DATING PRACTICES:
THE INFLUENCE OF CONTEXT AND THE GENDERED NATURE
OF HETEROSEXUAL RELATIONSHIPS ON WOMEN’S SEXUAL WELL-BEING

by

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Abstract

Limited attention has been paid to adult women’s sexual well-being despite their steadily rising rates of sexually-transmitted infections (STI) and human immunodeficiency virus (HIV). Two understudied areas that may affect women's sexual well-being are the changing context of dating and the gendered nature of heterosexual relationships. Internet technologies have become popular, yet little is known about how these technologies influence women's sexual risk. Additionally, few studies have addressed how conformity to gendered norms related to sexual activity and the expression of pleasure (i.e., orgasm during sex) influence women's sexual risk and well-being.

Analyses were undertaken of data collected from an online survey of 1,266 adult women living in the United States. Two models of sexual risk were hypothesized with associations between: (a) the modality and time spent communicating, the motivations and the pressure for sexual activity, and sexual risk and (b) sexual self-disclosure and communication about sexual risk. Multinomial logistic regression was used for the analyses. A third model examined women's sexual well-being in terms of faking orgasm. Binary logistic regression was used to examine predictors of faking orgasm including the importance of, and pressure to achieve orgasm, and the frequency of, and satisfaction with, orgasm.

Neither the modality nor time spent communicating was associated with sexual risk, however, the expectation to communicate trust and adherence to sexual scripts were associated. Discussion about past sexual behaviour (e.g., sexual positions, experiences) increased risk; yet, communication about STIs and HIV did not. The majority of women reported that they had faked orgasm during penile-vaginal intercourse. Perceived pressure to achieve an orgasm during this activity predicted the faking of orgasm.
The findings of this study indicate that women's sexual risk does not appear to be influenced by how they meet partners or by the modality and time spent communicating. Communication about STIs and HIV, does appear to decrease sexual risk. The gendered nature of heterosexual relationships is of particular importance for women's sexual well-being. Given the results of this study, women conforming to gendered expectations about sex are less likely to express what they find sexually pleasing.
Preface

This doctoral dissertation is the original, unpublished, independent work of the author, Cindy L. Masaro.

The research carried out for this doctoral dissertation was approved by the University of British Columbia, Behavioural Research Ethics Board (Project title: "Exploring women's dating experiences: How do new ways of communicating affect intimacy and sexual practices in the digital era?" Certificate H10-03367). The co-authors of the manuscripts included in this dissertation were supervisory committee members: Dr. J. L. Johnson, Dr. P. A. Ratner, Dr. V. Bungay, Dr. J. Buxton, and Dr. B. Zumbo. Chapters 2, 3, and 4 will be further developed for publication in peer-reviewed journals with the following authors, in order: Cindy Masaro, Joy L. Johnson, Vicky Bungay, Jane Buxton, Bruno Zumbo, and Pamela A. Ratner.

Cindy Masaro was responsible for the data collection and analysis and the initial drafts of all chapters.

The supervisory committee offered advice with respect to the formulation of the research questions, data analysis, interpretation, and writing.
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<tbody>
<tr>
<td>AMT</td>
<td>Amazon mechanical turk</td>
</tr>
<tr>
<td>CFA</td>
<td>Confirmatory factor analysis</td>
</tr>
<tr>
<td>CM</td>
<td>Coping Motives Scale</td>
</tr>
<tr>
<td>CMC</td>
<td>Computer-mediated communication</td>
</tr>
<tr>
<td>COS</td>
<td>Coital Orgasm Questionnaire</td>
</tr>
<tr>
<td>EFA</td>
<td>Exploratory factor analysis</td>
</tr>
<tr>
<td>EM</td>
<td>Enhancement Motives Scale</td>
</tr>
<tr>
<td>FOS</td>
<td>Female Orgasm Questionnaire</td>
</tr>
<tr>
<td>FTF</td>
<td>Face-to-face communication</td>
</tr>
<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
</tr>
<tr>
<td>ID</td>
<td>Identification number</td>
</tr>
<tr>
<td>IM</td>
<td>Intimacy Motives Scale</td>
</tr>
<tr>
<td>LR</td>
<td>Binary logistic regression</td>
</tr>
<tr>
<td>LRT</td>
<td>Log-likelihood ratio test</td>
</tr>
<tr>
<td>MLR</td>
<td>Multinomial logistic regression</td>
</tr>
<tr>
<td>MSM</td>
<td>Men who have sex with men</td>
</tr>
<tr>
<td>PA</td>
<td>Parallel analysis</td>
</tr>
<tr>
<td>PAM</td>
<td>Partner Approval Motives Scale</td>
</tr>
<tr>
<td>PCA</td>
<td>Principal Components Analysis</td>
</tr>
<tr>
<td>PPM</td>
<td>Peer Pressure Motives Scale</td>
</tr>
<tr>
<td>PVI</td>
<td>Penile vaginal intercourse</td>
</tr>
<tr>
<td>SAM</td>
<td>Self-Affirmation Motives Scale</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>---------</td>
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<tr>
<td>SEM</td>
<td>Structural equation modelling</td>
</tr>
<tr>
<td>SIP</td>
<td>Social Information Processing Theory</td>
</tr>
<tr>
<td>SPSW – R</td>
<td>Sexual Pressure Scale for Women – Revised</td>
</tr>
<tr>
<td>SPT</td>
<td>Social Presence Theory</td>
</tr>
<tr>
<td>SMS</td>
<td>Sexual Motives Scale</td>
</tr>
<tr>
<td>RML</td>
<td>Robust maximum likelihood</td>
</tr>
<tr>
<td>RMSEA</td>
<td>Root mean square error of approximation</td>
</tr>
<tr>
<td>SSDS</td>
<td>Sexual Self-Disclosure Scale</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually transmitted infection</td>
</tr>
<tr>
<td>URAI</td>
<td>Unprotected receptive anal-intercourse</td>
</tr>
<tr>
<td>WLSMV</td>
<td>Weighted least squares estimation, mean and variance adjusted</td>
</tr>
</tbody>
</table>
Chapter 1: Introduction

Epidemiological studies indicate that sexually transmitted infections (STIs) and human immunodeficiency virus (HIV) rates are rising faster in women 25 years of age and older than in their younger counterparts (Centers for Disease Control and Prevention, 2013a, 2014). Despite these increasing rates in this group of adult women, little is known about their sexual practices and how they impact their overall sexual well-being. Sexual well-being "involves positive self expression, coupled with the possibility of satisfying and safe sexual experiences" (Scott-Sheldon, Kalichman, & Carey, 2010, p. 59). This dissertation focuses on sexual well-being, specifically sexual risk in terms of HIV transmission and sexual pleasure in relation to orgasm. Sexual risk refers to a lack of protection, such as the failure to use a barrier method to prevent the transmission of HIV, as well as sexual activities that place women at a greater risk of HIV transmission.

The first area of focus of this dissertation considers sexual activities that vary in terms of their level of risk for HIV transmission and examines factors that may influence women's decisions about engaging in these activities. The second area of focus considers the gendered nature of heterosexual relationships and how factors related to conventions of heterosexuality may affect women's sexual risk as well as their expression of sexual pleasure. The factors considered in the first area of focus concern the changing context of dating, namely, dating in the “digital era” and the existence of digital technology. Internet usage, which has tripled in the last decade, has revolutionized how people interact

1 Safe sexual experiences refers to engaging in sexual activities or practices that are the least likely to transmit an STI or HIV.

2 The gendered nature of heterosexual relationships refers to inequalities between men and women in terms of power, control, wealth and social status. Men are routinely accorded more power, control, and agency than women, men's interests are usually privileged over women's, and men benefit routinely from a number of material advantages not similarly available to women (Baker & Elizabeth, 2013). Baker and Elizabeth contend that in such contexts, women frequently adhere to gendered "rules of the game" to secure access to economic resources or to elevate their social status.
and communicate with each other; it is not surprising, then, that internet technologies are increasingly used to establish and maintain relationships with others, a process that is commonly referred to as computer-mediated communication (CMC).³ Research evidence suggests that people, particularly adult women, are using CMC to find and maintain relationships with romantic and sexual partners, and that they are engaging in more risky sexual behaviour than those who meet their partners in more traditional, face-to-face (FTF) settings (Couch & Liamputtong, 2008; McWilliams & Barrett, 2014; Padgett, 2007). Yet, despite the popularity of CMC, research is lacking on how CMC affects women’s sexual risk as they search for potential partners.

The factors considered in the dissertation’s second area of focus relate to gender roles in terms of gendered sexual scripts⁴ and the power differential that exists between men and women. Although these factors have been acknowledged as influential in women’s sexual decision making (Wingood & DiClemente, 2000), little is known about how these scripts influence adult women’s motivations for sex, pressure to engage in sex, or what they communicate to their partner when in a sexual encounter. Social pressure to conform to traditional gender roles may place women at risk of acquiring HIV because their sexual agency is restricted (Morokoff, 2000; Schick, Zucker, & Bay-Cheng, 2008). For example, women may be less assertive in the discussion and negotiation of sexual practices that provide protection from infection or in discussion that allows them to express their sexual desire or pleasure, particularly in relation to their own orgasms. As pleasure is part of what most people hope to experience when they engage in sexual activity, examining pleasure and issues related to pleasure are important when considering discussions about sexual risk and safer sex. Safer sex and safer sexual practices are used synonymously in this dissertation. They refer to sexual activities that are associated with less risk of

³ The term computer-mediated communication (CMC) refers to any type of internet technology used to communicate with others. For this study we are examining written text, specifically email and chat/social networking discussions used to establish or maintain relationships with partners.

⁴ Gendered sexual scripts refer to societal conventions that shape people’s understanding, beliefs, and actions about how to behave in sexual situations; they consequently guide people’s sexual conduct. The terms gendered sexual scripts, traditional sexual scripts, and sexual scripts are used synonymously throughout this dissertation.
contracting HIV when engaging in certain sexual behaviours or practices. Some studies have shown that when women are denied the possibility of sexual pleasure within sexual relationships there is a negative impact on their ability to negotiate safer sexual practices (Holland, Ramazonoglu, Sharpe, & Thomson, 1992; Philpott, Knerr, & Boydell, 2006; Scott-Sheldon, Marsh, Johnson, & Glasford, 2006). Currently, there is little understanding about the ways in which the positive and pleasurable aspects of women's sexual experiences impact their sexual risk and consequently their sexual well-being.

For the most part, the focus of sexual health education programs has been on prevention, primarily condom use as a risk reduction strategy, and has not acknowledged other factors that may be influential in women’s decisions about sexual practices, including those considered to be high risk for HIV transmission. STI and HIV education and prevention campaigns traditionally have contained gender neutral messages, and have not targeted women specifically (Dworkin, Beckford, & Ehrhardt, 2007). Over the last several years, with the rising rates of HIV infection in women, prevention education and intervention strategies have started to become gender specific (Beres, 2010; Jackson, 1984; Miller, Exner, Williams, & Ehrhardt, 2000). Despite this shift, there is a general lack of consideration given to the context in which sexual activity occurs and how gender dynamics impact and shape not only sexual risk but women’s expression of sexual pleasure, particularly within heterosexual relationships. Given these factors, coupled with the prominent use of CMC in day-to-day life, more attention needs to be paid to how these aspects shape women's sexual experiences. Further research is warranted to better our understanding of these issues with a view to enhancing education, prevention, and intervention strategies that improve women’s sexual well-being by reducing their sexual risk and improving their expression of sexual pleasure.

This first chapter of the dissertation begins with a review of the relevant literature and provides a statement of the problem that is the focus of the research. Next, Chapter 2 provides the theoretical and methodological approach to the research, data collection, and how the key study variables were
conceptualized and operationalized. The key study findings are presented in Chapters 3, 4, and 5. Finally, the dissertation closes with a general conclusion that ties these chapters and the research findings together. Each of the findings chapters introduces the research and provides a brief overview of the literature relevant to the topic of the chapter, the methods used for analysis, the results, and a conclusion. Because the structure of this dissertation is “manuscript based,” the findings chapters have some overlap in content, particularly pertaining to the sample, data collection, and the discussion of some key variables.

**Review of the Literature**

The majority of the literature reviewed for this research was drawn from a comprehensive search of the published literature in nursing, psychology, medicine, sociology, education, women’s studies, and communications and indexed in the following databases: Academic Search Complete, Medline, PubMed, CINAHL, PsycINFO, SocINDEX, ProQuest, ERIC, Communication and Mass Media Complete, and Women’s Studies International. Additional search strategies included manual searches for relevant literature cited in textbooks and retrieved journal articles. The searches were limited to English language manuscripts published within the last two decades, although relevant key literature published before this period was also included. For the literature search, the following key words and key word combinations were used: computer-mediated communication, internet dating, online dating, women, sexually transmitted infections, sexually transmitted diseases, intimacy, trust, relationships, self-disclosure, sexual communication, gender, gender roles, sexual scripts, orgasm, sexual safety, sexual risk, and interpersonal relationships.

In what follows an overview is provided of the literature related to the current context of heterosexual dating, and the rising rates of HIV in adult women. Next, is a discussion that examines possible reasons for the increase in HIV in this population with a focus on the influence of CMC and a discussion of how traditional, gendered “sexual scripts,” a metaphor that attempts to explain sexual
encounters as social interactions (Gagnon & Simon, 1973), influence women’s conformity to those scripts, and the types of sexual activities they engage in.

The context of dating in the digital era

The desire to find “that unique” individual and to establish a romantic relationship is the primary reason why most people in North America date (Smith & Duggan, 2013). The tradition of initiating a romantic relationship spans many millennia, and, as those in the “dating pool” can attest, the search for “that special individual” can be challenging. People have sought assistance in meeting potential romantic partners through various means, some of which have included relying on one’s social network to match make, placing personal advertisements in newspapers, writing letters to persons of interest, and entering into prearranged marriages. Finding a romantic partner presents challenges, but new resources for communicating in the digital era have altered the context of dating — new avenues for meeting potential love interests are available. Much of this change can be attributed to the advent and ubiquitous availability of the internet, which has revolutionized how people meet and interact with each other. Traditionally, most dating occurred within a FTF setting with potential romantic partners limited to one’s social network. Dating in the digital era, however, not only affords people a much faster and efficient way of meeting dating partners, it also provides a larger network of individuals from which to choose, people that previously would have been unknown or inaccessible. Over the last decade, digital dating has become increasingly popular among adults (Cohn, Passel, Wang, & Livingston, 2011).

Social forces driving the growth in dating assisted by new internet technologies, what is commonly referred to as CMC, include: 1) greater career, family, and time pressures, 2) a larger proportion of single people in the population (due to rising divorce rates), and 3) a decline in workplace romances (due to growing sensitivities to sexual harassment) (Brym & Lenton, 2001; Valkenburg & Peter, 2007).

Given the changing context of dating, infectious disease specialists have been concerned that the use of CMC for dating purposes may potentiate the spread of STIs and HIV (Bateson, Weisberg,
McCaffery, & Luscombe, 2012; McFarlane, Bull, & Reitmeijer, 2000; Rietmeijer & McFarlane, 2009). It is hypothesized that faster and easier access to a wider pool of sexual partners may translate into more sexual partners, more frequent engagement in high-risk sexual behaviour, and exposure to new sexual networks (McFarlane et al., 2000; Rietmeijer & McFarlane, 2009). Associations between CMC, high-risk sexual behaviour, and disease acquisition has been found in several studies of men who have sex with men (MSM) (Elford et al., 2001; Horvath et al., 2008; Kim et al., 2001). Studies focused on the heterosexual population, however, have produced inconsistent results. For example, some researchers have reported that the use of CMC is associated with a higher number of partners, greater engagement in high-risk sexual behaviour, and more STIs in comparison with dating achieved through traditional FTF methods (McFarlane, 2002; McFarlane et al., 2000; Rietmeijer & McFarlane, 2009). Other researchers have failed to find a relationship between CMC or FTF interaction and the risk of infection or high-risk behaviour (Al-Tayyib, McFarlane, Kachur, & Rietmeijer, 2008; Bolding, Davis, Hart, Sherr, & Elford, 2006; Daneback, Mansson, & Ross, 2007; Mustanski, 2007).

Another factor that influences sexual risk is the lack of specific communication between partners about their sexual histories and the sexual activities most risky for HIV transmission (Buysse & Ickes, 1999; Niccolai et al., 2005; Quina, Harlow, Morokoff, Burkholder, & Deiter, 2000). In comparison with FTF interactions, CMC is thought to elicit more open and honest communication (Schouten, Valkenburg, & Peter, 2007; Tidwell & Walther, 2002). The anonymity of CMC purportedly allows individuals to be more forthcoming in disclosing sensitive information and to feel less constrained in discussing specific topics, ideas, emotions, and behaviour, thus leading to the sharing of more intimate confidences earlier than would occur within FTF interactions (McKenna & Bargh, 2000; Schouten et al., 2007; Tidwell & Walther, 2002). In relation to sexual risk, however, there is little evidence to indicate that people, especially women, using CMC are communicating or negotiating about this topic (Couch &

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5 High-risk sexual behaviour is behaviour that has a high likelihood of transmitting HIV.
Research indicates that, no matter what form of communication people use, in general, discussions about sexual risk or low-risk sexual activity occur infrequently, and these matters, when discussed, are usually alluded to through vague references (e.g., references to wanting an infection-free partner) (Kim, Kent, McFarland, & Klausner, 2001). Often, knowledge about a partner's sexual history or HIV status is gathered indirectly through ambiguous communication because very few people ask their partners direct questions (Crosby, Yarber, & Meyerson, 2000; Williams, Kimble, Covell, & Weiss, 1992). Yet communication is vital. A meta-analysis of communication about safer sex practices and condom use found that direct communication about condom use is one of the strongest predictors of actual condom use (Noar, Carlyle, & Cole, 2006).

**Computer-mediated versus face-to-face communication**

Given that CMC potentially facilitates sexual encounters because of its accessibility and speed at which people can communicate when developing a relationship, examining CMC theory and its differences from FTF communication may provide insight into factors that influence how relationships develop in CMC, and how this may affect sexual interactions and ultimately sexual risk. In recent years, much emphasis has been placed on the psychological and behavioural differences between CMC and FTF communication. Early theorists claimed that because CMC filters out important visual, auditory, and social/contextual cues, communication (compared with FTF) becomes impersonal and provides an environment for uninhibited aggressiveness. The impersonal nature of CMC was also thought to create feelings of isolation and loneliness among users; therefore, it was considered an inappropriate means of developing interpersonal relationships (Walther, 1993). An interesting aspect of CMC is how it challenges traditional theories of communication and relationship development. More recently, a growing body of research has focussed on the benefits of CMC in developing interpersonal relationships (Tidwell & Walther, 2002; Walther, 1996). Unlike FTF encounters, in which the social meaning of an interaction is conveyed through verbal, nonverbal, and contextual cues, CMC primarily relies on written
text, which lacks social cues, such as facial expressions, body language and posture, and gestures. The focus of much of the research on CMC, therefore, has been on how the linguistic characteristics of text-based electronic messages, and the absence of nonverbal and contextual cues, impact social connections and the development of interpersonal relationships.

Social Presence Theory (SPT) (Short, Williams, & Christie, 1976), and other similar early theories of CMC, collectively known as “cues filtered out” theory (Culnan & Markus, 1987), contends that as the availability and number of visual (physical appearance, facial expressions, posture, dress), auditory (voice inflection and quality), and other contextual cues increase within a medium, so does the attention that is paid by the communicator to the presence of others participating in the interaction. Hence, social presence is the extent to which one believes that one’s partner is “present” and engaged in the social interaction (Ramirez & Zhang, 2007; Whitty & Gavin, 2001). The degree of social presence is dependent on the number of cues available within any given medium. Higher levels of social presence are a result of more available cues, whereas lower levels result from fewer cues. A decrease in social presence is predicted to reduce one’s awareness of one’s partner. This lack of awareness is thought to hinder communication and produce interactions that are less socially oriented. These early CMC theories contended that visual (physical appearance, facial expressions, posture, dress), auditory (voice inflection and quality), and other contextual cues are necessary in the development of meaningful interpersonal relationships and social connections (Culnan & Markus, 1987). Because these social cues are absent in CMC, social presence is predicted to be low, thus resulting in online relationships that are more impersonal, cold, and task-focused than are FTF relationships. Proponents of the “cues filtered out” theory maintained that CMC is not conducive to developing meaningful relationships (Walther, 1996). While some early CMC research (Rice, 1993; Rice & Love, 1987; Siegel, Dubovsky, Kiesler, & McGuire, 1986; Sproull & Kiesler, 1986) supported the cues filtered out theory, much of this research had been conducted within business and government institutions, and was focused on impersonal, task-oriented
activities (e.g., completing a collaborative project or forming work relationships) that involved one-time-only or time-limited interactions (Walther, 1996).

Over the last decade, the use of the internet for social interaction has increased markedly, and new theories have emerged that counter the early CMC relationship theories. The Social Information Processing (SIP) perspective rejects the view that people using CMC are incapable of forming personal, intimate relationships. Instead, according to SIP, CMC users are inherently motivated to develop social relationships, and will compensate for missing social information by adapting to whatever social cues are available in the medium they are using (Walther, Loh, & Granka, 2005). For example, in CMC, a reduction in nonverbal and contextual cues forces the users to use verbal and linguistic cues (e.g., word style, word choice, content) to acquire and convey relational information (e.g., characteristics, attitudes, and emotions of others) and to form impressions of each other (Tidwell & Walther, 2002; Walther & Anderson, 1992).

