used to construct effective STI and HIV/AIDS intervention/prevention programs.

Implications for Practice

From a practical point of view, it is imperative that universities and others concerned be advised of the sexual health risks that increase with age. In this manner, the necessary mechanisms need to be put into place to ensure that we are not “setting up” our university aged youth to acquire an STI, including HIV/AIDS due to the lack of support or strategies in place. It is also essential to convey findings related to sexual communication to programs and others alike who teach it as a measure for safe sex. In this manner, the necessary adjustments could be made to ensure that sexual communication does not replace the use of a physical barrier. Lastly, medical check-ups should be brought to the forefront, especially given the rates of unprotected sexual activity. Hopefully, with efforts persisting on a research and practical level, our youth will look forward to a bright and fruitful future.

Implications for Social Work

As social workers, we have the luxury to have a comprehensive skill base that extends to both research and practice. It is therefore our responsibility to contribute to the research and practice recommendations made above. Particularly important on a research level, however, is the examination of the potential gender differences affecting women's attitudes, perceptions, and behaviours around sexuality, arguably putting them at a disadvantage compared to men.

Practically speaking, it is important that social workers remain cognizant of the research conducted in the area, thereby bridging research and practice. In this manner, social workers must explore the potential societal expectations that potentially hinder women from being as open as men with regards to sexually related issues. Indeed, demystifying the root of their reticence in this regard might be very helpful in enabling women to take an active role in sexual communication and evidently, in safe sex practices. Social workers can also effectively address safe sex practices with the youth they work with. Indeed, if young people discuss safe sex with individuals they have a rapport with and trust, a positive difference can actually be achieved! Social workers can also make the appropriate referrals or provide the youth with the necessary resources to facilitate the decision to engage in safer sex practices. In this manner, the health and well-being of individuals and families alike will be fostered – a worthwhile and positive goal for social workers!

Appendix A: Information Letter

Information Letter

If you are between the ages of 18 and 22, you are invited to voluntarily participate in the study, which includes filling out a survey that takes approximately 12 minutes to complete.

Despite the many campaigns for safe sex practices, many youth remain vulnerable to acquiring sexually transmitted infections (STIs), including HIV/AIDS that threaten their future. Consequently, more research is needed to come to a better understanding of adolescent sexuality. The present study, whose purpose is to observe the relationship between sexual communication, HIV/AIDS knowledge and identity style and safe sex practices, is a good step towards achieving this goal.

In addition to your communication around sex, identity style, and your HIV/AIDS knowledge, some questions will inquire about sexual practices, which can be a private issue. A list of resources has been included in the package to answer any questions or concerns that may be raised as a result of participating in the study. If you have more specific questions that are not answered by the resource list, please feel free to contact the researcher at kathia@mobile.rogers.com.

About 600 people will be asked to participate. If you chose to participate by filling out the questionnaire, you have a chance to win some money! Indeed, a draw will occur after the data collection phase (March 2004) giving you a chance to win one of the following cash prizes:

- ◆ \$50
- ◆ \$100
- ◆ \$150.

Instructions: Please put the completed survey in the large envelop and the ballot in the smaller one and return them via inner-campus mailbox by March 10th, 2004. Note that you can drop off items at any porter desk in any residence or through any other inner-campus mailbox (i.e., box hanging on a post in the University Centre in front of the elevators beside Travel Cuts).

Only aggregate data will be included in any write-up or presentation. NO revealing information is asked for at any point in the questionnaire. In this manner, complete confidentiality is assured. The return of the survey will be taken as your consent to participate as well as your confirmation about feeling you got adequate information on the research along with the procedures. The surveys will be kept under lock and key, only accessible by the researcher (and her advisors) and subsequently destroyed upon data analysis. Note that you have the right to abstain from answering any questions at no expense or risk of being excluded from the draw.

Study results will be made available via the internet: www.uoguelph.ca/~gadams/adamsweb/ upon the completion of the project in August, 2004. Note that no revealing information will be posted on the website – only factual information relevant to the study. In this manner, you can access study results in a convenient and anonymous fashion.

This study, *Safe Sex Practices: Identity, HIV/AIDS Knowledge and Sexual Communication*, is being conducted by Kathia Marie Hallal (kathia@mobile.rogers.com), a Master's level student in the Social Work department at Wilfrid Laurier University. The thesis is co-chaired by Dr. Gary Cameron (Faculty of Social Work at Wilfrid Laurier University, 519-884-1970 Ext. 3705), and Dr. Gerald Adams (Family Relations and Applied Nutrition department at Guelph University, 519-824-4120 Ext. 53967).