SIP theory maintains that, in relational development, a major difference between CMC and FTF communication is the element of time (Walther & Anderson, 1992). In CMC, relationship development occurs over a longer period of time compared with FTF interaction because users must adapt to the reduced cues and adjust their messages to seek sufficient information for impression formation. Once CMC users have formed an impression of a previously unknown partner, over time, they begin to test their assumptions about the partner by engaging in knowledge-generating and uncertainty-reduction communication strategies (Walther et al., 2005). Because social information is exchanged in CMC through one channel of communication (written text), the accrual of information is assumed to be much slower than with FTF interactions where information flows through many channels. According to Walther (1996), how quickly CMC relationships develop depends more on the rate at which information is exchanged between partners, rather than on the amount of information that is exchanged. In other
words, as CMC users exchange information over a period of time, their relationship will develop in much the same way as those interacting FTF.

According to SIP theory, CMC users employ different information-seeking strategies, depending on their relational goals and whether future interaction is anticipated. CMC users who anticipate future interaction, and who intend to engage in long-term communication with their partners, have been found to seek and exchange more personal information, to evaluate their partners in a more positive light, and to disclose more information about themselves than those engaged in short-term interactions or who communicate in offline settings (Tidwell & Walther, 2002; Utz, 2000; Walther, 1994; Walther, Slovacek, & Tidwell, 2001). SIP theory implies that CMC is able to facilitate meaningful, personal relationships similar to those developed through FTF interactions when sufficient time exists.

Walther (1996; 2007) and colleagues (Walther et al., 2001) proposed a theory of hyperpersonal communication that expands SIP theory. In addition to CMC facilitating the development of personal relationships, hyperpersonal theory contends that CMC may, in fact, enhance relational outcomes. According to this theory, CMC users can develop close and intimate relationships more quickly than they can in FTF settings because the medium presents users with several technological advances that provide a unique environment for interacting. For example, CMC users communicate with relative anonymity, which allows them to overcome some of the social awkwardness associated with FTF interactions. Social awkwardness can also be overcome because CMC users can be selective in the information they present about themselves to others. Walther (1996; 2007) alleged that the ability of CMC users to control, and thus be strategic in their self-presentation, ultimately contributes to the acceleration of intimacy. Given that a sense of trust and intimacy within a relationship can increase sexual risk among women (Gebhardt, Kuyper, & Greunsvens, 2003), CMC may lead to increased sexual risk because over time partners are trusted and believed to be low risk.
Unlike FTF interaction, CMC is often asynchronous, meaning that there is a delay in message transmission and response. Composing a message is usually a solitary process that occurs in physical isolation without interruption or immediate censorship from others. CMC users have time to carefully reflect on what they want to communicate, and can spend time consciously constructing and refining their communication and thinking about how best to present themselves to others. According to hyperpersonal theory, relationships may develop faster than those developed through FTF interaction partly because of the greater cognitive effort CMC users expend in constructing and refining their communication.

Walther (1996; 2007) and colleagues (Walther & Anderson, 1992) further postulated that because CMC users on the receiving end of a communication lack social cues, they are likely to form idealized perceptions of their partners because they over-interpret the limited information that has been sent. When information about a partner is interpreted as positive, receivers are likely to form an idealistic impression of that partner. In summary, Walther (1996) argued that the combination of elements in the CMC process (sender, receiver, channel, and feedback process) tend to heighten positive impressions and enhance interpersonal relations because people have: (a) more control over their interaction, (b) a greater opportunity to plan how they present themselves, (c) more time to reflect on and address the goals present in others' messages, and (d) their behaviour confirmed through positive feedback loops. Through these processes, hyperpersonal communication theory proposes that CMC may facilitate higher levels of self-disclosure, trust, and relational intimacy than that found in comparable FTF interactions (Hian, Chuan, Trevor, & Detenber, 2004; Tidwell & Walther, 2002; Walther, 1996; Walther et al., 2001).

To date, the majority of research examining CMC has focussed on perceived similarities and differences in communication and the initiation and development of relationships compared with those initiated in FTF settings. Limited attention has been paid to the impact of these differences on
relationship development and how this may affect sexual interactions and sexual risk. Although several studies have established an association between the use of CMC to seek sex (as opposed to romance) and high-risk sexual behaviour, few have examined the sexual well-being of individuals who use CMC for the primary purpose of finding or maintaining a romantic relationship leading to sexual activity. The rapidly increasing use of the internet to find and maintain relationships with romantic partners, and the lack of studies conducted, warrant research to develop an understanding of the factors that influence sexual decision making and sexual risk, especially those of women. The factors that are known to influence HIV rates are described in the following section.

HIV rates in adult women

The reported rates of HIV have increased significantly among heterosexual adults (25 years of age and older) in the last decade (Canadian Public Health Association, 2005; Centers for Disease Control and Prevention, 2010a, 2010b). Yet to date, few studies have been conducted to examine the reasons for these increased rates among adults. Worldwide, the proportion of women infected with HIV has been steadily increasing, and has surpassed that of men in the last decade (World Health Organization, 2010). Heterosexual contact is considered the main risk factor for HIV infection in women and represents the second highest exposure category in North America; men who have sex with men (MSM) being the highest exposure category (Centers for Disease Control and Prevention, 2010a, 2010b; Public Health Agency of Canada, 2013). Over the last several years, the proportion of women acquiring HIV through heterosexual contact has been significantly larger than that of men. For example, in 2010, 84% of new HIV infections in women in the United States were attributed to heterosexual contact (Centers for Disease Control and Prevention, 2014). A similar trend has been observed in Canada with 73% of

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6 For the purpose of this dissertation, the term adult refers to heterosexual men or women 25 years of age or older. This includes middle-aged and older adults.
new HIV infections being in adult women, versus 21% being in adult men, and they are attributed to heterosexual contact (Public Health Agency of Canada, 2013).

Women in North America, among other population groups (e.g., MSM, injection drug users, Aboriginal people, and youth), are disproportionately affected by HIV (Exner, Hoffman, Dworkin, & Ehrhardt, 2003; Fasula, Carry, & Miller, 2014). Black/African American and Hispanic/Latino women are particularly affected compared with women of other races/ethnicities (Centers for Disease Control and Prevention, 2014). In the US, of the total number of estimated new HIV infections among women in 2010, 64% were in African Americans, 18% were in whites, and 15% were in Hispanic/Latino women (Centers for Disease Control and Prevention, 2014). Various factors have contributed to the rise in HIV in women. The social determinants of health, including poverty, homelessness, lack of social support, lack of education, and abuse—both physical and sexual—continue to drive the HIV epidemic (Dworkin et al., 2007; Exner et al., 2003). These factors impede women's autonomous decision making and restrict their ability to make healthful choices and maintain their health (Gupta, 2001; Smith & Duggan, 2013).

Although we acknowledge the importance of and diverse array of determinants, a full consideration of these social determinants are beyond the scope of this research.

Although the social determinants of health provide some explanation for the rise in adult women’s HIV rates, another factor is related to a lack of awareness and education (Idso, 2009; Johnson, 2013). Adult women have not been targets of HIV education or prevention campaigns and they have been largely overlooked by HIV researchers. It is assumed that the majority of adult women are married or in long-term relationships and, therefore, not at risk for infection (Sherman, Harvey, & Noell, 2005). However, there are many adult women today who are single (due to divorce, later marriage, or death of a spouse) and dating, and therefore are initiating new sexual relationships. Those who have left long-term relationships, and are subsequently new to dating, may not be aware of the HIV risks. Many of these women have not had to think about HIV let alone risk prevention. Others may not consider
themselves to be at risk for HIV transmission because they incorrectly assume that these infections do not exist in their age group or social networks (Rich, 2001; Savasta, 2004). Paranjape et al. (2006) found that separated, divorced, and widowed women had the highest frequency of non-condom use. Of the sexually active women in their study, only 13% reported that they used condoms consistently. Similar findings have been reported by others. For instance, Deering, Tyndall, and Koehoorn (2010) found that adult women were significantly less likely to have used a condom during their last sexual intercourse compared with younger women (i.e., 15 to 24 year olds) and adult men.

Several barrier methods exist to prevent HIV transmission, however, when used correctly, the male condom is considered to be the most effective (World Health Organization, 2007). It is also the most widely promoted and thus the most familiar method. Condom use for many heterosexual adults, however, has been associated with the prevention of pregnancy, rather than with its effectiveness as a barrier in the prevention of STIs or HIV (Pratt, Gascoyne, Cunningham, & Tunbridge, 2010). A lack of awareness and information related to how to prevent HIV may be a contributing factor in the observed rates of infection in adult women.

The change in dating culture due to online technologies combined with the general lack of HIV awareness become especially problematic when considering the implications for those entering the dating scene and starting new sexual relationships (Gott, 2001; Lindau et al., 2007). Some literature suggests that adult women using CMC are more vulnerable to HIV because they are likely to engage in high-risk sexual behaviour (Bateson et al., 2012; McFarlane, Kachur, Bull, & Rietmeijer, 2004; Padgett, 2007). The evidence suggests that sexual intimacy is accelerated for those using CMC to find romantic partners compared with those that rely on FTF interactions (Ross, 2005). CMC allows for relationships to become intense and eroticized very quickly, even before a FTF meeting occurs (Cooper & Sportolari,

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7 We focus on evidence primarily related to male condoms for the reasons cited above, but acknowledge that there are many other sexual activities that pose low risk for STI/HIV transmission, such as sexual activities involving non-penetrative sex.
1997). The erotic conversations that CMC allows may heighten sexual feelings and romantic fantasies to the point that any discussion about safer sex (e.g., condom use, disclosure of sexual history, or being tested for HIV) runs the risk of destroying the romance or threatening the integrity of the relationship, especially if, for example, condom use must be negotiated. Having to consider HIV issues, while at the same time initiating new sexual relationships, may be especially challenging for many women. Given the rise in popularity of CMC, especially among those between 30 and 60 years of age (Brym & Lenton, 2001; Cooper, Mansson, Daneback, Tikkanen, & Ross, 2003; Rietmeijer, Bull, McFarlane, Patnaik, & Douglas, 2003), it is concerning that so little research has been conducted on (a) how adult women make decisions about the types of sexual activities they engage in and (b) whether the type of communication method used influences their decisions.

In addition to these sociocultural factors, women are more susceptible to HIV transmission relative to men because of their biology. It is generally accepted that HIV is much more easily transmitted from men to women than from women to men (Buve, Gourbin, & Laga, 2008); women have larger mucosal surface areas (i.e., vaginal and cervical) that can be exposed to HIV pathogens than do men (i.e., urethral meatus). In addition, their surface areas, when exposed to the pathogens, are exposed for a more prolonged period of time. Both of these factors (larger surface area and longer exposure) increase the probability of infection (Buve et al., 2008). Older adult women (e.g., post menopause) are at greater risk of HIV because of vaginal dryness and thinning of the vulvovaginal skin, which predispose them to tissue trauma during penetrative sex, allowing for easier transmission of viruses and bacteria (Buve et al., 2008). In addition, older adult men may not have used condoms or may be reluctant to use them for fear of erectile dysfunction (Potts, Grace, Gavey, & Vares, 2004). This may pose yet another barrier for women wanting to negotiate protection from HIV. A further concern is co-infection. Those who are unaware that they have an STI (i.e., are undiagnosed) are at greater risk of acquiring HIV as well as other infectious and chronic diseases (Wong, Chan, Boi-Doku, & McWatt, 2012).
Sexual risk

A core concept in this study is that of sexual risk. While many factors (e.g., sexual violence, sexual coercion, sexual abuse) place women at sexual risk that could lead to poor physical and emotional outcomes (Akiko, Christensen, Tabler, Ashby, & Olson, 2014; Bonomi, Anderson, Rivara, & Thompson, 2007), we refer to sexual risk as those sexual acts that have the riskiest or greatest likelihood of transmitting HIV pathogens. Much of the research related to sexual risk and women has been related to STIs and not necessarily HIV. Thus, this research intends to address the gap related to risk of HIV transmission as it pertains to sexual and dating relationships. A commonly accepted method for assessing an individual’s risk for HIV is to base it on behaviour that is most likely to result in transmission. The focus on HIV for sexual risk, rather than on bacterial or other viral STIs, is primarily warranted because HIV is not curable with antibiotics and is considered to be life-threatening, whereas most STIs are not. HIV risk associated with specific sexual behaviour has been most commonly studied in terms of the per-contact risk of acquiring an infection (Varghese, Maher, Peterman, Branson, & Steketee, 2002; Vittinghoff et al., 1999). Based on these and other epidemiologic studies, specific sexual behaviours have been placed within a hierarchy, based on the probability of HIV transmission occurring between partners of unknown or discordant HIV serostatus (i.e., the state of either having or not having detectable antibodies to HIV, as measured by a blood test). Sexual behaviour classified to be at the highest level of risk, or carrying the highest probability of transmission, is unprotected penile-anal sex followed by unprotected penile-vaginal sex.\(^8\) Unprotected receptive penile-anal intercourse (URAI) has been found to incur the highest risk of HIV transmission (Chmiel et al., 1987; Coates et al., 1988; Detels et al., 1989). A higher likelihood of transmission to the receptive partner is thought to occur not only through prolonged exposure to infected semen by the rectal mucosa, but also by rectal mucosa that has been traumatized (Chmiel et al., 1987). Although the majority of studies that have examined HIV

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\(^8\)Unprotected sex means that condoms or dental dams are not used as a barrier method to prevent HIV exposure.
transmission and URAI have been conducted in MSM, several studies have now identified that URAI is a risk factor among heterosexuals and women incur the greatest risk as the receptive partner (European Study Group, 1989; European Study Group on Heterosexual Transmission of HIV, 1992; Lazzarin, Saracco, Musicco, & Nicolosi, 1991; Padian et al., 1987). Although the frequency in which heterosexual couples engage in anal intercourse is poorly documented, several studies have found that women have anal sex for a variety of reasons including to enhance emotional intimacy, to please a male partner, or to avoid violence (Maynard, Carballo-Dieguez, Ventuneac, Exner, & Mayer, 2009; McBride & Fortenberry, 2010). Billy et al. (2009) found that women whose male partners conformed to traditional gender roles were much more likely than other women to engage in anal intercourse. Several researchers have found that the use of condoms is relatively infrequent when people engage in heterosexual anal sex (Billy et al., 2009; Halperin, 1999; Maynard et al., 2009; McBride & Fortenberry, 2010).

Penile-vaginal intercourse (PVI) poses the second highest risk for HIV transmission by sexual activity. The risk has been established through epidemiologic studies that have examined male-to-female and female-to-male HIV transmission (European Study Group on Heterosexual Transmission of HIV, 1992; Nicolosi et al., 1994; Padian, Shiboski, Glass, & Vittinghoff, 1997; Padian, Shiboski, & Jewell, 1991). These studies have provided strong evidence that HIV transmission through unprotected PVI does occur, and is significantly more efficient in transmitting from men to women—as much as 20 times more efficient—than from women to men.

Unprotected oral-penile (fellatio) and oral-vaginal (cunnilingus) sex, as well as protected vaginal and anal intercourse, have been classified as low-risk sexual activities for HIV transmission. The majority of research examining oral-penile sex and the risk of HIV transmission has been conducted with MSM (Jeffries et al., 1985; Moss et al., 1987; Winkelstein et al., 1987). These studies have failed to demonstrate an association between penile-oral sex and an elevated risk of HIV transmission. Although fewer studies have examined the risk of HIV transmission through oral-vaginal sex (female to male...
transmission), because few people practise oral sex exclusively, these too have resulted in the conclusion that oral-vaginal sex is a relatively low risk sexual activity (European Study Group, 1989; European Study Group on Heterosexual Transmission of HIV, 1992; Johnson et al., 1989; Lazzarin et al., 1991). In a more recent study of heterosexual HIV serodiscordant couples, where the only risk of transmission for seronegative partners was engagement in orogenital sex with their infected partners, no seroconversions occurred after an estimated 19,000 unprotected orogenital exposures (del Romero et al., 2002). Extremely low-risk practices include protected oral-penile and protected oral-vaginal sex, mutual masturbation, and wet kissing (i.e., open mouth kissing with an exchange of saliva). There is no apparent risk for HIV transmission from touching, social kissing, or caressing. The behaviours that place women most at risk for HIV transmission, in descending order of risk, are unprotected penile-anal intercourse, unprotected penile-vaginal intercourse, and unprotected oral (giving and receiving) intercourse.

**Why study heterosexual women's sexual risk?**

Although the changing context of dating, the social determinants of health, women's biology, and the lack of HIV awareness in adult women may, in part, explain why their HIV rates have increased, a relatively unexamined but important aspect of women's sexual experiences affecting their sexual well-being is the gendered nature of their relationships.

**Traditional sexual scripts**

Gendered behaviour refers to the cultural norms and expectations about how men and women relate to each other (Simon & Gagnon, 1986; Simon & Gagnon, 2003). This behaviour can affect sexual experiences because of the gendered power differential within men’s and women’s sexual scripts (Emmers-Sommer & Allen, 2005; Frith & Kitzinger, 2001). Traditional sexual scripts are patterns of interaction between men and women that are expected within their romantic and sexual encounters.
(Simon & Gagnon, 1986). They embody societal conventions that shape people’s understanding, beliefs, and actions about how to behave in sexual situations; they consequently guide people’s sexual conduct. Traditionally, men have been socialized to adhere to ideals of masculinity, which have promoted them as the aggressors and initiators of sex, as well as the sexual decision makers. Emphasis has been placed on their sexual prowess and personal physical pleasure. Women have been socialized to adopt ideals of femininity, which have promoted sexual passivity and encouraged a more relational approach to sex. Accordingly, women have been encouraged to consider sex as acceptable only when used to express or achieve emotional intimacy, or in the context of an emotionally committed relationship (Bowleg, Lucas, & Tschann, 2004; Hynie, Lydon, Cote, & Wiener, 1998). In addition to being cast as sexual gatekeepers, heterosexual women also have been encouraged to repress their own sexual needs and desires in favour of their male partners’ (Hynie et al., 1998). Women that endorse these traditional sexual scripts are less likely to communicate about sexual issues, disclose sexual information, or negotiate with their partners about the acceptability of various sexual activities (Amaro, 1995; Greene & Faulkner, 2005; Hynie et al., 1998). Some studies have revealed that this is an important factor contributing to the rise in HIV in women (Alexander, Coleman, Deatrick, & Jemmott, 2012; Bateson et al., 2012; Kalichman, Cain, Knetch, & Hill, 2005).

Adherence to sexual scripts restricts women’s control over important decisions concerning the type of sexual activity they engage in and their agency in expressing their sexual desires and what they find to be sexually pleasurable (Naisteter & Sitron, 2010; Philpott, Knerr, & Maher, 2006). Women often experience a range of pressures to engage in risky sexual practices or those that are not necessarily pleasurable (Holland et al., 1992). For example, they may comply with unwanted sex for “the good” of their relationship (Greene & Faulkner, 2005; Hynie et al., 1998; Katz & Tirone, 2009). Many women strive to maintain romantic ideologies and forgo their own physical pleasure, satisfaction, and safety in an effort to satisfy their male partners (Jones & Oliver, 2007; Ortiz-Torres, Williams, & Ehrhardt, 2003;
Wingood & DiClemente, 2000). Women's motivations for having sex (e.g., to become more intimate or to please one's partner) have been shown to be significant predictors of high-risk sexual behaviour (Cooper, Shapiro, & Powers, 1998; Damani et al., 2009; Higgins & Hirsch, 2007). Because women's sexual scripts have historically emphasized the primacy of love, trust, intimacy, and romance, women may fail to negotiate with their partners to engage in less risky sexual activity and the type of protection used, if any, for fear of rejection, violence, or ending the romance (Hoffman, O'Sullivan, Harrison, Dolezal, & Monroe-Wise, 2006; Jones, 2006b; Jones & Oliver, 2007). Acquiescing to sexual pressures negatively affects discussions about sexual behaviour and ultimately creates serious barriers to women's sexual well-being (Morokoff, 2000; Schick et al., 2008). To date, limited research has been conducted on how women's motivations for sex or the pressure they experience to engage in sex affect their sexual experiences.

Women's sexual scripts have been constructed for women to be responsive to men's sexual needs and to satisfy those needs (Gavey, McPhillips, & Braun, 1999; Muehlenhard & Peterson, 2005). Because heterosexual sexual activity is male dominated in terms of what occurs, what is valued, and how pleasure is defined (Nicolson & Burr, 2003), men's needs and pleasures are privileged over women's (Gavey, McPhillips, & Doherty, 2001). PVI is considered a compulsory component of heterosexual sex, representing the ultimate sexual experience (Jackson, 1984; Tiefer, 1995). It is considered the expected outcome of sex and supersedes all other sexual activity in terms of what counts as sex (Hayfield & Clarke, 2012; Jackson, 1984; McPhillips, Braun, & Gavey, 2001). Consequently, there is a societal expectation for men and women to engage in this activity even though it may jeopardize their health and well-being, and regardless of whether they find it pleasurable (Hayfield & Clarke, 2012). Women, in particular, are affected because unprotected PVI may have implications for their health (e.g., STIs, HIV, cervical cancer, pregnancy and ectopic pregnancy) (Lazzarin et al., 1991; Padian et al., 1987).
While it is generally accepted that PVI is particularly pleasurable for men, there is uncertainty about how pleasurable the activity is for women (Gavey et al., 2001; Gavey et al., 1999; Hayfield & Clarke, 2012).