This project has been reviewed and approved by the University Research Ethics Board. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Ms. Sandy Auld, Research Ethics Officer, University of Guelph, (519) 824-4120 ext. 56606.

Sincerely,

Kathia Marie Hallal
B.A.Sc., M.S.W. Candidate

Appendix B: Demographic Information

Section 1: Background Information

Please respond to the following questions by checking the answer that most accurately describes you at this time.

1. I am a Male
 Female

2. I was born in Canada
 Elsewhere

3. I am _____ years old

4. I am enrolled in the _____ program (i.e., B.A.Sc., B.Sc., B.A., etc.)

Appendix C: Survey

Section 2: Identity Style

Instructions: you will find a number of statements about beliefs, attitudes, and/or ways of dealing with issues. Read each carefully then use it to describe yourself. Indicate the extent to which you think the statement represents you. There are no right answers. For instance, if the statement is very much like you, write a 5; if it is not like you at all, write a 1. Use the 1 to 5 point scale to indicate the degree to which you think each statement is uncharacteristic (1) or characteristic (5) of yourself.

1	2	3	4	5
(not at all like me)				(very much like me)

Example:

 4 I really enjoy filling out questionnaires.

 1. I've spent a great deal of time thinking seriously about what I should do with my life.

 2. I'm not really sure what I'm doing in school; I guess things will work themselves out.

 3. I've more or less always operated according to the values with which I was brought up.

 4. I've spent a good deal of time reading and talking to others about religious ideas.

 5. When I discuss an issue with someone, I try to assume their point of view and see the problem from their perspective.

 6. It doesn't pay to worry about values in advance; I decide things as they happen.

 7. I've always had a purpose in life; I was brought up to know what to strive for.

1 (not at all like me)	2	3	4	5 (very much like me)
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- _____ 8. I have some consistent political views; I have a definite stand on where the government and country should be headed.
- _____ 9. Many times by not concerning myself with personal problems, they work themselves out.
- _____ 10. I'm really into my major; it's the academic area that is right for me.
- _____ 11. I've spent a lot of time reading and trying to make sense of political issues.
- _____ 12. I'm not really thinking about my future now; it's still a long way off.
- _____ 13. I've spent a lot of time and talked to a lot of people trying to develop a set of values that makes sense to me.
- _____ 14. Regarding religion, I've always known what I believe and don't believe; I never really had any serious doubts.
- _____ 15. I've known since high school that I was going to college/university and what I was going to major in.
- _____ 16. I think it's better to have a firm set of beliefs than to be open-minded.
- _____ 17. When I have to make a decision, I try to wait as long as possible in order to see what will happen.
- _____ 18. When I have a personal problem, I try to analyze the situation in order to understand it.

1 (not at all like me)	2	3	4	5 (very much like me)
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- _____ 19. I find it's best to seek out advice from professionals (e.g., clergy, doctors, lawyers) when I have problems.
- _____ 20. It's best for me not to take life too seriously; I just try to enjoy it.
- _____ 21. I think it's better to have fixed values, than to consider alternative value systems.
- _____ 22. I try not to think about or deal with problems as long as I can.
- _____ 23. I find that personal problems often turn out to be interesting challenges.
- _____ 24. I try to avoid personal situations that will require me to think a lot and deal with them on my own.
- _____ 25. Once I know the correct way to handle a problem, I prefer to stick with it.
- _____ 26. When I have to make a decision, I like to spend a lot of time thinking about my options.
- _____ 27. I prefer to deal with situations where I can rely on social norms and standards.
- _____ 28. I like to have the responsibility for handling problems in my life that require me to think on my own.
- _____ 27. Sometimes I refuse to believe a problem will happen, and things manage to work themselves out.
- _____ 28. When making important decisions, I like to have as much information as possible.

1 (not at all like me)	2	3	4	5 (very much like me)
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_____ 29. When I know a situation is going to cause me stress, I try to avoid it.

_____ 30. I find it's best for me to rely on the advice of close friends or relatives when I have a problem.

Section 3: Sexual Practices

Instructions: This questionnaire asks about your recent sexual history. Some words used in this questionnaire may not be familiar to you, or you may not be sure of their exact meaning. The following definitions may be helpful:

- ◆ **Vaginal sex** is sex in which the penis enters the vagina.
- ◆ **Oral sex** is sex in which the mouth or tongue is in contact with the genitals.
- ◆ **Anal sex** is sex in which the penis enters the anus, or back passage.
- ◆ **Protected sex** refers to penetrative sex with a condom or oral sex with a latex barrier or condom.
- ◆ **Unprotected sex** refers to penetrative sex without a condom or oral sex without a latex barrier or condom.

1. Have you ever had vaginal, oral or anal sex? _____ Yes _____ No (if the answer is no, please skip to section 5)

2. Who have you had vaginal, oral, or anal sex with?

_____ Only men

_____ Only women

Mostly women

Mostly men

Equally men and women

3. What kind(s) of sex did you have during your **last sexual encounter**? (Please check off yes or no to the following activities)

Unprotected vaginal sex: Yes No

Vaginal sex with a condom: Yes No

Unprotected anal sex: Yes No

Anal sex with a condom: Yes No

Oral sex: Yes No

4. Have you ever had unprotected vaginal, oral, or anal sex? Yes No

5. How often do you use a physical barrier (i.e., condom, dental dam) when you have vaginal, oral or anal sex?

Always

Sometimes

Almost Always

Never

6. In the past year, have you engaged in vaginal or anal sex without a condom?

Yes (please check one option below)



I got myself checked for sexually transmitted infections (STIs), including HIV/AIDS before engaging in vaginal or anal sex

My partner got himself/herself checked for STIs, including HIV/AIDS before engaging in vaginal or anal sex

We both got ourselves checked for STIs, including HIV/AIDS before engaging in vaginal or anal sex

Neither of us got ourselves checked for STIs, including HIV/AIDS before engaging in vaginal or anal sex

No (please check an option below)



I've not had vaginal or anal sex in the past year

A condom was always used

Section 4: Sexual Communication

Instructions: The following questions are intended to gain an understanding of (1) the degree to which you are concerned about STIs and HIV/AIDS, and (2) how much you discuss STIs and HIV/AIDS with others. Please record your answers (1 to 7) on the blank line to the left of each question.

1. How much do you talk to your sexual partner(s) about STIs and HIV/AIDS?

_____	1	2	3	4	5	6	7
	(openly, without restriction)						(I don't)

2. Have you and your partner discussed safe sex practices before engaging in sex?

_____	1	2	3	4	5	6	7
	(openly, without restriction)						(not at all)

3. If you are currently practicing sex without protection (condom), have you and your partner spoken about each other's sexual histories before engaging in sex?

_____	1	2	3	4	5	6	7
	(not at all)						(thoroughly)

4. How much have you discussed STIs and HIV/AIDS with others during the last month?

_____	1	2	3	4	5	6	7
	(as much as possible)						(I haven't)

5. How much do you talk to those of the opposite sex about STIs and HIV/AIDS?

_____	1	2	3	4	5	6	7
	(as much as possible)						(I don't)

	TRUE	FALSE
9. If the HIV test comes out negative, it means that the person has AIDS		
10. You can die from AIDS		
11. Men have a higher chance of getting AIDS from having sex with a woman than from having sex with a man		
12. Women are more likely to get AIDS from sex with a straight (heterosexual) man than with a bisexual man		
13. It is safe to have intercourse without a condom with a person who shoots drugs as long as you don't shoot drugs		
14. People have been known to get HIV and develop AIDS from a swimming pool used by someone with AIDS		
15. People of any race can get HIV and develop AIDS		
16. Lambskin condoms are better than latex condoms for preventing HIV infection		
17. People usually become very sick with AIDS a few days after being infected with HIV		
18. People have been known to get HIV and develop AIDS from insect bites		
19. It is safer not to have sexual intercourse at all than to have sexual intercourse using a condom		
20. A vaccine has recently been developed that prevents people from getting HIV infection (which can lead to AIDS)		
21. If you are really healthy, then exercising daily can prevent getting HIV (which can lead to AIDS)		
22. People have been known to get HIV and develop AIDS by eating at a restaurant where a worker has AIDS		
23. When using condoms, it is better to use one with a spermicide like Nonoxynol-9		

24. You are safe from AIDS if you have oral sex (with mouth to penis or mouth to vagina) without a condom		
25. If you get a "false positive" result on your HIV antibody test, it means you are infected		
26. Anal (rear end) sex without a condom is one of the safer sexual practices		
27. You can get HIV and eventually AIDS by donating blood		

Appendix D: Resources (U of G)

RESOURCES

- **Aids Committee of Guelph and Wellington County**
 Address: 58 Dawson Rd
 Guelph, On
 N1H 1A8
 Telephone: 519-763-2255

- **Aids and Sexual Health Info Line**
 Telephone: 416-392-2437 or 1-800-668-2437 or 1-800-686-7544