**Women's orgasm and conformity with sexual scripts**

Heterosexual encounters usually follow a predetermined sequence of events whereby foreplay leads to PVI and ends with orgasm and ejaculation for men (Cacchione, 2007; Jackson & Scott, 2001). While over 90% of men achieve orgasm during PVI, the majority of women (up to 70%) do not (Hite, 1982; Hite & Hinchliff, 2004; Muehlenhard, 2011; Wade, Kremer, & Brown, 2005). The absence of orgasm for women can impact their sexual well-being, especially considering the emphasis in the popular press on sex and orgasm, which fuels societal expectations that orgasm should consistently occur for women during PVI (Darling & Davidson, 1986; Farvid & Braun, 2006). Lack of orgasm, therefore, purportedly signifies a failure or dysfunction on the part of women (Jackson & Scott, 2001; Lavie-Ajayi, 2005). Although these societal expectations place pressure on women to achieve orgasm, Nicolson and Burr (2003) found that women were indifferent about orgasm during PVI, and that they did not attach any particular importance to their experience of orgasm, or lack of it, during this activity. Despite this, however, the women still desired to achieve orgasm during PVI to please their partners. According to Potts (2000a), the emphasis on women's orgasm during PVI works to reinforce traditional sexual scripts predicated on masculine sexuality as dominant.

If women's lack of orgasm during PVI can signify their dysfunction, it may also reflect a partner's flawed technique (Cacchione, 2007; Jackson & Scott, 2001). Given the ideals of masculinity inherent in sexual scripts (Connell, 2005; Potts, 2000b), having a woman achieve orgasm is seen as a demonstration of a man's sexual skill and prowess (Cacchione, 2007; Roberts, Kippax, Waldby, & Crawford, 1995). This places women under pressure to reassure men of their skill and competence, and thus to provide them with evidence of an orgasm (Jackson & Scott, 2001). Hite and Hinchliff (2004) suggested that much of the pressure for women is related to making their partners feel good. For women, such pressure can
lead to the phenomenon of faking an orgasm (Holland, Ramazanoglu, Sharpe, & Thomson, 2004; Muehlenhard & Shippee, 2010; Roberts et al., 1995). The most frequent reasons cited by women for faking an orgasm is their desire to please their partners, not hurt their feelings, and avoid any consequences that would negatively impact their relationships (Bryan, 2001; Darling & Davidson, 1986; Muehlenhard & Shippee, 2010; Wade et al., 2005). Some have argued that the expectation for women to achieve orgasm during PVI pressures women into concluding a sexual encounter with PVI because orgasm is expected to occur for both men and women as the final sexual act (Cacchione, 2007; Hayfield & Clarke, 2012; Holland et al., 2004; Lavie-Ajayi, 2005; McPhillips et al., 2001). Others have argued that not achieving orgasm during PVI places women at a different kind of risk, the risk of being diagnosed with sexual dysfunction, especially because this topic garners significant attention from the pharmaceutical industry and is becoming increasingly medicalized (Lavie-Ajayi & Joffe, 2009; Moynihan, 2003). Rather than viewing women's lack of orgasm during PVI as dysfunctional, there needs to be a new understanding of this as normal, not to be judged by male standards. Some argue that traditional sexual scripts reinforce conventions of masculinity and femininity, which are powerful contributors to sexual risk and the inability of women to negotiate for sexual practices that contribute to healthy sexual relationships and sexual well-being (Cacchione, 2007). Several studies have indicated that acknowledging women's pleasure is one way to reduce gender inequality and increase sexual practices that are safer for women (Philpott, Knerr, & Boydell, 2006; Philpott, Knerr, & Maher, 2006; Pulerwitz, Amaro, De Jong, Gortmaker, & Rudd, 2002).

**Summary**

The literature points to gaps in our knowledge of adult women’s sexual risk and sexual well-being. HIV infections are increasing in this population, yet limited research has been conducted to determine why adult women are not using condoms, or why they are not engaging in less risky sexual activity. Few studies have addressed sexual well-being in adults over the age of 25, particularly in
women. There is little evidence to indicate that the strategies in place for younger women are appropriate and effective for adult women who are at a different stage of development. While midlife is considered to be a time of reproductive and sexual decline, a significant number of adults continue to be sexually active (Gott, 2001; Health, 2003; Lindau et al., 2007; Patel, Gillespie, & Foxman, 2003). Bodley-Tickell et al. (2008) suggested that, over time, the number of older adults who are sexually active and who have more than one sexual partner is likely to increase as adults with more liberal sexual attitudes and behaviour age and experience relationship changes. Evidence of this change is demonstrated by the increased use of CMC to find romantic and sexual partners (McFarlane et al., 2000; Rietmeijer et al., 2003). Although many people use CMC to meet potential romantic and sexual partners, little is known about how CMC changes the way people interact and communicate about sex.

Given that heterosexual sex is a significant source of HIV transmission for women, it is surprising that education, prevention, and intervention efforts have not focused more on the gendered nature of heterosexual relationships as a factor that may influence relationship development and sexual partnerships. Currently, there is little understanding of how women's sexual experiences impact their sexual well-being. Many prevention efforts are based on the assumption that sexual behaviour is always initiated by and under the control of the individual who is the recipient of the prevention efforts. In public health campaigns, women are often targeted to enforce the use of male condoms, which places them in a position where they must negotiate condom use. This can be especially problematic with a partner who is uncooperative, or when a woman does not feel empowered to ask for what she needs. What is not acknowledged in most prevention efforts is that concerns about infection and public health do not govern most people's sexual decisions. Consequently, a lack of consideration has been given to the broader cultural and social contexts that influence and shape sexual behaviour. Some women lack the power to negotiate condom use, some may refrain from using condoms in an effort to develop intimacy, or some may find that condoms hamper their sexual pleasure or enjoyment (Higgins & Hirsch,
The power differential between men and women in heterosexual relationships also means that women will often forgo their own sexual pleasure in place of their partner’s pleasure. Research has shown that a woman’s orgasm during a sexual encounter is more important to men than it is to women (Salisbury & Fisher, 2013). Thus, positive relational benefits (i.e., for the good of the relationship or to avoid hurting a partner’s feelings) is a common reason why women fake orgasm (Opperman, Braun, Clarke, & Rogers, 2014). The question that arises is whether the limited attention given to sociocultural factors related to sexual relationships has undermined efforts to promote less risky sexual behaviour and to improve sexual well-being, and whether the emphasis on scare tactics regarding adverse consequences of sex has reinforced gendered sexual scripts and negatively affected women’s sexual well-being. More research is needed to enhance our understanding of these issues with a view to enhancing education, prevention, and intervention strategies, which will improve women’s sexual experiences and contribute to their overall sexual well-being.
Chapter 2: Theoretical and Methodological Approach

Theoretical Models and Hypotheses

Based on the review of the literature, it is clear that communication and gender roles are important factors related to women’s sexual well-being. For this research we are defining sexual well-being as "positive self-expression, coupled with the possibility of satisfying and safe sexual experiences" (Scott-Sheldon, Kalichman, & Carey, 2010, p. 59). The theoretical perspectives that informed this research were Social Information Processing Theory (SIP), Hyperpersonal Communication Theory (HPC), and Gendered Sexual Script Theory. SIP and HPC were integral for examining differences between face-to-face (FTF) and computer mediated communication (CMC) in terms of relationship development. Whereas early CMC theories did not support the development of interpersonal relationships, later theories such SIP and HPC did, and in addition, purported that CMC relationships developed at a much faster rate than FTF relationships (Walther, 1996; Walther, 2007; Walther & Anderson, 1992; Walther et al., 2005). The primary reason for these claims concerned the ease and frequency with which people interact when using CMC. These theories asserted that frequent interactions result in easier and faster disclosure and exchanges of highly intimate information. Ultimately, leading to an accelerated sense of intimacy and familiarity between relationship partners. Consideration of these factors are important in relation to sexual risk as research shows that intimacy and familiarity results in assumptions about how well people feel they "know" their partner, inclusive of that partner's sexual risk factors, despite not having asked any direct questions about it (Gebhardt, Kuyper, & Greunsvlen, 2003; Misovich, S.J., Fisher, J.D., & Fisher, W.A., 1997). Gendered sexual script theory was integral in this research in that it allowed us to consider how expected patterns of interaction between men and women in romantic and sexual encounters influenced women's behaviour. Whereas men are socialized to ideals of masculinity with a
focus on their sexual prowess and physical pleasure, women are socialized to ideals of femininity and encouraged to suppress their own sexual needs and desires (Simon & Gagnon, 2003). When considering heterosexual sexual activity, these scripts play out in a way that have privileged men's needs and desires over women's, which may ultimately impact women's sexual well-being. Women endorsing gendered sexual scripts are less likely to negotiate about the acceptability of sexual activities, communicate about sexual issues, or discuss their sexual needs or desires (Greene & Faulkner, 2005; Naisteter & Sitron, 2010).

Informed by SIP, HCP, and Gendered Sexual Script theories, and considering the gaps identified in the literature review, we set out to test three theoretical models. The first two theoretical models focus on sexual risk as the outcome of interest. In both models, computer-mediated communication (CMC) and dating modality (meeting partners via CMC or FTF) are key predictors. We were specifically interested in examining whether meeting modality (how women first met their partner – CMC versus FTF) and the time spent communicating (either by CMC or FTF) influences sexual risk. Informed by SIP and HPC, we hypothesized that women who initially meet their partners using CMC, and those who spend more time using CMC to communicate with their partners, are more likely to engage in high risk sexual activities than are women who meet their partners in FTF settings and spend less time using CMC. In relation to the gendered nature of heterosexual relationships, we were particularly interested in examining sexual pressure (e.g., the belief that trust is displayed by not using a condom, women's responsibility to please a partner sexually), sexual motives (e.g., engaging in sex to increase intimacy, for physical pleasure), sexual self-disclosure (e.g., erotic discussions about sexual likes and dislikes, fantasies), and safer sex communication (e.g., discussion about the practical/non-erotic side of sex such as condom use and HIV risk) and how these concepts influenced sexual risk. Informed by gendered sexual script theory, in the first theoretical model we hypothesized that women feeling pressure to engage in sex because of adherence to gender role expectations around sexual activity, and women
whose sexual motivations are related to developing intimacy and trust and conforming to traditional
gender roles, are more likely to engage in high risk sexual activities than are those who do not.

The second model focuses on whether there is an association between women’s sexual self-
disclosure, their communication about safer sex, and the types of sexual activities they engage in. In
terms of sexual self-disclosure, we hypothesized that the more information women disclose about their
sexual preferences, the more likely they are to engage in higher risk sexual activities. Evidence has
shown that discussion about sexual preferences is more likely to eroticize conversations and increase
arousal (Ben-Ze'ev, 2004; Ross, 2005) than is discussion about the practicalities of sex, such as discussion
about previous STIs or condom use, which is generally considered to be less arousing. We hypothesized
that communication about safer sex, however, would have the opposite influence on sexual risk in that
the more women communicate about safer sex, the less likely they are to engage in high risk sexual
activities.

The third theoretical model focuses on the phenomenon of faking orgasm and the factors that
contribute to women’s faking of orgasms during sexual encounters. In this model we were specifically
interested in determining whether there is an association between feelings of pressure to orgasm, the
importance placed on achieving orgasm, satisfaction with and frequency of orgasm, and having ever
faked an orgasm. The expectation for women to achieve orgasm during penile-vaginal intercourse and
the emphasis placed on sex and orgasm in the popular media reinforces the notion that women are
providers of men's sexual pleasure. An absence of orgasm can impact women's sexual well-being in that
women may perceive themselves has having a problem or as dysfunctional if orgasm is not achieved
during penile-vaginal intercourse. Considering the societal emphasis placed on orgasm, and the role that
gendered sexual scripts play, we hypothesized that the increased importance of and pressure to achieve
orgasm would increase the odds of faking an orgasm, whereas an increased satisfaction with and
frequency of orgasm would decrease the odds to fake orgasms. Traditional risk factors associated with
sexual risk were included in the theoretical models to control for these factors. For the theoretical models one and two, the factors included were: the number of lifetime sexual partners of a woman, the number of sexual partners she had in the last year, her age at the time of first sexual intercourse, and having had a previous STI/HIV diagnosis. For model number three, the factors included were age and number of lifetime sexual partners. The reasons given for dating were also included. Women indicated they were dating to find short- and long-term relationship partners, to have sex only, or to find a “friend with benefits” partner.

**Conceptual Definitions**

In what follows we briefly define the concepts that are used in this research.

**Faked Orgasm** - refers to a person’s acting or pretending to have an orgasm without actually having an orgasm by simulating behaviour such as body movements and vocal sounds that are usually associated with orgasm.

**Importance of and Pressure to Achieve Orgasm** - refers to the degree of importance placed on achieving orgasm as well as the perceived pressure for women to achieve orgasm during vaginal-penile intercourse.

**Meeting Modality** – Meeting modality refers to the environment, either physical or virtual, where people initially meet partners they are interested in dating.

**Orgasm** - the "combination of waves of a very pleasurable sensation and mounting of tensions, culminating in a fantastic sensation and release of tension" (Bancroft, 1989 p. 81). These experiences can vary in both intensity and frequency and result in how satisfied women feel in terms of the quality and quantity of their orgasms. In women orgasm can occur as the result of different sexual activities

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9 "Friends with benefits” refers to someone an individual has sex with but with whom he/she is not emotionally involved. These individuals usually consider themselves to be friends who are capable of having casual sexual relations. There is no commitment to one another in terms of a monogamous relationship of any kind (Bisson & Levine, 2009).
most often involving direct stimulation of the clitoris, and sometimes as a result of penile vaginal penetration.

**Sexual Motivations** - refer to people's purposes or reasons for engaging in sexual activity, and the needs that are met (both physical and psychological) when engaging in sexual activity.

**Sexual Pressure** - according to Jones and Gulick (2009), “Sexual pressure represents a woman’s adherence to gender stereotypical expectations about engaging in sex and concern about adverse consequences ranging from losing the relationship to coercive force or threats by a male partner if these expectations are not met” (p. 71). Threats may be either physical or verbal. For example physical violence or verbal threats about ending/leaving the relationship.

**Sexual Risk** – refers to sexual behaviours for HIV transmission that are generally classified as high or low risk for transmission. High risk includes unprotected anal sex, with next highest risk being unprotected vaginal sex. Unprotected oral sex (giving or receiving) is considered low risk for HIV transmission as is genital rubbing or any kind of genital to genital contact where skin to skin contact occurs.

**Sexual Risk Factors** - sexual risk factors are factors that traditionally have been linked to a higher likelihood of acquiring an STI or HIV. The factors examined in this study included age at first intercourse, number of lifetime sexual partners, and previous STI or HIV. For example, early first intercourse has been associated with a greater number of sexual partners in one’s lifetime and an increased likelihood of engaging in risky sexual behaviour. This has been linked with higher rates of STI, including HIV (Buve et al., 2008). In addition, people with previous STI diagnoses are more likely to acquire an STI in the future, compared with those who have never been diagnosed.

**Sexual Self-Disclosure** - the discussion of topics such as sexual preferences, sensations, fantasies, and behaviours with a partner.

**Safe(r) Sex Communication** - the degree to which the safety and risk of certain sexual behaviours (including STI/HIV transmission) are discussed, including an open discussion between sexual partners or
potential sexual partners about previous sexual partners, practices, condom use, previous STI/HIV diagnoses and testing practises.

**Time Spent Communicating** – refers to the amount of time spent communicating with a partner in a specified period of time. For CMC this means the time spent constructing online email messages and chats or social networking discussions as well as the time spent reading responses from partners. For FTF communication this means the amount of time spent conversing FTF within a physical environment.

**Purpose and Study Objectives**

The broad purpose of this study was to further our understanding of adult women's dating experiences, specifically their sexual experiences. This research sought to address the gaps in our knowledge about how CMC, and how the gendered nature of heterosexual relationships, influence women's sexual well-being in terms of their sexual risk and sexual pleasure. It is anticipated that the findings from this study might inform the development of more tailored approaches to interventions targeting women's sexual well-being, and to assist them in achieving healthy sexual relationships.

**Research Approach**

A cross-sectional survey design was used in the three sets of analyses included in this dissertation. Data were collected from October 15, 2011 to March 15, 2012 in the form of an online survey, which was promoted through the Amazon Mechanical Turk (AMT) website. AMT has been described as an online “crowdsourcing”\(^{10}\) internet marketplace where tasks, such as surveys, can be distributed to and completed by a large (over 100,000 individuals from over 100 countries) diverse population of anonymous individuals (Buhrmester, Kwang, & Gosling, 2011; Ross, Irani, Silberman, Zaldi var, & Tomlinson, 2010). The online questionnaire was composed of several self-report scales and

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\(^{10}\) Crowdsourcing, a portmanteau of “crowd” and “outsourcing” was coined in 2005 to describe the process of acquiring services, ideas, content, or funding from large groups of people, particularly through solicitation of online communities (Howe, 2006).
items that incorporated the study's constructs of interest (safer sex communication, sexual self-disclosure, sexual pressure, sexual motivations, sexual risk, and experiences of orgasm). The majority of questions were close-ended and used Likert-type scale responses. The questionnaire consisted of 148 self-report items (see Appendix A for a copy).

An advertisement for the study, which outlined the study purpose and population of interest, along with a hyperlink to the study website, was placed on the AMT website. Women recruited from the AMT website were advised that they would be completing an online survey about their dating and sexual experiences. As per AMT policy, the participants recruited from the website were paid a nominal fee—$1.00—for completing the questionnaire. AMT has been identified in psychological and social science peer-reviewed journals as an online source that provides researchers with a relatively inexpensive and rapid way to obtain high-quality data from a diverse sample (Buhrmester et al., 2011; Ross et al., 2010).

The population of interest was adult women living in the United States. To be eligible, the women had to: (a) be dating at the time of the survey or had entered into a relationship within the last year, (b) be 25 years of age or older, (c) have had at least one sexual encounter with their male dating partner within the last year, and (d) be living in the United States. A sexual encounter was considered to be any type of penile-oral, penile-vaginal, penile-anal intercourse or penetration, or any genital-to-genital contact (non-penetrative). Because one of the outcomes of interest was sexual risk, women who had had sex with women exclusively were ineligible because they were considered to be at much lower risk for transmission of HIV than were women who had had sex with men. Women under 25 years of age also were excluded from this study because of the preponderance of STI/HIV research related to their sexual risk. In addition, women under 25 years of age are less likely to use online methods to find dating partners than are those over 25 years of age (Brym & Lenton, 2001; Madden & Lenhart, 2006).
To determine their eligibility, the respondents were required to answer four screening questions (the eligibility criteria). Site visitors found to be ineligible were denied entry into the study site beyond the initial pages. Those meeting the eligibility criteria were invited to begin the questionnaire, and were automatically directed to instructions on how to complete the online questions. Although a paper copy of the questionnaire was available, no participants requested to complete the survey using this method; all surveys were completed online.

A total of 1,510 participants completed the online survey. To ensure data quality, several strategies were used to clean and screen the data, which resulted in a final sample of 1,266 women. Two hundred forty-four participants were excluded for the following reasons. Upon completion of the survey, the participants received a five-digit randomly generated code, which served as proof of their survey completion. Before the randomly generated code was produced, a verification check was done that required the participants to answer the same eligibility questions they had answered at the beginning of the survey. Completed questionnaires were discarded and payment was denied if the answers to the eligibility questions submitted upon completion did not match those answered at the beginning. Another verification strategy involved calculating the participants’ ages from their reported dates of birth. Although the eligibility criteria clearly stated that participants had to be 25 years of age or older, 110 participants entered birth dates that did not meet this criterion and were eliminated.

Because each participant had a unique AMT identification (ID) number, it was possible to sort the ID numbers to determine if any participants completed the survey more than once. Using this strategy, 56 participants were found to have completed the survey more than once. All surveys from these participants were eliminated. Finally, various logic checks were conducted. This involved examining whether answers to specific questions logically corresponded or were congruent with other answers. For example, one participant reported both her current age and age at first sex to be 41, and also reported that she had had 100 sexual partners in the last year, but only 50 sexual partners in her
lifetime. Some participants stated that they had been in a relationship with their partner for more than one year and were disqualified because the eligibility criteria stated that participants must have begun a new relationship within the last year. Others reported the duration of their relationship that exceeded their age in years. All these questionnaires were removed and not included in the analyses.

**The Measurement of Key Variables**

A thorough review of the literature was conducted prior to developing the survey instrument to locate established measures used in previous STI/HIV, sexual relationship, and communications research. This review provided information about the alignment of the instrument/items with their conceptual definitions, the measures’ psychometric properties, and the feasibility of the instruments selected. Although only original scales and items with satisfactory psychometric properties were selected, for the most part, some scales and items were adapted for this study's target population, and others were developed because no established instruments were found. The survey instrument was composed of several self-report scales and items that incorporated the study’s constructs of interest.

**Sociodemographic and sexual risk factors**

Sociodemographic characteristics and sexual risk factor questions were included for the purpose of describing the characteristics of the sample and to assess their sexual risk. This information was obtained with nine closed-ended questions. One item addressed each of the sociodemographic characteristics of age, marital status, ethnicity/race, household income, and education level. The relevant questions were adapted from the National Population Health Survey (Statistics Canada, 2009) and the Canadian Community Health Survey (Statistics Canada, 2008a). Age was measured on a ratio scale. The participants were asked to report the day, month, and year of their birth. Their age in years was then calculated based on the date the survey was completed. Marital status, ethnicity/race, household income, and education level were measured categorically. For marital status, the participants were asked to identify whether they were single, married, separated, in a common-law marriage,
divorced, or widowed. Ethnicity/race was measured by asking the participants to self-identify from a provided list of ethnic groups. For household income, the participants were asked to provide an estimate of their total household income before taxes and deductions. Education was measured with response options that ranged from “Grade nine or less” to “a doctorate” (see questionnaire in Appendix A).

The participants’ sexual risk factors were assessed with their reported age at first sexual intercourse, the number of sexual partners they had had in their lifetime, the number of sexual partners they had had in the last year, and whether they had ever been diagnosed with an STI or HIV (History of an STI). The constructs “age at first sexual intercourse,” “number of lifetime sexual partners,” and “number of sexual partners in the last year” were measured on ratio scales. In a free form box, the participants were asked to enter their age and their age when they first had had sexual intercourse. They also were asked to enter, in free form, the number of sexual partners they had had in their lifetime, and the number of sexual partners they had had in the last year. For history of an STI, a categorical “yes” or “no” answer indicated whether the participants had ever been diagnosed with an STI, and a list of infections were provided as examples. Sexual risk factor questions followed the format used in the "Sexual Decision Making" survey (Masaro, Dahinten, Johnson, Ogilvie, & Patrick, 2008).

In addition to sexual risk factors, the participants were also asked about the reasons they were dating. This question was asked to describe the sample and to determine if the reason for dating was a factor influencing sexual risk. One closed ended question gave the participants the option to choose whether they were dating to develop a short-term relationship, long-term relationship, "friends with benefits" relationship, or to have sex only.

**Meeting modality**

The single item to measure meeting modality was developed by the investigators to determine how women initially met their dating partner. One item asked the participants how they initially met the
dating partner with whom they most recently had sex; the response options were: met via CMC or
met in a FTF setting. The participants also were asked a categorical "yes" or "no" question about
whether they were still dating or "seeing" that partner.

**Time spent communicating with partners**

The items assessing the time spent communicating with partners were developed to ascertain
the modes of communication the women used to communicate with their partners, and to ascertain
how many hours per week they spent conversing with a partner using those modes of communication.
The participants were first asked to indicate the various methods they used to communicate before they
had sex with their partner. They were then asked to provide an estimate of the average number of
hours spent communicating per week using that method. Two variables were then created, one for the
total number of hours spent in online communication per week, and the other for the total number of
hours spent in FTF communication per week.

**Total number of hours spent in online communication per week**

The Total Number of Hours Spent in Online Communication per Week was constructed by adding
the total number of hours spent per week constructing and reading emails and the time spent in “chats”
when conversing with the partner.

**Total number of hours spent in face-to-face communication per week**

The Total Number of Hours in FTF Communication per Week was measured from one item that
asked the participants the total number of hours they had spent conversing with their partners in a FTF
setting.

**Sexual pressure**

Sexual pressure was measured with Jones and Gulick’s (2009), *Sexual Pressure Scale for
Women—Revised* (SPSW-R). The SPSW-R consists of an 18-item four-factor structure that Jones and
Gulick deemed to be congruent with their conceptual definition of sexual pressure, which emphasized gender role expectations. The factors were labelled: Show Trust (5 indicators), Men Expect Sex (5 indicators), Women’s Sex Role (5 indicators), and Sexual Coercion (3 indicators). These factors were designed to measure the following: (a) Show Trust - women's expectation to engage in unprotected sex as a way of communicating trust and relationship closeness; (b) Men Expect Sex - the expectation that a male partner's relationship priorities are to be with a women for her body and for sexual purposes; (c) Women’s Role - a women's expectation that it is her responsibility to satisfy her partner and that sex will provide evidence that she is the best partner for him; and (d) Sexual Coercion - incurring threats, choking, hitting, kicking, or pulling of hair by a man to obtain sex when it is not desired by the woman. Jones and Gulick reported satisfactory measurement model fit as follows: Root Mean Square Error of Approximation (RMSEA) = .05 and Goodness of Fit Index (GFI) = .90. A Cronbach's alpha of .88 was reported. In addition, Jones (2009) reported that convergent and discriminant validity was established with correlations between the SPSW-R and other measures (e.g., sexual victimization and sexual relationship power) being as predicted.

In the current study, the participants were asked to think about the first few times that they had had sex with their most recent sexual partner when reading the 18 items of the SPSW-R. For each statement, the participants indicated how much they agreed or disagreed with each statement. The responses were measured on a six-point scale ranging from one (completely disagree) to six (completely agree). Examples of the item statements for each of the factors were: Show Trust—"I did not ask my partner to use a condom because he might have thought I did not trust him." Men Expect Sex—"At times my partner made me feel like I owed him something and should have had sex with him." Women’s Sex Role—"A woman needs to please her man sexually to hold onto him." Sexual Coercion—"My partner has yelled or cursed at me after I told him I would not have sex with him." Each of the four factors consisted of the following number of indicators: Show Trust (5 indicators), Men Expect Sex (5 indicators), Women’s
Sex Role (5 indicators), and Sexual Coercion (3 indicators). Indicator scores for each factor were summed and averaged to create four factor-specific subscale scores. Higher subscale scores represented stronger endorsement of the construct.

Sexual motivations

The participants’ sexual motivations were measured with Cooper et al.’s (1998), Sexual Motives Scale (SMS). The scale, with six subscales (29 items), was designed to measure the extent to which people are motivated to have sex for psychological reasons, including: (a) Enhancement Motives (EM) - to enhance physical or emotional pleasure; (b) Intimacy Motives (IM) - to achieve intimacy with a partner; (c) Coping Motives (CM) - to cope with negative emotions; (d) Self-Affirmation Motives (SAM) - to affirm or bolster one's sense of self; (e) Partner Approval Motives (PAM) - to appease or please one's partner; and (f) Peer Pressure Motives (PPM) - to avoid social censure or to gain another's approval.

Each of these subscales consists of five items, except the PPM, which contains four items. The participants were prompted to think about the last time that they had had sex with their partner, and then to read a statement with the stem: "Thinking about the last time you had sex with your partner, to what extent did you have sex...?" They were then asked to complete the question with the 29 items. Examples of the items for each subscale included: IM—"To become more intimate with your partner," EM—"Just for the thrill of it," CM—"Because it helps you feel better when you’re lonely," SAM—"To prove to yourself that your partner thinks you’re attractive," PAM—"Out of fear that your partner won't love you anymore if you don’t, and "PPM—"Because all your friends are having sex." The response options ranged from one (not at all) to five (a great deal).

Cooper et al. (1998) conducted a confirmatory factor analysis (CFA) of the SMS with data obtained from a large heterogeneous community sample of adolescents and young adults (N = 1,666). Their results indicated that the data fit the six-factor model well (i.e., Normed Fit Index (NFI) = .91, Comparative Fit Index (CFI) = .92, the standardized root mean square residual (SRMR) = .04, although $\chi^2$
was significant at \( p < .001 \) (likely because of the large sample). They also evaluated measurement invariance to determine whether the obtained factor structure was robust across gender, race, and age and found that configural invariance was demonstrated in all subgroups. Evidence of convergent and discriminant validity for the sexual motives subscales was also reported. All six factors were used in this study. Responses were measured on a five-point scale ranging from one (not at all) to five (a great deal). Indicator scores for each factor were summed and averaged to create six factor-specific subscale scores. Higher scores represent a greater motivation to engage in sex with a partner for the reason specified.

**Sexual self-disclosure**

Sexual self-disclosure was measured using a modified version of Snell, Belk, Papini, and Clark's (1989) *Sexual Self-Disclosure Scale* (SSDS). The original SSDS was a 72-item scale consisting of 24 subscales, designed to measure a person’s willingness to discuss certain sexual topics with an intimate partner. The SSDS assessed the extent to which people were willing to discuss such topics as sexual preferences, sensations, fantasies, and behaviours. The reported reliability for the SSDS was as follows: Cronbach's alphas for the combined group (men and women) ranged from .59 to .91 (mean = .81); for men and women considered separately they ranged from .60 to .89 (mean = .81) and .52 to .92 (mean = .80), respectively. The researchers did not report Cronbach's alphas for the individual subscales.

Five SSDS subscales were used in this study: sexual behaviours, sexual fantasies, sexual sensations, sexual preferences, and the meaning of sex. Each subscale consisted of three items for a total of 15 items overall. The participants were asked to think about their most recent sexual partner and then to indicate the extent to which they discussed with their partner the topics listed in each item statement before they had sex with the partner. Examples of the SSDS item statements for each subscale are as follows: Sexual Behaviours—"the types of sexual behaviours I have engaged in," Sexual Sensations—"the kinds of touching that sexually arouse me," Sexual Fantasies—"my private sexual fantasies," Sexual Preferences—"what I would desire in a sexual encounter," The Meaning of Sex—"what
sex in an intimate relationship means." A seven-point Likert scale was used with responses ranging from one (not at all) to seven (a great deal). The scores for each scale were summed and averaged. Higher scores represent a greater willingness to disclose personal sexual information to a partner.

**Safer sex communication**

Because most traditional measures of communication about safer sex specifically target condom use, and do not usually include communication about STIs/HIV in general or other types of sexual behaviour, a new measure of communication about safer sex was developed to capture a broad spectrum of discussion about STIs/HIV and sexual behaviour. For example, because STI and HIV testing is one of the most definitive methods (when considering window or incubation periods) for determining the risks for STI/HIV, questions pertaining to testing were incorporated into the measure. The *Safer Sex Communication Scale* consisted of 10 questions that related to a general discussion about STIs/HIV and sexual history (e.g., condom use and STI/HIV testing practices). One question asked about pregnancy as an indication of one’s ability to discuss issues relating to another possibly unwanted outcome of a sexual encounter. Before answering these questions, the participants were asked to think about the dating partner they most recently had had sex with, and then were asked to read each question and indicate the extent to which they discussed the topics with their partner before they had had sex. Examples of the item topics are as follows: (a) how to prevent pregnancy, (b) the use of condoms, (c) how to use condoms, (d) STIs or HIV/AIDS in general, (e) how to prevent STIs, (f) how to prevent acquiring HIV/AIDS, (g) the partner’s sexual history, (h) the partner’s history of STIs, (i) whether the partner had been tested for STIs or HIV, (j) the date of the partner’s last STI or HIV test, and (k) if tested, the length of time in days that has elapsed since the test(s) was(were) done. The response choices ranged from one (not at all) to seven (a great deal). Exploratory factor analysis (EFA) indicated that there were two factors, which were labelled *STI/HIV General Discussion* and *Sexual History*. The scores were summed and averaged
for each subscale. Higher scores represented a greater willingness to discuss STIs/HIV in general and a greater willingness to discuss one's sexual history with a partner.

**Orgasm**

For experiences related to orgasm, we used the McIntyre-Smith and Fisher’s (2011) *Female Orgasm Scale* (FOS), which consisted of two subscales, one measuring the *Frequency of Orgasm* during different sexual activities (4 items) and the other measuring *Satisfaction with Orgasm* (2 items). The *Frequency of Orgasm* items assessed the frequency during: (a) intercourse with direct clitoral stimulation, (b) hand or manual stimulation of the clitoris or genitals by a partner, (c) self-stimulation of the clitoris or genitals in the presence of a partner, and (d) oral stimulation of the clitoris or genitals by a partner. The participants were asked to indicate the relative frequency that orgasm occurred during sexual activity using an 11-point scale that ranged from 0% to 100% (increasing by increments of 10%). They were provided with a “does not apply to me” option if they did not partake in a specific sexual activity. The *Satisfaction with Orgasm* scale was used to assess the participants’ satisfaction with the number and quality of orgasms they experienced during sexual activity with their partner. They were offered a seven-point scale that ranged from one = “very unsatisfied” to seven = “very satisfied” to indicate how satisfied they were. Higher scores on the *Frequency of Orgasm* scale represented a higher frequency of female orgasm during various partnered sexual activities, while higher scores on the *Satisfaction with Orgasm* scale represented greater satisfaction with their orgasms, overall.

McIntyre-Smith and Fisher (2011) reported Cronbach’s alphas ranging from .84 to .86 (from three studies) for the total overall FOS (including both subscales). For the *Frequency of Orgasm* scale and the *Satisfaction with Orgasm* scale, they reported Cronbach’s alphas ranging from .81 to .82 and .72 to .90, respectively. They also reported a four-week test-retest reliability of $r = .82$ for the total scale, and a range of .62 to .78 for the subscales. They provided evidence of convergent and discriminant validity for both subscales.
Importance of and pressure to achieve orgasm

Twelve items from the unpublished Coital Orgasm Questionnaire (COQ) developed by Salisbury (Salisbury, 2010) were used to measure how important it was for the participants, and how important they perceived it to be for their partners, that they achieve orgasm during sexual intercourse. Items from this questionnaire also were used to measure the perceived pressure felt by both parties for the woman to achieve orgasm during sexual intercourse. All of the items were measured on a seven-point Likert-type scale that ranged from one = "strongly disagree" to seven = "strongly agree." No prior EFA or confirmatory factor analysis (CFA) had been conducted on the COQ. Personal communication with the author resulted in items being grouped into theoretical constructs that were deemed to be theoretically coherent and conceptually similar. These constructs were labelled: Importance of My Orgasm to Me (3 indicators), Importance of My Orgasm to My Partner (3 indicators), and Pressure to Achieve Orgasm (2 indicators). The grouped items were summed and then averaged to create a subscale score for each construct. Higher scores represented more agreement with the constructs. The grouped items were as follows:

Importance of My Orgasm to Me: (a) The occurrence of my orgasm is important to me, (b) Orgasm is my goal in having sexual intercourse, and (c) I expect to have an orgasm during sexual intercourse.

Importance of My Orgasm to My Partner: (a) The occurrence of my orgasm is important to my partner, (b) My orgasm is my partner's goal in having sexual intercourse, and (c) My partner expects me to have an orgasm during sexual intercourse.

Pressure to Achieve Orgasm: (a) I feel pressure to have an orgasm during sexual intercourse and (b) My partner feels pressure to make me orgasm during sexual intercourse.
The Measurement of the Outcome Variables

Sexual risk

The outcome of interest was sexual risk, which refers to those sexual behaviours or sexual activities that are generally accepted as the riskiest or have the highest likelihood of transmitting HIV pathogens. We focused on HIV transmission, rather than on bacterial or other viral STIs, because HIV is not curable with antibiotics and is considered to be life-threatening. The heterosexual behaviours deemed to be the riskiest in terms of HIV transmission, in descending order, are as follows: unprotected anal, unprotected vaginal, and unprotected oral (giving and receiving) intercourse. A modified version of an overall sexual risk indicator developed by Rothenberg, Baldwin, Trotter, and Muth (2001) was used to assess sexual risk. Rothenberg et al. ordered various behavioural acts according to commonly held perceptions of their level of risk. For example, they considered receptive or insertive anal intercourse to be the most risky activity for HIV transmission because it confers the highest probability of transmission from a single act, followed by vaginal and then oral intercourse. Using this hierarchy, they created a four digit binary number (0000 to 1111) with digits marked as a 1 if they determined risky behaviour to be present (e.g., unprotected anal intercourse) and a 0 if these behaviours were absent. The first digit in the sequence of four was deemed to be the most significant digit and was weighted the highest at $2^3$. The next significant digit was weighted at $2^2$, then $2^1$ and the least significant digit at $2^0$. The total score included all the designated risk behaviours, or digits marked with the number 1. To calculate a risk score, the binary numbers were translated to a decimal format using the weighting assigned to each digit. The scores were then summed for an overall total risk score ranging from 0 to 15. Higher scores represented a higher level of risk for HIV transmission. For example, if a participant engaged in unprotected anal and vaginal intercourse, a 1 would be assigned to the first and second digits in the sequence. The weightings for these digits were $2^3$ and $2^2$, respectively, which resulted in a total score of 12: calculated as $(2^3 = 8) + (2^2 = 4) + (0) + (0) = 12.$
Slight modifications to the risk categories were made in that unprotected vaginal and oral sex were considered to convey different risks for HIV transmission. For example, unprotected oral intercourse is generally considered to pose a much lower risk of transmission of HIV compared with unprotected vaginal sex (Susser, Desvarieux, & Wittkowski, 1997; Varghese et al., 2002). Furthermore, in this study, a category was added for unprotected (skin to skin) genital to genital contact or rubbing. This sexual behaviour is considered to pose a relatively low risk of HIV transmission. The categories of sexual risk and their weightings from highest to lowest risk of transmission were as follows: (a) unprotected anal sex = $2^3 = 8$; (b) unprotected vaginal sex = $2^2 = 4$; (c) unprotected oral sex = $2^1 = 2$; and (d) genital to genital rubbing = $2^0 = 1$.

**Ever faked orgasm**

The participants were asked to agree or disagree with the statement, "I have (at one time or several times) faked an orgasm during sexual intercourse." The item was measured using a seven-point Likert-type scale with anchored response options ranging from one = strongly disagree to seven = strongly agree to allow for variations in the frequency of faking as well as varying degrees of faking. For example, a participant may have responded “slightly agree” if they had faked orgasm once or twice in their lifetime (e.g., by making certain sounds) or if they had infrequently responded affirmatively to the question, "Did you have an orgasm?" when they did not. In comparison, someone may have selected “strongly agree” because they frequently faked an orgasm, or frequently responded affirmatively to questions about whether they had experienced an orgasm when they had not. The response option coded as four was categorized as a neutral response because the response option anchor stated neither agree nor disagree. This variable was then dichotomized as agree or disagree with responses of five through seven recoded as one = agree, had faked an orgasm, and responses one through three recoded as zero = disagree, had not faked an orgasm. Neutral responses (i.e., 4) were coded as missing and not included in the analysis.
Pilot Testing

After receiving approval from the ethics review board, and prior to data collection, the online version of the study instrument was pilot tested to evaluate the feasibility and appropriateness of the study questions, and to test the operational aspects of the study website. Feedback was solicited from pilot test participants about whether the study information (e.g., letter of introduction and purpose) and survey questions were clear, readable, and easily understood. The pilot test participants included colleagues and experts working in the area of STIs and HIV, as well as women who were dating and 25 years of age or older. To solicit feedback from the online pilot test participants, a data field was added to the end of the questionnaire to capture comments and suggestions. Once the pilot testing was complete, the survey was modified based on the feedback obtained. The 25 pilot test participants ranged in age from 25 to 60 years. Survey completion times ranged from 25 to 45 minutes. Overall the pilot participants reported that the survey questions were easy to read and understandable. There were some suggestions regarding changes to the layout and formatting so that the questions were easier to read. In addition, there were a few minor edits suggested in terms of grammatical corrections and typographical errors. All of the pilot participants reported that there was a logical flow to the questions. The graphical images on the study website and e-cards were positively received. Refinements to the study questions and website were made based on the feedback received.

Data Analysis

Structural equation modelling (SEM) was the proposed statistical method to examine the hypothesized sexual risk models. A two-step approach was originally planned; step one was designed to test the hypothesized structure of the measurement models and step two would test the structural model to examine the relationships among the latent, observed, and outcome variables specified in the model. The analysis of the measurement models was conducted as planned. Several problems were encountered in the analysis of the structural models. In particular, the models did not converge and
components of the data analysis output were not interpretable. In recognizing that we had modelled single indicators for each latent concept (the subscale scores) we acknowledged that little was gained by applying a latent variable modelling approach. We consequently revised the data analysis plan and conducted regression analyses to examine the associations between the variables of interest and the outcomes (sexual risk and ever faking an orgasm). The sexual risk variable was not normally distributed and was recoded as an ordinal variable; multinomial regression analyses were conducted. The variable related to faking an orgasm was binary in nature and thus logistic regression analysis was applied.

**Data preparation**

Both descriptive and inferential statistics were used to analyze the data; the underlying basic assumptions of each statistical test were first assessed. Several variables were measured on ordinal scales, and their frequencies and distributions were examined to provide a general idea of the shape of their distribution. Multivariate normality was assessed following the steps outlined by Tabachnick and Fidell (2007).

The Statistical Package for the Social Sciences (SPSS) version 20.0 was used for cleaning the data, calculating the descriptive statistics, and completing the multinomial and logistic regression analyses. Frequencies and percentages were calculated for the demographic and other study variables measured categorically (e.g., education and income) and means, ranges, and standard deviations were calculated for the variables measured on a ratio scale (e.g., age and number of sexual partners). The EFAs and CFAs were conducted with Mplus version 7.0.

**Examination of missing data**

The presence of missing data and the patterns of “missing-ness” were assessed for all of the study variables. Because the participants were required to answer each set of questions on each screen of the online questionnaire before they could advance to the next set of questions, the amount of
missing data was minimal. The largest percentage of missing data was contained in the demographic variables. Of these, reported income had the largest amount missing with 5.7% of the participants not completing the item. This was followed by 3.9% of the participants who did not provide their marital status, and 3.4% who did not complete the ethnicity/race item. In terms of the main study variables, sexual self-disclosure had one case of missing data on each subscale,\(^{11}\) whereas the subscales for the sexual motivations and sexual pressure had no missing data. The variables, meeting modality and history of an STI had 12 missing cases each, and education had 10 missing cases. The total percentage of missing values was less than 5%, which is an acceptable amount of missing data; no multiple imputation was needed (Tabachnick & Fidell, 2007). Little's (1988) Missing Completely at Random test results indicated that the information was missing completely at random. Four missing data patterns were noted. However, there were no jointly missing data patterns. This means that the pattern of missing values did not depend on the data values.