- **Beginnings Crisis Pregnancy Centre**

 Address: 175 Woolwich St
 Guelph, On
 N1H 3V4
 Telephone: 519-763-7980

- **Community Mental health Clinic**
 Address: 147 Delhi St.
 Guelph, On
 N1E 4J3
 Telephone: 519-821-3760 or 1-800-821-3760

- **Family Counselling and Support Services for Guelph Wellington**
 Address: 409 Woolwich St.
 Guelph, On
 N1H 3X2
 Telephone: 519-824-2431 or 1-800-307-7078

- **Guelph General Hospital – Guelph-Wellington Care & Treatment Centre for Sexual Assault and Domestic Violence**
 Address: 115 Delhi St.
 Guelph, On
 N1E 4J4
 Office Telephone: 519-837-6440 Ext. 2758
 After Hours: 519-837-3440 Ext. 2210

- **Guelph Wellington Women in Crisis – Sexual Assault Centre**
 Address: PO Box 1451
 Guelph, On
 N1H 6N9
 Telephone: 519-836-1110 or 1-800-265-7233
 Crisis Phone: 519-836-5710

- **Lesbian Gay Bi Youth Line**
Telephone: 416-962-9688 or 1-800-268-9688

- **University of Guelph – Counselling Services**
Address: University of Guelph
University Centre – Level 3
Guelph, On
N1G 2W1
Telephone: 519-824-4120 Ext. 56335

- **University of Guelph – OUTline**
Address: c/o The CSA, University Centre, Level 2
University of Guelph
Guelph, On
N1G 2W1
Telephone: 519-836-4550

- **University of Guelph - Guelph Queer Equality**
Address: c/o Central Student Association
University of Guelph, Room 243
Guelph, On
N1H 2W1
Telephone: 519-824-9632 Ext. 56702

- **Wellington Dufferin Guelph Health Unit**
Address: 125 Delhi St.
Guelph, On
N1E 4J5
Telephone: 519-821-2370 or 1-800-265-7293

- **Women’s resource Centre**
Address: c/o The Women’s Resource Centre
University Centre, Room 107
University of Guelph
Guelph, On
N1G 2W1
Telephone: 519-824-4120 Ext. 58559

Appendix E: Ballot (U of G)

BALLOT

Thank you so much for completing the survey! You are invited to complete this ballot for a chance to win one of three cash prizes:

- ◆ \$50
- ◆ \$100
- ◆ \$150

Name: _____

Contact information (i.e., email or telephone number): _____

Six-hundred people have been asked to participate and those who have returned their survey and ballot will be included in the draw. A name will be drawn following the completion of data collection sometime in March 2004.

Instructions: Please put the completed ballot in the small envelope and send it via inner-campus mail (at any residence porter desk or in the University Centre in front of the elevators beside Travel Cuts). This way, your survey (which goes in the large envelope) will have no identifying information and confidentiality is maintained. Again, thank you kindly for your participation and good luck!!!

Appendix F: Information letter (WLU)

Information Letter

If you are between the ages of 18 and 22, you are invited to voluntarily participate in the study, which includes filling out a survey that takes approximately 12 minutes to complete.

Despite the many campaigns for safe sex practices, many youth remain vulnerable to acquiring sexually transmitted infections (STIs), including HIV/AIDS that threaten their future. Consequently, more research is needed to come to a better understanding of adolescent sexuality. The present study, whose purpose is to observe the relationship between sexual communication, HIV/AIDS knowledge and identity style and safe sex practices, is a good step towards achieving this goal.

In addition to your communication around sex, identity style, and your HIV/AIDS knowledge, some questions will inquire about sexual practices, which can be a private issue. A list of resources has been included in the package to answer any questions or concerns that may be raised as a result of participating in the study. If you have more specific questions that are not answered by the resource list, please feel free to contact the researcher at kathia@mobile.rogers.com.

This package includes a questionnaire and a ballot for a draw where you can wish cash prizes. I hope you will complete and return the questionnaire. However, you can choose to return the ballot whether you complete the questionnaire or not. Five-hundred people will be asked to participate at Wildrid Laurier University and the draw will occur after the data collection phase (March 2004) giving you a chance to win one of the following cash prizes:

- ◆ \$50
- ◆ \$75
- ◆ \$100

Instructions: Please put the completed survey in the large envelop and the ballot in the smaller one and return them via inner-campus mailbox **within 2 weeks**. To return the envelop(s), simply go to your residence mailroom and give it to a staff member who will place it in the inner-university mail system. If no one is in the mailroom at that time, simply push the envelop(s) all the way through your mailbox, and into the mailroom. Alternatively, you may drop it off in the courier box located in the concourse, across from the bookstore.

Only aggregate data will be included in any write-up or presentation. NO revealing information is asked for at any point in the questionnaire. In this manner, complete confidentiality is assured. The return of the survey will be taken as your consent to participate as well as your confirmation about feeling you got adequate information on the research along with the procedures. The surveys will be kept under lock and key, only accessible by the researcher (and her advisors) and subsequently destroyed upon data analysis. Note that you have the right to abstain from answering any questions at no expense or risk of being excluded from the draw.

Study results will be made available via the internet: www.uoguelph.ca/~gadams/adamsweb/ upon the completion of the project in August, 2004. Note that no revealing information will be posted on the website – only factual information relevant to the study. In this manner, you can access study results in a convenient and anonymous fashion.

This study, *Safe Sex Practices: Identity, HIV/AIDS Knowledge and Sexual Communication*, is being conducted by Kathia Marie Hallal (kathia@mobile.rogers.com), a Master's level student in the Social Work department at Wilfrid Laurier University. The thesis is co-chaired by Dr. Gary Cameron (Faculty of Social Work at Wilfrid Laurier University, 519-884-1970 Ext. 3705), and Dr. Gerald Adams (Family Relations and Applied Nutrition department at Guelph University, 519-824-4120 Ext. 53967).

This project has been reviewed and approved by the University Research Ethics Board. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Bill Marr, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-1970.

Sincerely,

Kathia Marie Hallal
B.A.Sc., M.S.W. Candidate

Appendix G: Ballot (WLU)

BALLOT

Thank you so much for completing the survey! You are invited to complete this ballot for a chance to win one of three cash prizes:

- ◆ \$50
- ◆ \$75
- ◆ \$100

Name: _____

Contact information (i.e., email or telephone number): _____

Five-hundred people have been asked to participate at Wildrid Laurier University. A name will be draw following the completion of data collection sometime in March 2004

Instructions: Please put the completed ballot in the small envelop and return it to your residence mailroom. If no one is in the mailroom to put your material in inner-campus mail, simply push the envelop all the way through your mailbox, and into the mailroom. Alternatively, you may drop it off in the courier box located in the concourse, across from the bookstore. Again, thank you kindly for your participation and good luck!!!

Appendix H: Resources (WLU)

RESOURCES

- **Waterloo Region Community Health Department AIDS/STD Program (free and confidential drop-in clinics)**

Sexually Transmitted Disease testing and treatment

99 Regina Street South
 2nd floor, Waterloo
 Mondays and Thursdays 3:00 to 6:00 p.m.

The Clinic at the ROOF

242 Queen Street
 Kitchener
 Wednesdays 12:00 to 3:00 p.m.

Anonymous HIV testing

99 Regina Street South
 2nd floor, Waterloo
 Wednesdays 9:00 a.m. to 3:30 p.m.

ACCKWA

85 Frederick Street East
 Kitchener
 Thursdays 4:00 to 7:00

(519) 883-2251

- **AIDS Committee of Cambridge, Kitchener, Waterloo Area (ACCKWA)**
 85 Frederick Street
 Kitchener
 N2H 2L5
 (519) 883-3687
- **AIDS Hotline**
 1-800-668-2437
- **Information and Support: Sexual Assault Crisis Support for women**
 KW area: (519) 653-2422 or 1-800-410-4482
- **Sexual Assault support: EARS for men**
 KW area: (519) 570-3277

- **Sexual Abuse Treatment Program**
39 Sterling Street North
Kitchener
(519) 744-6549
- **KW Crisis Pregnancy**
(519) 886-4001

- **Wilfrid Laurier University Counselling Services**
Students Services Centre
75 University Avenue West
Waterloo, N2L 3C5
(519) 884-1970 Ext. 2338

- **KW Counselling Services**
75 King Street, 3rd floor
Waterloo, N2J 1P2
(519) 884-000

- **Distress Line Kitchener, Waterloo, Cambridge**
(519) 745-1166

- **Laurier Peer Help Line**
(519) 884-PEER (7337)

- **Lesbian Gay Bi Youth Line**
1-800-268-YOUTH (9688)
Sunday to Friday 4:00 to 9:30 p.m.

- **Gays, Lesbians or Bisexuals at Laurier (GLOBAL)**
75 University Avenue West
Waterloo, N2L 3C5
Email: OOglobal@mach1.wlu.ca
www.wlu.ca/global

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