**Confirmatory factor analysis**

CFAs were carried out to confirm the factor structure identified in previous research for both the Sexual Motivations and Sexual Pressure measures. A decision tree was used to analyze and validate the factor structure of each measure (see Appendix B).

**Method of estimation**

All of the measurement models were identified (positive degrees of freedom). Because the variables contained in the measurement models were on the ordinal scale (and consequently considered non-normal), weighted least squares estimation, mean and variance adjusted (WLSMV) was used.

\(^{11}\) The participants could not advance to questions without first answering their current question. They were given a “refuse to answer” option. The participant with the missing responses did not answer any of the questions in this section.
**Model fit**

An acceptable model fit was defined by the following criteria: RMSEA values < .05 indicated good fit, between .05 and .08 indicated reasonable errors of approximation, larger than .08 and less than .10 indicated mediocre fit, and > .10 indicated poor fit (Brown, 2006; Hu & Bentler, 1999a; MacCallum, Browne, & Sugawara, 1996). Satisfactory CFI and TLI values were those ≥ .95. Factor loadings ≥ .40 were considered salient (Brown, 2006). Factor scores for the CFAs were calculated as the developers of the specific measures advised (Cooper et al., 1998; Jones & Gulick, 2009). Unstandardized residual correlations were examined to determine whether there were localized areas of strain in the solutions. Based on the magnitude of misfit identified, consideration was given to either conducting separate CFAs for each subscale in the measure, or to conduct an EFA. If the model fit, subscale scores were calculated for each factor identified.

**Evaluating measurement validity**

**Sexual motivations**

The bivariate relationships among the Sexual Motivations subscale indicators were strong; the range of polychoric correlation coefficients within each factor were: Intimacy Motives (.72–.90); Enhancement Motives (.62–.92); Self-Affirmation Motives (.74–.86), Coping Motives (.76–.90), Peer Pressure Motives (.87–.91), and Partner Approval Motives (.88–.93). The subscale-specific indicators had tolerance values of < .10 and VIF values of < 10.0 suggesting that multicollinearity was not a problem. The overall Goodness of Fit indicators suggested that the six-factor model fit the data moderately well ($\chi^2_{(362)} = 3072.93 \ p < .001$; RMSEA = .077 (90% CI = .074, .079); CFI = .98; and TLI = .98). All of the items had salient factor loadings (the range was .60–.95) (see Table 3.5). All of the factor loadings were statistically significant; the magnitude of the standard errors for each item was acceptable. The percentages of variance explained in the items by the latent factors were: Intimacy

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12 Only unstandardized residuals are available in Mplus when the WLSMV estimator is used.
Motives (70–92%); Enhancement Motives (60–90%); Self-Affirmation Motives (71–86%); Coping Motives (80–91%); Peer Pressure Motives (88–95%); and Partner Approval Motives (89–90%). The factor loading estimates revealed that the majority of the indicators were strongly related to their respective latent factors.

The unstandardized residuals for this model were close to zero, as expected for a moderately well-fitting model. Thus, for this measure, the factor-specific items were regarded as reasonable measures of the six factors comprising the Sexual Motivations measure, and the model was deemed to fit. Subscale scores were calculated for each of the factors by summing and averaging the item scores. Ordinal Cronbach’s alpha for all of the subscales was indicative of internal consistency: Intimacy Motives = .96, Enhancement Motives = .94, Self-Affirmation Motives = .95, Coping Motives = .97, Peer Pressure Motives = .98, and Partner Approval Motives = .97. See Table 2.1 for the CFA results for the Sexual Motivations measure.
Table 2.1 Results of the Confirmatory Factor Analysis of the Sexual Motivations Measure

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Item</th>
<th>β</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“To what extent did you have sex…”</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Six-factor model</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intimacy Motives</strong></td>
<td>To become more intimate with your partner?</td>
<td>0.84</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>To express love for your partner?</td>
<td>0.85</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>To make an emotional connection with your partner?</td>
<td>0.95</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>To become closer with your partner?</td>
<td>0.96</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>To feel emotionally close to your partner?</td>
<td>0.94</td>
<td>0.88</td>
</tr>
<tr>
<td><strong>Enhancement Motives</strong></td>
<td>Because you felt horny?</td>
<td>0.83</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td>Because it felt good?</td>
<td>0.84</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>Just for the fun of it?</td>
<td>0.95</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Just for the thrill of it?</td>
<td>0.95</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>To satisfy your sexual needs?</td>
<td>0.78</td>
<td>0.61</td>
</tr>
<tr>
<td><strong>Self-Affirmation Motives</strong></td>
<td>To prove to yourself that your partner thinks you’re attractive?</td>
<td>0.84</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>Because it made you feel like you’re a more interesting person?</td>
<td>0.91</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>Because it made you feel more self-confident?</td>
<td>0.89</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>To reassure yourself that you are sexually desirable?</td>
<td>0.91</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td>To help you feel better about yourself?</td>
<td>0.93</td>
<td>0.86</td>
</tr>
<tr>
<td><strong>Coping Motives</strong></td>
<td>To cope with upset feelings?</td>
<td>0.93</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>To help you deal with disappointment in your life?</td>
<td>0.94</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>Because it helped you feel better when you were lonely?</td>
<td>0.90</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>Because it helped you feel better when you were feeling low?</td>
<td>0.95</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>To cheer yourself up?</td>
<td>0.90</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Peer Pressure Motives</strong></td>
<td>Because you worried that people would talk about you if you didn’t have sex?</td>
<td>0.94</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>Because people would think less of you if you didn’t?</td>
<td>0.96</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>Because others would kid you if you didn’t?</td>
<td>0.97</td>
<td>0.95</td>
</tr>
<tr>
<td></td>
<td>Just because all your friends were having sex?</td>
<td>0.94</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>So that others wouldn’t put you down about not having sex?</td>
<td>0.96</td>
<td>0.92</td>
</tr>
<tr>
<td><strong>Partner Approval Motives</strong></td>
<td>Out of fear that your partner wouldn’t love you anymore if you didn’t?</td>
<td>0.95</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Because you didn’t want your partner to be angry with you?</td>
<td>0.94</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>Because you worried that your partner wouldn’t want to be with you?</td>
<td>0.95</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Because you worried that your partner wouldn’t want to be with you if you didn’t?</td>
<td>0.95</td>
<td>0.90</td>
</tr>
</tbody>
</table>

*Note. N = 1,266. All parameter estimates were statistically significant, $p < .001.*
Sexual pressure

Bivariate analysis of the Sexual Pressure scale items revealed some variability in the magnitude of the correlations. The subscale-specific item correlations ranged as follows: Show Trust = .75 to .92; Men Expect Sex = .37 to .84; Women’s Sex Role = .58 to .72; and Sexual Coercion = .88 to .92. The tolerance and variance inflation factor (VIF) statistics suggested that there was no multicollinearity of concern (i.e., tolerance values were < .10 and VIF values were < 10.0).

The overall goodness of fit indices from the CFA suggested that the four-factor model fit the data moderately well ($\chi^2 = 50,748, p < .001$; RMSEA = .08 (90% CI = .077, .086); CFI = .98; and TLI = .98) (see Table 2.2 for items and factor loadings). The item “My partner made me feel like I should try new ways to have sex” had a squared completely standardized factor loading of .23. This result was not consistent with evidence of the measurement model, which suggested that the item was a reliable indicator of Men Expect Sex. All of the other factor loadings were salient and statistically significant (ranged from .52–.92). The magnitude of the standard errors for each item was acceptable.

The unstandardized residual covariances for this model were acceptable. Given that the fit statistics and parameter estimates were indicative of an acceptable model fit, it was concluded that the data fit the model relatively well. Subscale scores were calculated for each of the four factors by summing and then averaging the factor-specific item scores. See Table 2.2 for the CFA results of the Sexual Pressure measure.
<table>
<thead>
<tr>
<th>Subscale</th>
<th>Item</th>
<th>$\beta$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Show Trust</strong></td>
<td>I did not ask my partner to use a condom because he may have thought I did not trust him</td>
<td>0.87</td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td>After we'd had sex without a condom, I couldn't start asking my partner to use a condom, even if I thought he'd been with someone else</td>
<td>0.83</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td>I was afraid to ask my partner to use a condom because he might have said NO</td>
<td>0.93</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>I did not ask my partner to use a condom because he might have said NO</td>
<td>0.96</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>I did not ask my partner to use a condom because he might have thought I had sex with someone else</td>
<td>0.95</td>
<td>0.91</td>
</tr>
<tr>
<td><strong>Men Expect Sex</strong></td>
<td>Sometimes my partner made me feel like I owed him something and that I should have sex with him</td>
<td>0.89</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>There were times I felt my partner would leave me if I did not have sex with him</td>
<td>0.92</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>There were times my partner made me feel he would cheat if he got tired of having sex with me</td>
<td>0.90</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>Sometimes I had sex with my partner because I was afraid of losing the things he did for me</td>
<td>0.90</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>My partner made me feel like I should try new ways to have sex (i.e., try new positions, use toys, watch/look at porn, or have sex in a threesome)</td>
<td>0.48</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>Women's Sex Role</strong></td>
<td>It's a woman's responsibility to satisfy a man sexually</td>
<td>0.72</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>A woman needs to please a man sexually to hold onto him</td>
<td>0.76</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>If my partner wants sex, it is my responsibility to have sex with him</td>
<td>0.84</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>Having sex with my partner will show him that I am the best woman for him</td>
<td>0.84</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>I felt I should have sex with my partner because there are plenty of women who are willing to have sex with him</td>
<td>0.92</td>
<td>0.85</td>
</tr>
<tr>
<td><strong>Sexual Coercion</strong></td>
<td>My partner has physically hurt me (for example, slapped, hit, or pushed me) after I've told him I would not have sex with him</td>
<td>0.96</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>My partner has threatened to hurt me after I've told him I would not have sex with him</td>
<td>0.96</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>My partner has yelled or cursed at me after I've told him I would not have sex with him</td>
<td>0.92</td>
<td>0.84</td>
</tr>
</tbody>
</table>

Note. $N = 1,266$. All parameter estimates were statistically significant, $p < .001$. 
Exploratory factor analysis

EFA, rather than CFA, was used to determine the structure of the Safer Sex Communication measure, which was newly developed for this study. An EFA was also conducted for the Sexual Self-Disclosure measure. Although the Sexual Self-Disclosure measure had been used in previous research, no psychometric properties other than a Cronbach’s alpha had been reported. To determine the number of factors to be retained (i.e., the structure), a decision tree was used (see Appendix C).

Model evaluation

A principal components analysis (PCA) was conducted as a first step to examine the number of factors/components to be extracted. The eigenvalue greater than one rule, a scree plot, and factor loadings were used to identify the number of factors. The factor loadings were examined to determine whether the factor loadings supported the factors that were extracted, and a parallel analysis (PA) was also conducted. This was followed by an examination of the wording of each item to determine the theoretical fit of the indicators within each factor. A parallel analysis (PA) was conducted to assist in determining the number of factors to be extracted. Implicitly and explicitly hypothesized theory identified in prior studies was taken into consideration. The final step involved conducting the EFA with consideration given to the results of the PCA, PA, and scree plot.

Method of estimation

Because the items contained in both the Safer Sex Communication and Sexual Self-Disclosure were measured on ordinal scales (and consequently considered non-normal), maximum likelihood with robust standard errors (RML) estimation was used with oblique rotation (GEOMIN).

Model fit for the exploratory factor analyses

Four approaches were used to evaluate the EFA model fit. The first approach involved an examination of the goodness of fit indices. Acceptable model fit was defined by the following criteria as suggested by Brown (2006), Hu and Bentler (1999b), and MacCallum, Browne, and Sugawara (1996):
RMSEA values < .05 indicated good fit, between .05 and .08 indicated reasonable errors of approximation, larger than .08 but less than .10 indicated mediocre fit, and greater than .10 indicated poor fit. Acceptable CFI and TLI values were greater than or equal to .95.

The second approach involved examining the bivariate correlations and the direction, magnitude, and statistical significance of the standardized parameter estimates. Nonsignificant factor loadings were eliminated from the model. The factor structure was examined for simple structure, the interpretability of the loadings, and theoretical coherence. An overall subscale score was created by summing together the items loading highly on a given factor (Russell, 2003). Factor loadings ≥ 0.40 were considered salient (Brown, 2006). The parameter estimates were examined for direction and magnitude as well as statistical significance.

The third approach involved the examination of the standardized residual correlations, and the fourth approach involved ensuring the interpretability of each factor by considering the meaningfulness of the respective indicators. Once model fit was determined to be satisfactory, the subscale scores were calculated for each factor identified.

**Evaluating measurement validity**

*Safer sex communication*

Examination of the bivariate relationships among the *Safer Sex Communication* items revealed that all 10 items, specified to measure communication about STIs and HIV in general and sexual history, were strongly and positively related with one another. The range of polychoric correlation coefficients ranged from .39 between communication about the use of condoms in general and information regarding a partner’s last testing date, to .58 between communication on how to prevent an STI and how to prevent HIV. Results of the PCA indicated that two factors should be extracted (eigenvalues greater than one) although it was noted that the eigenvalue for the second factor was small (1.05). Comparison of the observed with the randomly generated eigenvalues for the PA suggested that the
retention of one factor was most appropriate, and visualization of the scree plots suggested that there were one and possibly two factors underlying the data. Based on the results of the PCA, PA, and the scree plot, a one-, two-, and three-factor EFA was conducted.

Although the results of the three-factor solution indicated an acceptable model fit with an RMSEA of 0.07 and a CFI and TLI of 1.00 and .99, respectively, this solution was not chosen because the factor loadings were not interpretable, and extracting three factors from 10 items was a concern (Russell, 2003). The results of the two-factor solution revealed that each of the two factors were defined by a subset of items loading with values greater than .70, with the exception of one item that related to communication about STIs and HIV in general. This item cross-loaded substantially on the two factors and was meaningfully related to both. There were six items that loaded on factor one; all reflected general communication about STIs, HIV, and pregnancy. There were three items that loaded on factor two, all of which reflected sexual history. Because the one item that cross-loaded (communication about STIs and HIV in general) was theoretically linked to both factors, this item was included in the calculation of both subscales’ scores. In terms of model fit, the RMSEA value for the two factor solution was .20 with CFI and TLI values of .98 and .97, respectively. Although an RMSEA of .20 is too large to be indicative of a well-fitting model, examination of the residual correlation matrix showed that the areas of strain identified in the one-factor solution were substantially reduced in the two-factor solution. Thus, the two-factor solution was chosen because it had several advantages over the one-factor solution: (a) a smaller RMSEA and larger CFI and TLI, (b) more complexity in that the two-factor model allowed us to tap into the conceptual differences identified, and (c) there were relatively fewer areas of strain in the residual correlation matrix. Thus, the two factors were labelled General STI/HIV Discussion and Sexual History and the subscale scores were calculated by summing and averaging the relevant item scores. The correlation between these two factors was .63. Both subscales had good reliability with a
Cronbach’s alpha of .92 for the General STI/HIV Discussion subscale and .88 for the Sexual History subscale. See Table 2.3 for the two-factor EFA solution.

**Table 2.3 Results of the Exploratory Factor Analysis of the Safer Sex Communication Measure**

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Item</th>
<th>Two-factor model</th>
<th>β</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before I had sex with my partner, we discussed...</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General STI/HIV Discussion</td>
<td>How to prevent pregnancy</td>
<td>0.81</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The use of condoms</td>
<td>0.85</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How to use condoms</td>
<td>0.79</td>
<td>0.63</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STIs or HIV/AIDS in general¹</td>
<td>0.51</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How to prevent sexually transmitted infections</td>
<td>0.84</td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How to prevent HIV/AIDS</td>
<td>0.81</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The sexual activities that are likely to transmit infection</td>
<td>0.70</td>
<td>0.49</td>
<td></td>
</tr>
<tr>
<td>Sexual History</td>
<td>STIs or HIV/AIDS in general¹</td>
<td>0.50</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>My partner’s sexual history (including history of STIs)</td>
<td>0.78</td>
<td>0.61</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Whether my partner had been tested for STIs or HIV</td>
<td>0.98</td>
<td>0.96</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The date of my partner’s last STI or HIV test</td>
<td>0.82</td>
<td>0.67</td>
<td></td>
</tr>
</tbody>
</table>

*Note. N = 1,266. Oblique geomin rotation was used with RML estimation. All parameter estimates were statistically significant, p < .001.¹Cross-loading item.*

**Sexual self-disclosure**

Previous theory indicated that the Sexual Self-Disclosure measure consisted of five subscales (Snell et al., 1989). Because each of the five factors consisted of three indicators, the model was not properly identified (i.e., it was just identified), and thus conducting a CFA was not appropriate. Following the steps outlined above, an EFA was conducted.

The bivariate relationships among the items contained in the Sexual Self-Disclosure measure revealed that all were positively related with one another. The polychoric correlation coefficients ranged in magnitude from .49 between communication about “past sexual experiences” and “sexual episodes that I daydream about” to .93 between “sensations that are sexually exciting to me” and “types of
sexual foreplay that feel arousing to me.” The solution for the PCA revealed that there were three factors with eigenvalues greater than one, although the third factor had an eigenvalue of 1.1. The results of the PA suggested retaining two factors, and visualization of the scree plot indicated that there were two and possibly three factors. The EFA was conducted with consideration given to the results of the PCA, PA, and scree plot.

Although the results of the PCA and PA did not point to a five-factor model, the results of the EFA indicated that a five-factor solution was the best fitting model (see Table 2.9). The fit indices for the five-factor model indicated good fit as follows: RMSEA = .05, CFI = 1.00, and TLI = .98. All of the factor loadings were large (> .57), statistically significant, and interpretable with the exception of the item pertaining to “the sexual positions I have tried,” which cross-loaded significantly on the factors, Sexual Behaviours and Sexual Sensations. This item fit theoretically with both factors. The five-factor solution had three items loading on each of the factors with the exception of the factor Sexual Sensations, which had four items because of the cross-loading item, “the sexual positions I have tried.” All of the residual correlations were near zero, indicating a good fitting model. Compared with the other solutions, the areas of strain were substantially reduced in the five-factor model. No localized areas of strain were noted. All of the factor correlations were statistically significant and ranged from .46 to .89. Thus, the best fitting solution was determined to be the five-factor structure, which most closely resembled the hypothesized structure. Because the item that cross loaded (“the sexual positions I have tried”) was theoretically related to both Sexual Behaviours and Sexual Sensations, it was included in both of these subscale scores. The items on each subscale were summed and the mean was calculated as a subscale score. See Table 2.4 for the EFA results for the Sexual Self-Disclosure measure.
Table 2.4 Results of the Exploratory Factor Analysis of the Sexual Self-Disclosure Measure

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Item</th>
<th>β</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sexual Behaviour</strong></td>
<td>&quot;Before I had sex with my partner, we discussed....&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>My past sexual experiences</td>
<td>0.77</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>The types of sexual behaviour I have engaged in</td>
<td>0.90</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>The sexual positions I have tried</td>
<td>0.46</td>
<td>0.21</td>
</tr>
<tr>
<td><strong>Sexual Sensations</strong></td>
<td>The sexual positions I have tried</td>
<td>0.56</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td>The kinds of touching that sexually arouse me</td>
<td>0.88</td>
<td>0.77</td>
</tr>
<tr>
<td></td>
<td>The sensations that are sexually exciting to me</td>
<td>0.93</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>The types of sexual foreplay that feel arousing to me</td>
<td>0.90</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Sexual Fantasies</strong></td>
<td>My private sexual fantasies</td>
<td>0.84</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>My &quot;juicy&quot; sexual thoughts</td>
<td>0.81</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>The sexual episodes that I daydream about</td>
<td>0.71</td>
<td>0.50</td>
</tr>
<tr>
<td><strong>Sexual Preferences</strong></td>
<td>The sexual preferences that I have</td>
<td>0.67</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>What I would desire in a sexual encounter</td>
<td>0.97</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>The things I enjoy most about sex</td>
<td>0.57</td>
<td>0.32</td>
</tr>
<tr>
<td><strong>Meaning of Sex</strong></td>
<td>What sex in an intimate relationship means to me</td>
<td>0.82</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>What it means to me to have sex with my partner</td>
<td>0.98</td>
<td>0.96</td>
</tr>
<tr>
<td></td>
<td>What I think and feel about having sex with my partner</td>
<td>0.84</td>
<td>0.71</td>
</tr>
</tbody>
</table>

*Note. N = 1,266. Oblique geomin rotation was used with RML estimation. All parameter estimates were statistically significant, $p < .001$. Cross-loading item.*

**Regression analyses**

Multinomial logistic regression analysis was used to test the two theoretical models that examined Sexual Risk as the outcome. Binary logistic regression analysis was used to test the third theoretical model that examined the phenomenon of faking an orgasm as the outcome. Multivariate outliers were assessed with Mahalanobis distance at $p < .001$ as the criterion (Tabachnick & Fidell, 2007). Extreme values were capped at a value equal to 1.5 times the interquartile range and extreme outliers were capped at a value equal to three times the interquartile range. If the variable remained
extremely skewed, with capping, the values were grouped into a categorical variable corresponding to the quartiles.

Model building and the assessment of model fit followed the steps suggested by Hosmer, Lemeshow, and Sturdivant (2013) whereby predictor variables were first chosen based on their bivariate correlations (p values ≤ .25) or if they were deemed to be theoretically relevant. All covariates and factors were entered into the regression model simultaneously. The log-likelihood ratio test (LRT) was used to assess the significance of the relationships between the predictor and outcome variables in the fitted model. It was also used to select the most important predictors, and to compare the intercept only or null model with the model containing the predictors. The difference in the log-likelihood values between these models was used to determine whether the model with the predictors was significantly different from the null model. The statistical significance of the individual regression estimates was assessed with the LRT statistic to determine which predictors could be dropped from the model to create a reduced and more parsimonious model. For both the model and the individual regression estimates, the alpha level for the significance tests was set at .05. The Nagelkerke value (a pseudo $R^2$) was examined to provide an indication of the percentage of variance in the outcome explained by the predictors in the final model (Meyers, Gamst, & Guarino, 2013).

To evaluate the usefulness of the final multinomial logistic model, a classification matrix was examined to determine the accuracy of the model (Bayaga, 2010; Meyers et al., 2013; Schwab, 2007). The models were characterized as being useful if the overall percentage accuracy rate (classification accuracy) was 25% more than the proportional by chance accuracy.

Finally, a t test was used to determine if those in the highest sexual risk group (i.e., the first quartile of respondents who were correctly classified by the model) differed significantly from all other participants on the ratio level predictors of Sexual Risk. A chi-square test was used for the same comparison between the groups for the categorical predictors (i.e., dating for sex only).
Recoded variables

After identifying any multivariate outliers using Mahalanobis distance at $p < .001$, and prior to running the regression analyses, the following predictors were recoded and categorized by quartile cut-offs: total number of hours spent online communicating per week ($1 = 4+$ hours; $2 = 1–3$ hours; $3 = 0$ hours), total number of hours spent in FTF communication per week ($1 = 13+$ hours; $2 = 7–12$ hours; $3 = 3–6$ hours; $4 = 0–2$ hours), age at first sexual intercourse ($1 = 20+$ years, $2 = 18–19$ years, $3 = 17$ years, $4 = 11–16$ years), number of sexual partners in the last year ($1 = 4+$ partners, $2 = 3$ partners, $3 = 2$ partners, $4 = 1$ partner), number of lifetime sexual partners ($1 = 16+$ partners, $2 = 9–15$ partners, $3 = 5–8$ partners, $4 = 1–4$ partners). The outcome variable, Sexual Risk was also recoded: $1 = 7+$, $2 = 4–6$, $3 = 3$, $4 = 0–2$. See Table 2.5 for the recoded variables’ relative frequency distributions for the number of hours per week spent communicating via CMC and FTF, number of lifetime sexual partners, number of sexual partners in the last year, age at first sexual intercourse, and Sexual Risk score.
Table 2.5 Frequency Distribution of the Duration of Computer-Mediated and Face-to-Face Communication, Age at First Sexual Intercourse, Number of Sexual Partners, and Sexual Risk Scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CM communication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4+ hours/week</td>
<td>294</td>
<td>23.2</td>
<td>23.2</td>
</tr>
<tr>
<td>1–3 hours/week</td>
<td>348</td>
<td>27.5</td>
<td>50.7</td>
</tr>
<tr>
<td>0 hours/week</td>
<td>624</td>
<td>49.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>1,266</td>
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</tr>
<tr>
<td><strong>FTF communication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13+ hours/week</td>
<td>278</td>
<td>22.0</td>
<td>22.0</td>
</tr>
<tr>
<td>7–12 hours/week</td>
<td>277</td>
<td>21.9</td>
<td>43.8</td>
</tr>
<tr>
<td>3–6 hours/week</td>
<td>392</td>
<td>31.0</td>
<td>74.8</td>
</tr>
<tr>
<td>0–2 hours/week</td>
<td>319</td>
<td>25.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
<td></td>
</tr>
<tr>
<td><strong>Age at First Sexual Intercourse</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20+ years</td>
<td>265</td>
<td>20.9</td>
<td>20.9</td>
</tr>
<tr>
<td>18–19 years</td>
<td>316</td>
<td>25.0</td>
<td>45.9</td>
</tr>
<tr>
<td>17 years</td>
<td>194</td>
<td>15.3</td>
<td>61.2</td>
</tr>
<tr>
<td>11–16 years</td>
<td>491</td>
<td>38.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
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<td></td>
</tr>
<tr>
<td><strong>Number of Sexual Partners in Lifetime</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16+</td>
<td>309</td>
<td>24.4</td>
<td>24.4</td>
</tr>
<tr>
<td>9–15</td>
<td>298</td>
<td>23.5</td>
<td>47.9</td>
</tr>
<tr>
<td>5–8</td>
<td>332</td>
<td>26.2</td>
<td>74.2</td>
</tr>
<tr>
<td>1–4</td>
<td>327</td>
<td>25.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
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<td></td>
</tr>
<tr>
<td><strong>Number of Sexual Partners in Last Year</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4+</td>
<td>184</td>
<td>14.5</td>
<td>14.5</td>
</tr>
<tr>
<td>3</td>
<td>155</td>
<td>12.2</td>
<td>26.8</td>
</tr>
<tr>
<td>2</td>
<td>323</td>
<td>25.5</td>
<td>52.3</td>
</tr>
<tr>
<td>1</td>
<td>604</td>
<td>47.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
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</tr>
<tr>
<td><strong>Sexual Risk Score</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7+</td>
<td>276</td>
<td>21.8</td>
<td>21.8</td>
</tr>
<tr>
<td>4–6</td>
<td>265</td>
<td>20.9</td>
<td>20.9</td>
</tr>
<tr>
<td>3</td>
<td>138</td>
<td>10.9</td>
<td>10.9</td>
</tr>
<tr>
<td>0–2</td>
<td>587</td>
<td>46.4</td>
<td>46.4</td>
</tr>
<tr>
<td>Total</td>
<td>1,266</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Organization of the Dissertation

This dissertation comprises three main findings chapters, each examining an aspect of sexual well-being. Chapters 3 and 4 examine sexual risk in terms of HIV transmission and Chapter 5 examines sexual pleasure in terms of orgasm. The following chapter (Chapter 3) specifically examines how the time spent communicating per week via CMC and FTF, sexual motivations, and sexual pressure, influence women’s decisions about the type of sexual activities they engage in with a male partner (i.e., Sexual Risk). In Chapter 4, we also examine the time spent communicating per week using CMC and FTF, but unlike Chapter 3, we examine how the information women disclose to a partner about their sexual experiences (e.g., sex positions, likes, and dislikes), and what they discuss in terms of sexual risk and sexual histories, influence their sexual risk or the type of sexual activities they engage in. In Chapter 5, we focus on the phenomenon of faking an orgasm. Because there is much societal emphasis placed on achieving orgasm during a sexual encounter, we examine whether factors related to achieving orgasm (the pressure to achieve orgasm, the importance of achieving orgasm, satisfaction with and frequency of orgasm), influence women to fake an orgasm during a sexual encounter. Each of the findings chapters is structured with an introduction, a review of the methods employed, the results, and a discussion of the findings, their implications, and the limitations of the work. The dissertation concludes with a discussion of the key findings and with recommendations for further research and policy development.
Chapter 3: Adult Women's Sexual Risk: The Influence of Communication, Motivation, and Pressure for Sex

Introduction

Internet use in North America has grown at a phenomenal pace over the last decade (Internet World Stats, 2010; Statistics Canada, 2008b). Many people now consider internet technology to be an integral part of their social life (Ipsos Reid, 2010) with recent figures estimating that two billion people worldwide use the internet (Internet World Stats, 2010). As a result, computer-mediated communication (CMC) has become an extremely popular way to meet and “stay connected” with romantic or sexual partners. Questions about how people evaluate a potential partner’s sexual safety (i.e., likelihood of having a sexually-transmitted infection [STI] or being infected with Human Immunodeficiency Virus [HIV]) have become increasingly important as CMC changes the way people interact and seek romantic and sexual partnerships. To date, only a limited number of studies have examined women’s use of CMC to meet or stay connected with such partners. Although some women use CMC primarily to find a partner for sexual activities (Leiblum, 2001), the majority use CMC to seek romantic relationships that may ultimately lead to sexual activity (Cooper et al., 2003; Ferree, 2003; Rietmeijer et al., 2003). Some researchers have found that women who meet their dating partners via CMC frequently engage in risky sexual behaviour (such as non-condom use) making them more vulnerable to STIs and HIV (McFarlane et al., 2004; Padgett, 2007). For example, McFarlane et al. (2004) found that nearly one half of the women (N = 1,276) in their study, which focussed on those aged 18 years of age and over, who answered an online survey about sex partners found online, reported having unprotected sex with someone they met online. Similar findings were reported by Padgett (2007), who found that 77% (N = 740) of her study participants had engaged in unprotected sex (oral, vaginal, or anal
sex) during their first face-to-face (FTF) encounter with a partner met online. Other studies (Bateson et al., 2012) have compared older women (40 years of age and older) and younger women (18 to 39 years of age) who meet dating partners online, and found that although older women are significantly more likely to discuss STIs and HIV with a new partner, they are significantly less likely than younger women to refuse sex without a condom with these partners.

Some researchers have shown that women's reasons for having sex (e.g., to become more intimate, to please one's partner, or to enhance one's own emotional or physical pleasure) are significant predictors of high-risk sexual behaviour (Cooper et al., 1998; Damani et al., 2009). Other researchers have shown that the levels of intimacy and trust within a relationship are significant predictors of women’s engagement in risky sexual behaviour (Gebhardt et al., 2003; Jadack, Fresia, Rompalo, & Zenilman, 1997). Many heterosexual women engage in risky sexual behaviour with men because they feel pressured to do so, or because they believe that it will secure or maintain a relationship (Clark, Miller, Harrison, Kay, & Moore, 1996; Jones, 2004; Jones, 2006a). These reasons may be the result of traditional sexual scripts, which, for women, have emphasized the primacy of love, trust, intimacy, and romance. Ferree (2003) and Leiblum (2001) asserted that CMC is appealing for women because it may provide an optimal venue for developing trust and intimacy and for finding a “perfect” romantic relationship. However, social pressure to conform to gendered sexual scripts means that heterosexual women may not negotiate safer sexual activity while searching for the ideal romantic relationship (Frith & Kitzinger, 2001; Kalichman et al., 2005). For example, women may feel pressured to acquiesce to their partner and to play a relatively passive role; this may negatively impact their ability to initiate discussions about safer sexual practices (such as the use of condoms). The popularity of CMC to

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13Risky sexual behaviour and high-risk sexual behaviour are used interchangeably. These concepts refer to a lack of protection, such as not using a barrier method to prevent the transmission of HIV or other infections or engaging in only those sexual activities that are lower in risk in terms of transmission.

14Safer sex and safer sexual practices are used synonymously. They refer to sexual activities that are associated with less risk of contracting an STI or HIV when engaging in certain sexual behaviours or practices.
find romantic and sexual partners, especially among 30- to 60- year-old people (Brym & Lenton, 2001), the evidence that women engage in risky sexual behaviour when meeting and communicating with partners through CMC (Padgett, 2007), and the significant increase in HIV infection rates in women of this age (Centers for Disease Control and Prevention, 2009; Public Health Agency of Canada, 2009) are troubling trends. Sexual risk can significantly impact women's sexual well-being. Further inquiry into how heterosexual women's sexual risk, as an aspect of sexual well-being, is influenced by their motivations to engage in sexual activity and by the sexual pressures to which they are exposed, is required.

**Review of the Literature**

**Motivations for sex and pressure to engage in sex**

Maintaining intimacy is often a priority for relationship partners, especially women (Clark et al., 1996; Jones & Oliver, 2007; Tschann, Adler, Millstein, Gurvey, & Ellen, 2002). Several studies have demonstrated that people in search of intimacy in opposite sex relationships, and those wishing to express love through sexual interaction, are more likely to not use condoms compared with people who have sexual relationships for physical reasons alone (Flood, 2003; Gebhardt et al., 2003; Higgins & Hirsch, 2007). Tschann et al. (2002) suggested that if relationship partners are not equally emotionally involved, the partner having less desire for emotional intimacy will have greater control or power within the relationship because the more involved partner will be willing to do more to maintain the relationship. They found that among 228 heterosexual STI-clinic clients, those who desired high levels of emotional intimacy were less likely to be successful in negotiating the use of condoms. Furthermore, young men saw themselves as being more in control of the emotional intimacy they experienced in their relationships than did young women. Other researchers have reported similar findings (Billy et al., 2009). Although there are many factors that intersect to contribute to the maintenance of a relationship, several studies have demonstrated that some women knowingly place themselves at risk of
HIV to maintain an intimate relationship with their partner (Clark et al., 1996; Corbett, Dickson-Gomez, Hilario, & Weeks, 2009; Jones, 2006b; Noar et al., 2006).

Sexual relationships are complex and can involve challenging power dynamics. Research has demonstrated that women can feel pressured to "show" their trust in a partner by engaging in high-risk sexual behaviour. Jones and Oliver (2007) found that many of the heterosexual women they included in their focus groups indicated that they believed that they had to have unprotected sexual intercourse (i.e., without the use of a condom) to demonstrate that they trusted their partner. Similarly, in a qualitative study that examined 50 heterosexual couples' condom use, Corbett et al. (2009) found that the participants engaged in unprotected sex as a way of showing their trust. Having sex without the use of a condom was considered to demonstrate the belief that the partner had been honest about his or her sexual history and his or her STI/HIV status. The participants reported that the lack of condom use was a strategy they employed to establish a serious, as opposed to casual, relationship. Similar results were reported by Hillier et al. (1998) and Rosenthal et al. (1998). For many people, the suggestion that a condom should be used implies mistrust or infidelity or the belief that a partner is already infected or diseased (Corbett et al., 2009; Kirkman, Rosenthal, & Smith, 1998; Woolf & Maisto, 2008). Thus, women who are not willing to display "trust" by engaging in unprotected sex with their male partner may be subject to the negative consequences (e.g., not establishing an intimate, long term relationship).

Adherence to dominant and traditional sexual scripts in which women hold a sexually passive role may result in them acquiescing to a male partner's desire to engage in riskier sexual behaviour, rather than negotiating less risky behaviour, and thus they are at greater risk of contracting an STI or HIV (Bowleg et al., 2004; East, Jackson, O'Brien, & Peters, 2010). Katz and Tirone (2009) examined gender-based pressure to have sexual intercourse in 199 female undergraduate students in heterosexual relationships, and found that more than one third of their participants reported engaging in consensual, yet unwanted, sexual intercourse. They reported that the women who acquiesced to having unwanted
sex tended to endorse strongly feminine gender roles and traditional sexual scripts. They concluded that adherence to feminine gender roles "may lead women to voluntarily submit to unwanted sex to avoid deviating from their prescribed gender role as passive keepers of peace and relational harmony" (p. 353). Similarly, Gallupe, Boyce, and Fergus (2009) found that feeling pressured to have heterosexual sex was significantly related to non-condom use for girls, but not for boys (Grade 9 to 11 students). Girls feeling pressured to have sex were 1.7 times more likely to not have used a condom during their last sexual intercourse compared with those who reported no pressure.

Sexual pressure may manifest itself in various forms, and women may acquiesce to such pressure for various reasons. In a systematic review, Impett and Peplau (2003) identified several ways in which women felt pressured to have sex: (a) not wanting to disappoint a partner, (b) wanting to gain partner approval, (c) wanting to impress their peers, (d) wanting to gain sexual experience, (e) wanting to feel more desirable, (f) wanting to please their partner, and (g) wanting to keep their partner interested.

Prevalent in North American culture is a romantic narrative that exerts much influence on women's sexual behaviour (Gavey & McPhillips, 1999; Gavey et al., 2001). In addition to scripting women as sexually passive, the romantic narrative scripts romance as a necessary precursor to any sexual encounter. People, particularly women, are encouraged to believe that true love requires one to be swept away in passion (Diekman, McDonald, & Gardner, 2000). Thus, heterosexual women's motivations for having sex have been predominately tied to romantic ideals and not to their own physical satisfaction. As a result of their romantic ideals, women may fail to negotiate protection or the type of sexual activities they would like to engage in for fear of rejection, violence, or elimination of the romance (Hoffman et al., 2006; Jones, 2006b; Jones & Oliver, 2007).

Much of the literature related to STI/HIV prevention fails to consider the important roles that love and romance play in women's sexual encounters. Infection prevention messages and the concept of
risk run counter to romantic ideology, although romance is acknowledged to be a significant component of women's sexual experiences (Warr, 2001). Little consideration has been given to the positive aspects of women's sexual functioning, or how having sex for pleasure may influence women's motivations for sex, their sexual behaviour, and their risk-reduction practices. Meston and Buss (2007) found that although women engage in sexual intercourse primarily for emotional reasons, the next most frequently mentioned reason is physical pleasure, followed by insecurity reasons (e.g., worry a partner may leave), and then goal attainment reasons15 (e.g., goals related to social status, revenge, resources, and utilitarian considerations). Meston, Hamilton, and Harte (2009) examined the motivation to have sex in three groups of pre-menopausal women: 18–22 year olds (N = 137), 23–30 year olds (N = 103), and 31–45 year olds (N = 87). Although their findings revealed that the oldest women (31–45 year olds) had a wider range of motives for having sexual intercourse, compared with the younger women, having sex for pleasure, love, and commitment were the primary motives described by a large proportion of the women. Their findings were consistent with those of Meston and Buss (2007). No statistically significant age-related differences were found. However, these findings are inconsistent with stereotypical sexual scripts wherein having sex for pleasure has been thought of as a primary motivator for men, but not for women.

The purpose of this study was to more fully understand how the factors related to new communication technologies (time spent communicating using CMC and FTF methods), sexual motivations, and sexual pressure, influence the type of sexual behaviour heterosexual women engage in, particularly sexual behaviour that places them at risk for HIV transmission. We were specifically interested in whether the ways in which women meet their dating partners (meeting modality - CMC

15 Goal attainment may include the achievement of a particular social status such as being popular or having more sex than one’s friends. Another goal may be attaining resources, including obtaining a job, a promotion, money, drugs, or gifts. Revenge is a goal that may involve wanting to harm another person. For example, a woman might think, “I was mad at my partner so I had sex with someone else” or “I wanted to give someone else an STI.” Utilitarian goals for having sex may include wanting to change the topic of conversation or improving one’s sexual skills.
versus FTF) and the time spent communicating using CMC or FTF methods influence their sexual risk behaviour. Informed by CMC theories (i.e., Social Information Processing Theory and Hyperpersonal Communication Theory), we hypothesized that women who initially meet their partners through CMC, and those who spend more time using CMC methods to communicate with their partners, are more likely to engage in high risk sexual activity compared with women who meet their partners in FTF settings and who spend relatively less time using CMC. We were also interested in examining whether there is a relationship between women’s sexual motivations, their perceived sexual pressure, and their sexual risk. We hypothesized that women who feel pressured to have sex because of adherence to gender role expectations about engaging in sex, and women whose motivations for sex are related to developing trust and intimacy and conforming to traditional gender roles are more likely to engage in higher risk sexual activities that can affect their sexual well-being than are those who did not.

**Methods**

**Study design**

A cross-sectional, correlational survey design was used to collect the data. Data were collected with a self-report questionnaire. The questionnaire was made available online to women over the age of 25 years who lived in the United States.

**Sample**

The population of interest was adult women living in the United States who were dating or recently in a new relationship (formed within the past year) and whose most recent sexual encounter was with a partner of the opposite sex. We were interested in sampling women who had met their partners in one of two ways: in a FTF environment or in an online format using computer-mediated technology (e.g., email, internet dating site, text messaging, online chats, or social networking site). The selection criteria for the sample specified that the women must: (a) be currently dating or in a new
relationship formed within the past year, (b) be 25 years of age or older, (c) have had at least one sexual encounter with the dating partner within the past year, and (d) be living in the United States. Women whose last sexual partner was a woman were excluded; they were considered to be at relatively lower risk for transmission of HIV than were women who had had sex with men.

**Data collection**

The data were collected from an online survey using Amazon Mechanical Turk (AMT). AMT is an online marketplace where tasks, such as surveys, can be distributed and completed by a large diverse population of anonymous individuals (i.e., over 100,000 individuals from over 100 countries) (Buhrmester et al., 2011; Ross et al., 2010). Social scientists have valued the website as an online source that provides researchers with a relatively inexpensive and rapid way of obtaining high-quality data from diverse samples (Buhrmester et al., 2011; Ross et al., 2010).

Eligible participants were invited to start the questionnaire. Ineligible participants were thanked for their interest and not granted entry to the study site. The questionnaire contained 148 questions, which asked participants to report on their dating and sexual experiences in general. The survey took approximately 30 to 40 minutes to complete.

**Measures**

**Sociodemographic characteristics and sexual risk factors**

The sociodemographic characteristics of the participants were assessed with closed-ended questions related to their age, marital status, ethnicity/race, household income, and education level (see Appendix A for the questionnaire). Age was measured on a ratio scale, whereas marital status, ethnicity/race, household income, and education level were measured categorically. The sexual risk factor questions were included for the purpose of describing and assessing the participants' sexual risk; they included: age at first sexual intercourse, number of lifetime sexual partners, number of sexual
partners in the last year, and whether the participant had ever been diagnosed with an STI (history of STI). These factors were included to describe the sample population and because these factors are commonly acknowledged as established sexual risk factors.

The participants were also asked to indicate the reasons they were dating. This question was asked of participants in order to describe the sample and to determine if the reason for dating was a factor influencing sexual risk. One closed ended question gave the participants the option to choose whether they were dating to meet short-term dating partners, long-term dating partners, "friends with benefits" partners, or to have sex only.

Meeting modality and time spent communicating with partners

Meeting modality refers to the environment, either physical or virtual, where people initially meet partners they are interested in dating. The participants were asked how they initially met the dating partner with whom they had most recently had sex. Two response options were provided—meeting via CMC or in a FTF setting. The CMC option included any communications that occurred via CMC. FTF environments included any venue where they might have met their partner (e.g., party, bar, club, work, or social function). Time spent communicating with a partner refers to the amount of time spent conversing with a partner for a specified time period. For those using CMC this means time spent constructing online messages or chats as well as the time spent reading responses from partners. For FTF communicating this means the amount of time spent conversing FTF within a physical environment. The items assessing the time spent communicating with partners were developed by the investigators to determine how many hours per week the participants spent conversing with a partner using these modes of communication. The participants were first asked to indicate the various methods they used to communicate before they had sex with their partner. They were then asked to provide an estimate of the average number of hours spent communicating per week using that method. Two variables were then created, one for Total Number of Hours Spent in Online Communication per Week, and one for the
Total Number of Hours Spent in FTF Communication per Week. For the variable, Total Number of Hours Spent in Online Communications per Week, the number of hours spent constructing emails and chats as well as reading the responses were summed.

**Sexual pressure**

*Sexual Pressure* was measured with Jones and Gulick’s (2009), *Sexual Pressure Scale for Women—Revised* (SPSW-R). According to Jones and Gulick, “Sexual pressure represents a woman’s adherence to gender stereotypical expectations about engaging in sex and concern about adverse consequences ranging from losing the relationship to coercive force or threats by a male partner if these expectations are not met” (p. 71). The measure consists of four factors, each labelled and consisting of the number of indicators as follows: *Show Trust* (5 indicators), *Men Expect Sex* (5 indicators), *Women’s Sex Role* (5 indicators), and *Sex Coercion* (3 indicators). These factors were designed to measure the following: (a) *Show Trust* – a woman’s expectation of engaging in unprotected sex as a way of communicating trust and relationship closeness; (b) *Men Expect Sex* - reflects the expectation that a male partner’s relationship priorities are to be with a woman for her body and for sexual purposes; (c) *Women’s Role* - a woman’s expectation that it is her responsibility to satisfy her partner and that sex will provide evidence that she is the best partner for him; and (d) *Sexual Coercion* – being threatened, choked, hit, kicked, or having one’s hair pulled when sex is not desired by the woman. In the current study, the participants were asked to think about the first few times that they had sex with their most recent sexual partner when reading the 18 items of the SPSW-R. For each statement, the participants indicated how much they agreed or disagreed with each statement. Responses were measured on a six-point scale ranging from one (completely disagree) to six (completely agree). Indicator scores for each factor were summed and averaged to create four factor-specific subscale scores. Higher scores represented higher levels of endorsement of the construct.
Sexual motivations

Sexual motivation refers to people's purposes or reasons for engaging in sexual activity. The participants’ sexual motivations were measured with Cooper et al.’s (1998), Sexual Motives Scale (SMS). The six subscales were designed to measure the extent to which people are motivated to have sex for psychological reasons, including: (a) Enhancement Motives (EM) - to enhance physical or emotional pleasure (5 items); (b) Intimacy Motives (IM) - to achieve intimacy with a partner (5 items); (c) Coping Motives (CM) - to cope with negative emotions (5 items); (d) Self-Affirmation Motives (SAM) - to affirm or bolster one's sense of self (5 items); (e) Partner Approval Motives (PAM) - to appease or please one's partner (5 items); and (f) Peer Approval Motives (PPM) - to avoid social censure or to gain another's approval (4 items).

The participants were prompted to think about the last time that they had had sex with their partner, and then to read a statement with the stem: "Thinking about the last time you had sex with your partner, to what extent did you have sex...?" They were then asked to complete the question with the 29 items. All six subscales were used in this study. Responses were measured on a five-point scale ranging from one (not at all) to five (a great deal). The respective item scores for each factor were summed and averaged to create six factor-specific subscale scores. Higher scores represented higher levels of motivation to have sex for the specified reason.

Sexual risk

A modified version of a Risk Indicator developed by Rothenberg, Baldwin, Trotter, and Muth (2001) was used to assess sexual risk. The participants were asked to indicate, from a list of items, all of the types of sexual behaviour that they had engaged in with their partner, including oral sex (giving or receiving) with or without a condom or dental dam, vaginal sex with or without a condom, anal sex with or without a condom, and genital-to-genital rubbing or contact with or without a condom or some other barrier. In calculating the overall Risk Indicator score, only high-risk sexual behaviour (unprotected) was
scored. The categories of sexual risk and their weightings from highest to lowest risk of transmission were as follows: (a) unprotected anal sex = 8; (b) unprotected vaginal sex = 4; (c) unprotected oral sex = 2; and (d) genital to genital rubbing = 1. For example, a woman who engaged in unprotected anal and vaginal sex but who did not engage in oral sex received a score of 12 (8 + 4 + 0 = 12). Scores could range from a low of 1 to a high of 15. Higher scores represented higher sexual risk. Further details about the Sexual Risk measure can be found in Chapter 2.

**Data analysis**

The Statistical Package for the Social Sciences (SPSS) version 20.0 was used for cleaning the data, calculating descriptive statistics, and completing a multinomial regression analysis. Confirmatory factor analysis (CFA) via Mplus version 7.0 was conducted to evaluate the measurement structure of the Sexual Motivations and Sexual Pressure measures. Weighted least squares estimation, mean and variance adjusted (WLSMV) was used. An acceptable model fit was defined by the following criteria: RMSEA values < .05 indicated good fit, between .05 and .08 indicated reasonable errors of approximation, larger than .08 and less than .10 indicated mediocre fit, and > .10 indicated poor fit (Brown, 2006; Hu & Bentler, 1999a; MacCallum et al., 1996). Satisfactory CFI and TLI values were those ≥ .95. Factor loadings ≥ .40 were considered salient (Brown, 2006).

Multinomial logistic regression analyses were conducted to determine how Meeting Modality, Total Number of Hours Spent in Online Communication per Week, Total Number of Hours Spent in FTF Communication per Week, Sexual Motivations, and Sexual Pressure influenced the women’s Sexual Risk. Model building and the assessment of model fit followed the steps suggested by Hosmer, Lemeshow, and Sturdivant (2013). All of the covariates and factors were entered into the regression model simultaneously. The log-likelihood ratio test (LRT) was used to assess the significance of the relationships between the predictor and outcome variables in the fitted model. For both the model and the individual regression estimates, the alpha level for the significance tests was set at .05. The
Nagelkerke value (a pseudo $R^2$) was examined to indicate the percentage of variance in the outcome explained by the predictors in the final model (Meyers et al., 2013). Using a classification matrix, the final multinomial models were characterized as being useful if the overall percentage accuracy rate of classification was 25% more than the proportional by chance accuracy (Bayaga, 2010; Meyers et al., 2013; Schwab, 2007). Chi-square and t tests were undertaken to determine whether those in the highest sexual risk group (i.e., the first quartile who were correctly classified) differed significantly from all of the other participants.

**Results**

**Demographic characteristics**

The 1,266 respondents ranged in age from 25 to 74 years of age with a mean age of 31.7 (SD = 7.1). Eighty-five percent of the participants were between 25 and 35 years of age. The majority (78.4%) of the participants reported that they were single. Their household income from all sources, in the previous 12 months, ranged from less than $10,000 to more than $100,000 with the median annual income being between $30,000 and $49,000. The majority of the respondents reported being white/Caucasian (77.4%), and their education ranged from Grade 9 or less to an earned doctorate or a degree in medicine, dentistry, veterinary medicine, or chiropractic. At least 460 (36.8%) of the respondents had achieved a baccalaureate or other undergraduate university degree. See Table 3.1 for detailed demographic information.
Table 3.1 Sample Demographics

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th>Mean (SD)</th>
<th>Range</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>31.7 (7.1)</td>
<td>25–74</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>953 (78.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>66 (5.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Separated</td>
<td>39 (3.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common law</td>
<td>25 (2.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>124 (10.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>9 (0.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $10,000</td>
<td>90 (7.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10,000 to $29,999</td>
<td>330 (27.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$30,000 to $49,999</td>
<td>415 (34.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$50,000 to $79,999</td>
<td>246 (20.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$80,000 to $99,999</td>
<td>59 (4.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$100,000 or more</td>
<td>54 (4.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>947 (77.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>115 (9.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>77 (6.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>41 (3.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>43 (3.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 9 or less</td>
<td>1 (0.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some secondary school</td>
<td>14 (1.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduated from secondary school</td>
<td>110 (8.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some trade/technical/business/ vocational school</td>
<td>61 (4.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma–trade/technical/business school</td>
<td>47 (3.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some community college</td>
<td>140 (11.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma from community college</td>
<td>82 (6.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some university</td>
<td>171 (13.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baccalaureate or other undergraduate degree</td>
<td>460 (36.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master’s degree</td>
<td>145 (11.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree in medicine, dentistry, veterinary medicine, chiropractic</td>
<td>7 (0.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earned doctorate (e.g., PhD)</td>
<td>12 (1.0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sexual risk factors and reasons for dating

The average age at first sexual intercourse was 17.7 years of age ($SD = 3.3$) with a range of 11 to 37 years. The average number of lifetime sexual partners was 14.7 ($SD = 21.2$) with a range of 1 to 207 partners reported. The average number of current sexual partners was 1.1 ($SD = 1.0$), with an average of 2.4 ($SD = 3.3$) sexual partners reported within the last year. About one in six (15.3%) of the participants reported having a history of an STI.

The majority of the participants reported meeting their partner (with whom they most recently had had sex) in a FTF setting (69.2%). Slightly more than three quarters (76.8%) of the participants reported that they were continuing to date that partner. The most frequently reported (88.2%) purpose for dating was to meet a long-term partner. A small percentage of the participants (10.0%) reported that they were dating solely for the purpose of having sex, with slightly more (17.0%) reporting dating for the purpose of entering into a “friend with benefits” relationship (see Table 3.2).
Table 3.2 Sexual Risk and Reasons for Dating

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
<th>Range Minimum–Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at first sexual intercourse</td>
<td>17.7 (3.3)</td>
<td>11–37</td>
</tr>
<tr>
<td>Number of sexual partners in last year</td>
<td>2.4 (3.3)</td>
<td>1–40</td>
</tr>
<tr>
<td>Number of current sexual partners</td>
<td>1.1 (1.0)</td>
<td>1–20</td>
</tr>
<tr>
<td>Number of lifetime sexual partners</td>
<td>14.7 (21.2)</td>
<td>1–207</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>History of Sexually Transmitted Infection</td>
<td>191 (15.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for Dating1,2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term relationship</td>
<td>338 (26.7)</td>
</tr>
<tr>
<td>Long-term relationship</td>
<td>1,116 (88.2)</td>
</tr>
<tr>
<td>“Friend with benefits” relationship</td>
<td>221 (17.5)</td>
</tr>
<tr>
<td>Sex Only</td>
<td>127 (10.0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meeting Modality1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Face-to-face communication</td>
<td>868 (69.2)</td>
</tr>
<tr>
<td>Computer-mediated communication</td>
<td>386 (30.8)</td>
</tr>
</tbody>
</table>

1Responses relate to the partner with whom they had most recently had sex.
2Percentages do not total 100 because multiple responses were permitted.

Types of communication

The women in this study reported a variety of ways in which they communicated with their partners. Eighty-seven percent of the sample reported communicating by telephone and in FTF settings, and 83% reported using text messages. Emails, chats, and social networking sites were used less frequently: 40% used email, 31% used chats, and 38% used social networking sites. Webcams16 were used infrequently with only 16% of the participants reporting that they used this method to communicate. The participants spent more time each week meeting with their partners FTF (M = 9.7 hours, SD = 14.1) and talking on the telephone (M = 5.2 hours, SD = 18.6), than they did emailing, chatting online, or using a webcam. See Table 3.3 for the type of communication engaged with their respective sexual partners.

16A webcam is a video camera that inputs to a computer connected to the internet so that images and vocalization can be transmitted to other internet users.
### Table 3.3 Type and Frequency of Communication with Sexual Partner

<table>
<thead>
<tr>
<th>Type of Communication</th>
<th>Number of users (%)</th>
<th>Mean number of hours per week (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td>1,093 (86.5)</td>
<td>5.2 (18.6)</td>
</tr>
<tr>
<td>Face-to-Face</td>
<td>1,092 (86.7)</td>
<td>9.7 (14.1)</td>
</tr>
<tr>
<td>Email</td>
<td>499 (39.7)</td>
<td>1.2 (3.4)</td>
</tr>
<tr>
<td>Chats/Social Network Discussions</td>
<td>375 (30.6)</td>
<td>2.0 (6.2)</td>
</tr>
<tr>
<td>Webcam</td>
<td>199 (15.7)</td>
<td>0.7 (2.5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range of messages sent/received per week</td>
</tr>
<tr>
<td>Text Messages</td>
<td>1,043 (82.8)</td>
<td>0 - 400</td>
</tr>
<tr>
<td>Social Network Messages</td>
<td>481 (38.3)</td>
<td>0 - 200</td>
</tr>
</tbody>
</table>

1. Telephone, webcam, text/social networking messages were not included in the analyses. This information is included here as descriptive information about the modes of communication women were using.
2. Responses relate to partner with whom they had most recently had sex.
3. Participants were not asked to estimate the total time spent sending or receiving messages, they were asked to estimate the number of messages sent and received.

The six Sexual Motivations subscales (see Table 3.4 for subscale details), had mean scores that ranged from a minimum of 1.7 to a maximum of 3.9. The Enhancement Motives subscale followed by the Intimacy Motives subscale were endorsed the strongest (as shown by their means) indicating that participants’ motives to engage in sexual activity with their partner most often involved a desire to achieve intimacy and to enhance physical or emotional pleasure. In relation to scores for the Sexual Pressure subscales, the mean subscale scores ranged from a minimum of 1.4 to a maximum of 2.6. The Women’s Sex Role subscale was the most strongly endorsed subscale indicating that women expected it to be their responsibility to sexually satisfy their partner and that they needed to demonstrate that they were the best partner for him. The Sexual Coercion subscale had the weakest endorsement, indicating
that the majority of the participants were not overtly physically or verbally coerced into having sex with their partner.

**Table 3.4 Descriptive Statistics of the Sexual Motivations and Sexual Pressure Subscales**

<table>
<thead>
<tr>
<th>Predictor Subscale Scores</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motives for Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intimacy Motives</td>
<td>1,266</td>
<td>3.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Enhancement Motives</td>
<td>1,266</td>
<td>3.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Self-Affirmation Motives</td>
<td>1,266</td>
<td>2.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Coping Motives</td>
<td>1,266</td>
<td>2.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Peer Pressure Motives</td>
<td>1,266</td>
<td>1.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Partner Approval Motives</td>
<td>1,266</td>
<td>1.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Sexual Pressure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show Trust</td>
<td>1,266</td>
<td>1.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Men Expect Sex</td>
<td>1,266</td>
<td>2.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Women's Sex Role</td>
<td>1,266</td>
<td>2.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Sexual Coercion</td>
<td>1,266</td>
<td>1.4</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**Sexual risk**

The maximum obtainable score for the *Sexual Risk* index was 15. For this sample, the scores ranged from 0 to 15 with a mean of 3.9 ($SD = 3.5$). Because the distribution was severely skewed ($skew = 14.1$), the variable was recoded based on quartile cut-offs. Of the total sample, 276 participants (22%) were observed to have high sexual risk scores (7 or above) compared with 587 (46%) who were observed to have low sex risk scores (0–2) with the remainder (32%) observed to have moderate risk (see Table 3.5).

**Table 3.5 Frequency Distribution of the Sexual Risk Scores**

<table>
<thead>
<tr>
<th>Sexual Risk Score</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7+</td>
<td>276</td>
<td>21.8</td>
<td>21.8</td>
</tr>
<tr>
<td>4–6</td>
<td>265</td>
<td>20.9</td>
<td>42.7</td>
</tr>
<tr>
<td>3</td>
<td>138</td>
<td>10.9</td>
<td>53.6</td>
</tr>
<tr>
<td>0–2</td>
<td>587</td>
<td>46.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>1,266</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Multinomial logistic regression models

For all of the multinomial logistic analyses, the reference category for the outcome Sexual Risk, was the lowest category of scores (0–2). The model fitting information (see Table 3.9) for the initial model suggested that there was a statistically significant relationship between the outcome Sexual Risk and the set of predictors. Analysis of the full model (Model 1) was conducted first with all 21 predictors entered into the model simultaneously (see Table 3.6).

Table 3.6 Model 1—Sexual Risk Regressed on all Predictors: Model Fit

<table>
<thead>
<tr>
<th>Model</th>
<th>Model Fitting Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept only</td>
<td>-2 log likelihood</td>
</tr>
<tr>
<td></td>
<td>3,106.75</td>
</tr>
<tr>
<td>Final</td>
<td>2,765.98</td>
</tr>
</tbody>
</table>

Note. Statistically significant differences noted with p values in bold typeface.

The Nagelkerke R-square value of .26 indicated that there was a moderately-sized relationship between the outcome and the predictors. The LRTs indicated that 13 predictors did not make statistically significant contributions to the model and thus they were dropped from subsequent models (see Table 3.7): (1) Men Expect Sex, (2) Sexual Coercion, (3) Intimacy Motives, (4) Enhancement Motives, (5) Self-Affirmation Motives, (6) Coping Motives, (7) Meeting Modality, (8) Total Number of Hours Spent in Online Communication per Week, (9) Number of Sex Partners in Last Year, (10) History of an STI, (11) Dating for a Short-Term Relationship, (12) Dating for a Long-Term Relationship, and (13) Dating for a “Friend with Benefits” Relationship.
Table 3.7 Full Model 1—Sexual Risk Regressed on 21 Predictors: Likelihood Ratio Tests

<table>
<thead>
<tr>
<th>Predictor</th>
<th>-2 log likelihood of reduced model</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept Only</td>
<td>2,765.98</td>
<td>0.00</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sexual Pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show Trust</td>
<td>2,842.57</td>
<td>76.59</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>Men Expect Sex</td>
<td>2,768.86</td>
<td>2.88</td>
<td>3</td>
<td>0.41</td>
</tr>
<tr>
<td>Women’s Sex Role</td>
<td>2,779.16</td>
<td>13.18</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>Sexual Coercion</td>
<td>2,771.00</td>
<td>5.02</td>
<td>3</td>
<td>0.17</td>
</tr>
<tr>
<td>Sexual Motivations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intimacy Motives</td>
<td>2,768.67</td>
<td>2.68</td>
<td>3</td>
<td>0.44</td>
</tr>
<tr>
<td>Enhancement Motives</td>
<td>2,773.41</td>
<td>7.43</td>
<td>3</td>
<td>0.06</td>
</tr>
<tr>
<td>Self-Affirmation Motives</td>
<td>2,769.33</td>
<td>3.35</td>
<td>3</td>
<td>0.34</td>
</tr>
<tr>
<td>Coping Motives</td>
<td>2,766.13</td>
<td>0.15</td>
<td>3</td>
<td>0.99</td>
</tr>
<tr>
<td>Peer Pressure Motives</td>
<td>2,780.09</td>
<td>14.11</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>Partner Approval Motives</td>
<td>2,775.59</td>
<td>9.60</td>
<td>3</td>
<td>0.02</td>
</tr>
<tr>
<td>Meeting Modality</td>
<td>2,768.78</td>
<td>2.80</td>
<td>3</td>
<td>0.42</td>
</tr>
<tr>
<td>Total Hours Spent in Online Communication per Week</td>
<td>2,777.27</td>
<td>11.29</td>
<td>6</td>
<td>0.08</td>
</tr>
<tr>
<td>Total Hours Spent in Face-To-Face Communication per Week</td>
<td>2,783.10</td>
<td>17.12</td>
<td>9</td>
<td>0.05</td>
</tr>
<tr>
<td>Number of Sex Partners in Last Year</td>
<td>2,772.04</td>
<td>6.06</td>
<td>9</td>
<td>0.73</td>
</tr>
<tr>
<td>Number of Lifetime Sexual Partners</td>
<td>2,796.29</td>
<td>30.31</td>
<td>9</td>
<td>0.00</td>
</tr>
<tr>
<td>History of Sexually-Transmitted Infection</td>
<td>2,767.64</td>
<td>1.66</td>
<td>3</td>
<td>0.65</td>
</tr>
<tr>
<td>Dating for a Short-Term Relationship</td>
<td>2,771.17</td>
<td>5.20</td>
<td>3</td>
<td>0.16</td>
</tr>
<tr>
<td>Dating for a Long-Term Relationship</td>
<td>2,771.25</td>
<td>5.27</td>
<td>3</td>
<td>0.15</td>
</tr>
<tr>
<td>Dating for Sex Only</td>
<td>2,774.84</td>
<td>8.86</td>
<td>3</td>
<td>0.03</td>
</tr>
<tr>
<td>Dating for a “Friend with Benefits” Relationship</td>
<td>2,766.40</td>
<td>0.42</td>
<td>3</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Note. Meeting Modality (0 = met in face-to-face encounter and 1 = met through computer-mediated communication). Statistically significant relationships noted with p value in bold typeface.
A second reduced model (Model 2) was estimated with only those predictors that made a statistically significant contribution to the initial model, as indicated by an LRT significance value equal to or less than .05. The Sexual Pressure predictors included Show Trust and Women’s Sex Role, and the Sexual Motivations predictors included Peer Pressure Motives and Partner Approval Motives. The other variables included Age at First Sexual Intercourse, Number of Lifetime Sexual Partners, Total Number of Hours Spent in FTF Communication per Week, and Dating for Sex Only. Examination of the LRTs indicated that two variables, Age at First Sexual Intercourse and Partner Approval Motives did not make statistically significant contributions to this reduced model. The final model, therefore, was run without these variables, and included the six variables that made a significant contribution to the model: Show Trust, Women’s Sex Role, Peer Pressure Motives, Number of Lifetime Sexual Partners, Total Number of Hours Spent in FTF Communication per Week, and Dating for Sex Only. See Table 3.8 for the final model fitting information and Table 3.9 for the final model LRT significance values.

Table 3.8 Final Model—Sexual Risk Regressed on Statistically Significant Predictors: Model Fit

<table>
<thead>
<tr>
<th>Model</th>
<th>Model fitting information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-2 log likelihood</td>
</tr>
<tr>
<td>Intercept Only</td>
<td>2,825.43</td>
</tr>
<tr>
<td>Final</td>
<td>2,580.25</td>
</tr>
</tbody>
</table>

Note. Statistically significant differences noted with p values in bold typeface.
### Table 3.9 Final Model—Sexual Risk Regressed on Statistically Significant Predictors: Likelihood Ratio Tests

<table>
<thead>
<tr>
<th>Predictor</th>
<th>-2 log likelihood of reduced model</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2,580.25</td>
<td>.00</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Show Trust</td>
<td>2,665.31</td>
<td>85.06</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>Women’s Sex Role</td>
<td>2,599.79</td>
<td>19.54</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>Peer Pressure Motives</td>
<td>2,605.18</td>
<td>24.93</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>Number of Lifetime Sexual Partners</td>
<td>2,642.56</td>
<td>62.32</td>
<td>9</td>
<td>0.00</td>
</tr>
<tr>
<td>Face-to-Face Communication</td>
<td>2,598.37</td>
<td>18.13</td>
<td>9</td>
<td>0.03</td>
</tr>
<tr>
<td>Dating for Sex Only</td>
<td>2,589.41</td>
<td>9.17</td>
<td>3</td>
<td>0.03</td>
</tr>
</tbody>
</table>

*Note. Statistically significant relationships noted with p value in bold typeface.*

The parameter estimates for the final model predictors of all the Sexual Risk categories compared with the reference group are shown in Table 3.10.
Table 3.10 Final Model—Sexual Risk Regressed on Statistically Significant Predictors: Parameter Estimates

<table>
<thead>
<tr>
<th>Sexual Risk(^1)</th>
<th>B</th>
<th>Sig.</th>
<th>Odds Ratio</th>
<th>95% CI for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td><strong>Scores of 7+</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show Trust</td>
<td>0.16</td>
<td>0.00</td>
<td>1.18</td>
<td>1.12</td>
</tr>
<tr>
<td>Women’s Sex Role</td>
<td>0.07</td>
<td>0.00</td>
<td>1.10</td>
<td>1.03</td>
</tr>
<tr>
<td>Peer Pressure Motives</td>
<td>-0.10</td>
<td>0.04</td>
<td>0.90</td>
<td>0.86</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 1 (16+)</td>
<td>1.41</td>
<td>0.00</td>
<td>4.09</td>
<td>1.89</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 2 (9–15)</td>
<td>0.48</td>
<td>0.04</td>
<td>1.61</td>
<td>0.81</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 3 (5–8)</td>
<td>0.30</td>
<td>0.20</td>
<td>1.35</td>
<td>0.75</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 4 (1–4)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>FTF Communications/wk = 1 (13+ hrs)</td>
<td>0.25</td>
<td>0.26</td>
<td>1.29</td>
<td>0.83</td>
</tr>
<tr>
<td>FTF Communications/wk = 2 (7–12 hrs)</td>
<td>-0.06</td>
<td>0.81</td>
<td>0.94</td>
<td>0.59</td>
</tr>
<tr>
<td>FTF Communications/wk = 3 (3–6 hrs)</td>
<td>-0.16</td>
<td>0.45</td>
<td>0.90</td>
<td>0.57</td>
</tr>
<tr>
<td>FTF Communications/wk = 4 (0–2 hrs)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Dating for Sex Only = 0 (Yes)</td>
<td>0.63</td>
<td>0.01</td>
<td>1.87</td>
<td>1.14</td>
</tr>
<tr>
<td>Dating for Sex Only = 1 (No)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Scores of 4–6</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show Trust</td>
<td>0.18</td>
<td>0.00</td>
<td>1.20</td>
<td>1.14</td>
</tr>
<tr>
<td>Women’s Sex Role</td>
<td>0.01</td>
<td>0.45</td>
<td>1.01</td>
<td>0.98</td>
</tr>
<tr>
<td>Peer Pressure Motive</td>
<td>-0.12</td>
<td>0.00</td>
<td>0.90</td>
<td>0.85</td>
</tr>
<tr>
<td>Lifetime Sexual Partner = 1 (16+)</td>
<td>0.99</td>
<td>0.00</td>
<td>2.70</td>
<td>1.73</td>
</tr>
<tr>
<td>Lifetime Sexual Partner = 2 (9–15)</td>
<td>0.35</td>
<td>0.13</td>
<td>1.41</td>
<td>0.90</td>
</tr>
<tr>
<td>Lifetime Sexual Partner = 3 (5–8)</td>
<td>0.61</td>
<td>0.00</td>
<td>1.85</td>
<td>1.22</td>
</tr>
<tr>
<td>Lifetime Sexual Partner(^2) = 4 (1–4)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>FTF Communication/wk = 1 (13+ hrs)</td>
<td>0.35</td>
<td>0.13</td>
<td>1.42</td>
<td>0.90</td>
</tr>
<tr>
<td>FTF Communication/wk = 2 (7–12 hrs)</td>
<td>0.47</td>
<td>0.04</td>
<td>1.59</td>
<td>1.03</td>
</tr>
<tr>
<td>FTF Communication/wk = 3 (3–6 hrs)</td>
<td>-0.09</td>
<td>0.67</td>
<td>0.91</td>
<td>0.60</td>
</tr>
<tr>
<td>FTF Communication/wk (^2) = 4 (0–2 hrs)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Dating for Sex Only = 0 (Yes)</td>
<td>0.06</td>
<td>0.83</td>
<td>1.06</td>
<td>0.60</td>
</tr>
<tr>
<td>Dating for Sex Only(^2) = 1 (No)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td><strong>Scores of 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show Trust</td>
<td>0.00</td>
<td>0.92</td>
<td>1.00</td>
<td>0.94</td>
</tr>
<tr>
<td>Women’s Sex Role</td>
<td>-0.01</td>
<td>0.62</td>
<td>0.99</td>
<td>0.95</td>
</tr>
<tr>
<td>Peer Pressure Motive</td>
<td>-0.03</td>
<td>0.40</td>
<td>0.95</td>
<td>0.91</td>
</tr>
<tr>
<td>Lifetime Sexual Partner = 1 (16+)</td>
<td>0.47</td>
<td>0.11</td>
<td>1.57</td>
<td>0.91</td>
</tr>
<tr>
<td>Lifetime Sexual Partner = 2 (9–15)</td>
<td>0.63</td>
<td>0.02</td>
<td>1.84</td>
<td>1.13</td>
</tr>
<tr>
<td>Lifetime Sex ualPartner = 3 (5–8)</td>
<td>0.12</td>
<td>0.66</td>
<td>1.10</td>
<td>0.66</td>
</tr>
<tr>
<td>Lifetime Sexual Partner(^2) = 4 (1–4)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>FTF Communication/wk = 1 (13+ hrs)</td>
<td>0.58</td>
<td>0.04</td>
<td>1.80</td>
<td>1.02</td>
</tr>
<tr>
<td>FTF Communication/wk = 2 (7–12 hrs)</td>
<td>0.68</td>
<td>0.02</td>
<td>1.97</td>
<td>1.13</td>
</tr>
<tr>
<td>FTF Communication/wk = 3 (3–6 hrs)</td>
<td>0.12</td>
<td>0.68</td>
<td>1.10</td>
<td>0.65</td>
</tr>
<tr>
<td>FTF Communication/wk (^2) = 4 (0–2 hrs)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Dating for Sex Only = 0 (Yes)</td>
<td>0.65</td>
<td>0.05</td>
<td>1.91</td>
<td>1.01</td>
</tr>
<tr>
<td>Dating for Sex Only(^2) = 1 (No)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Statistically significant relationships noted with p value in bold typeface.

\(^1\) Low sexual risk (scores = 0 – 2) was the reference category. \(^2\) Reference categories for categorical predictors were set to zero and were as follows: Lifetime Sexual Partners = 4 (1–4 partners); FTF Communication = 4 (13+ hours per week); Dating for Sex Only = 1 (No).
The final model estimates revealed that there were statistically significant relationships between Sexual Risk and several of the predictors. Comparing those in the highest sexual risk category (scores of 7+) with those in the lowest risk category (referent group, scores of 0 – 2) revealed that the predictors Show Trust, Women’s Sex Role, Peer Pressure Motives, Number of Lifetime Sexual Partners (16+), Number of Lifetime Sexual Partners (9–15), and Dating for Sex Only were significant in distinguishing women in the highest sexual risk group from those in the lowest sexual risk group. The participants who had higher scores on Show Trust and Women’s Sex Role were more likely to be in the group of participants who had the highest sexual risk scores (7+), rather than in the group of participants with the lowest sexual risk (scores 0 – 2), while controlling for the influence of the other variables. For each unit increase in the Show Trust and Women’s Sex Role scores, the odds of being in the group with the highest sexual risk scores increased by 18% and 10%, respectively. For Peer Pressure Motives, participants with higher Peer Pressure scores (more peer pressure to engage in sexual activities with a partner) were less likely to be in the group of participants that had the riskiest sex. For lifetime sexual partners, those that had 16 or more partners were four times more likely to be in the highest sexual risk group than in the lowest risk group. The odds dropped significantly for those with 9 to 15 lifetime partners; this group was only 1.6 times more likely to be in the highest risk group rather than the lowest risk group. Those who were dating for sex only were almost twice as likely to be in the high risk group, rather than in the low risk group.

A comparison of those in the second highest sexual risk category (scores of 4 – 6) with those in the lowest risk category (referent group, scores of 0 – 2) showed that many of the same predictors as above were significant in distinguishing women in this group from those in the lowest sexual risk group. The exceptions were the predictors, Women’s Sex Role and Dating for Sex Only, which were no longer significant in distinguishing these two groups from each other, and Total Number of Hours Spent in FTF.
Communication (7–12 hours) and Number of Lifetime Sexual Partners (5 – 8), which were statistically significant in distinguishing women with sexual risk scores of 4 to 6 from those with low sexual risk scores. The participants that spent at least 7 to 12 hours per week in FTF communication (and not 0 – 2 hours) were almost twice as likely to be in the group of participants with sexual risk scores of 4 to 6 compared with the group with the lowest sexual risk scores (scores 0 – 2), while controlling for the influence of the other variables. This was also found for those who had 5 to 8 and 16+ lifetime sexual partners.

In the final model, the Nagelkerke R-square was .19. Chi-square tests and t tests were used to examine statistically significant differences between the participants who were correctly classified into the highest sexual risk category compared with all of the other participants. For example, a t test was used to examine differences in the variables measured on a ratio level scale between those that were correctly classified in the high-risk category versus all the other participants. Chi-square was used for the categorical variables. Levene’s test for equality of variances was used to test the assumption of homogeneity of variance for the t tests. Because this assumption was not met, the values for parameter estimates that did not have equal variances assumed are reported.

To evaluate the utility of the model, the proportional by chance accuracy rate was calculated by determining the proportion of cases for each group based on the number of cases in each group. This value was then squared and the proportion of cases in each group summed (.218² + .209² + .109² + .464² = .05 + .04 + .22 = .31). When the overall percentage accuracy rate is 25% more than the proportional by chance accuracy generally, the multinomial logistic regression model is characterized as being useful. Thus, the sum from above is multiplied by 25%. For this model, the proportional by chance accuracy criterion was 39% (.25 x .31 = .078 + .31 = .39). To characterize the model as useful, the overall percentage accuracy rate (predicted versus observed; see Table 3.11) must be greater than the proportional by chance accuracy rate of 39%. The overall percentage accuracy rate (classification
accuracy) was 52.1% thereby satisfying the criterion for classification accuracy suggesting that the model was more useful than one based on chance alone.

Table 3.11 Overall Percentage Accuracy Rate of Final Model

<table>
<thead>
<tr>
<th>Observed Sexual Risk Score</th>
<th>Predicted Sexual Risk Score</th>
<th>% Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7+</td>
<td>4 – 6</td>
</tr>
<tr>
<td>7+</td>
<td>98</td>
<td>24</td>
</tr>
<tr>
<td>4 – 6</td>
<td>54</td>
<td>43</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>0 – 2</td>
<td>46</td>
<td>22</td>
</tr>
<tr>
<td>Overall %</td>
<td>16.4%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

Only 98 (35.5%) of the 276 observed to have high sexual risk scores were predicted to be in the high sexual risk category. When comparing these 98 participants with all the other participants, the t test results showed that these participants differed significantly in relation to the variables Show Trust and Women’s Sex Role (see Table 3.12).

Table 3.12 Differences in Means of Show Trust, Women’s Sex Role, and Peer Pressure Motives of Correctly Classified High-Risk Group and All Other Participants

<table>
<thead>
<tr>
<th></th>
<th>t test for Equality of Means</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
<td>Df</td>
<td>Sig.</td>
<td>Mean Difference</td>
<td>Std. Error</td>
<td>95% CI of Diff.</td>
</tr>
<tr>
<td>Show Trust</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>6.98</td>
<td>102</td>
<td>&lt; .001</td>
<td>4.47</td>
<td>0.64</td>
<td>3.20</td>
</tr>
<tr>
<td>Women’s Sex Role</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>12.54</td>
<td>117</td>
<td>&lt; .001</td>
<td>6.06</td>
<td>0.48</td>
<td>5.10</td>
</tr>
<tr>
<td>Peer Pressure Motives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.88</td>
<td>105</td>
<td>.63</td>
<td>0.93</td>
<td>0.49</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Note. Statistically significant differences noted with p value in bold typeface.
In terms of the categorical variables, when comparing the 98 participants predicted to be in the high sexual risk group with all the other participants, chi-square results showed that these participants differed significantly in terms of the *Number of Lifetime Sexual Partners* and those *Dating for Sex Only*.

**Discussion**

In this study, we examined how dating modality (i.e., meeting partners FTF versus CMC), time spent communicating (FTF and CMC hours per week), sexual motivations, and sexual pressure influenced women's sexual risk. We expected that both dating modality and time spent communicating per week using CMC would positively influence sexual risk. However, the results of this study are surprising in that neither dating modality nor time spent communicating using CMC were significantly related to sexual risk as originally hypothesized. Of interest, although FTF communication made a significant contribution to the overall final sexual risk model, it was not a significant individual predictor of sexual risk. This adds to the already inconsistent findings in the literature regarding whether CMC influences sexual risk in heterosexual populations. An explanation for this null finding may be related to the observation that people meeting new relationship partners often use both CMC and FTF communication to establish their relationships. CMC combined with FTF interactions may facilitate higher levels of personal self-disclosure involving emotions, beliefs, feelings, and attitudes. For example, Walther, Loh, and Ganka (Walther et al., 2005) found that once people have formed an impression of a previously unknown partner, over time, they begin to test their assumptions about the partner by engaging in knowledge-generating and uncertainty-reduction communication strategies. Research has shown that one such strategy is direct questioning. In comparison with FTF encounters, people are able to engage in more direct questioning of their partners when they use CMC (Antheunis, Valkenburg, & Peter, 2007; Tidwell & Walther, 2002). Thus, the combination of CMC and FTF communication may accelerate the "getting to know you" stage specifically because people may find the courage to be more assertive and to say things or ask questions outside of their usual realm of conversation when using CMC.
(McKenna & Bargh, 2000). Consequently, people may take greater steps to reduce their uncertainty about a partner in terms of their sexual history, or by discussing low-risk sexual activities and STI/HIV testing practices prior to engaging in sexual activity with that partner.

The number of lifetime sexual partners an individual has is often considered to be a risk factor for the acquisition of STIs or HIV (Centers for Disease Control and Prevention, 2013a; Public Health Agency of Canada, 2008). Having multiple partners, whether these partners are sequential or concurrent, increases an individual's likelihood of becoming infected (Celentano et al., 2010; Centers for Disease Control and Prevention, 2013b). STI/HIV risk increases as the number of lifetime sexual partners increases, regardless of whether these have been partners in a short-time frame or spread over one's life course. Results from this study support this finding and indicate that women who had a greater number of sexual partners in their lifetime were up to four times more likely to engage in riskier sexual behaviour than those with relatively fewer partners. None of the other traditional behavioural risk factors, such as age at first sex and history of an STI/HIV were significant in differentiating high sexual risk takers from low sexual risk takers.

The findings from this study suggest that the women engaging in higher sexual risk activities experienced pressure to have sex without a condom as a way of showing trust and developing intimacy with a new relationship partner compared with those who engaged in lower sexual risk activities. As trust is one of the most desired qualities in a relationship, and is used as an important factor for assessing the future potential of a relationship, it is not surprising that some women place themselves at risk to establish trust with a potential relationship partner (Baumgartner, Lugina, Johnson, & Nyamhanga, 2010; Gavin, 2000; Jones, 2006b). Sexual scripts appear to support an implicit understanding that unprotected sex (e.g., not using condoms) is a display of trust (Moran & Lee, 2012). Other researchers have noted that for some women, unprotected sex also serves as a strategy for winning or keeping a man, maintaining hope in a relationship, developing intimacy, and achieving
stability (Diekman et al., 2000; Hynie et al., 1998). Furthermore, it signals the initiation and maintenance of a relationship (Jones, 2006b; Jones & Oliver, 2007). Thus, it appears that many women are willing to take great personal risk, including sexual risk, to initiate or maintain their relationships.

The women who engaged in riskier sexual activities were also more likely to strongly endorse the notion that it is a woman's responsibility to please a male partner sexually. Considering the power of women's traditional sexual scripts (Gagnon & Simon, 1973), this finding was not unexpected. Traditional beliefs that position women as the providers of men's pleasure have been influenced by romantic ideology. The findings in this study indicate that if women perceive it is their responsibility to please a man sexually, they may be at higher risk of acquiring STIs and HIV. This occurs primarily because women will strive to maintain romantic ideologies and to provide physical pleasure for their male partners at any cost (Jones & Oliver, 2007; Ortiz-Torres et al., 2003; Wingood & DiClemente, 2000). Several studies have shown that women who believe that condom use destroys romance are least likely to use condoms (Corbett et al., 2009; Dworkin et al., 2007; Shearer, Hosterman, Gillen, & Lefkowitz, 2005). To date, STI/HIV prevention messages have not acknowledged the important role that romance plays in women's lives. This is problematic in terms of women's sexual well-being because infection prevention messages, which are based on notions of risk, are contrary to that of romantic ideology, which is based on notions of love that preclude risk (Warr, 2001).

Unfortunately, much of the messaging women receive about sex is from popular media (e.g., women's magazines, television, and romance novels), which reinforces the notion of romance and women's role as the providers of sexual pleasure for men. Such messaging prioritizes male pleasure by advising women on how to develop the sexual skills needed to provide pleasure to their man and to keep him satisfied (Farvid & Braun, 2006; Kim et al., 2007). This has been detrimental for women's sexual well-being. Exposure to the sexual and romantic scripts in the media has been related to negative

17 Romantic ideology in this context means evoking or given to thoughts and feelings of love, especially idealized or sentimental love.
attitudes about condom use and a reduced intention to use condoms in future sexual encounters (Diekman et al., 2000). Feminists often view romanticism as an ideology that is detrimental to women's sexual well-being because it reflects images of femininity that are oppressive, and that reinforces the sexist ideals of patriarchal society, such as the centrality of love and commitment and women's passivity (Warr, 2001). Furthermore, the women in our study who strongly endorsed the notion that it was a woman's responsibility to please her male partner sexually and to establish trust by not using a condom were unlikely to negotiate safer sexual activity, especially if a male partner insisted or pressured them to engage in risky sexual behaviour. More research needs to be conducted to examine how these factors impact women's sexual well-being outcomes to influence and promote sexual risk reduction practices.

Peer pressure motives (e.g., having sex because your peers expect you to) appeared to offer some protection for women engaging in high-risk sexual activities. Women who were influenced by their peers about engaging in sexual activity were less likely to be in the high-risk group compared with those in the low-risk group. This is somewhat contrary to what might have been expected. A possible reason for this may be that these women are more open to discussing their sexual encounters and, therefore, their sexual activities and sexual pleasures with their peers. Such discussions and sharing of information may increase sexual risk knowledge, sexual self-efficacy, and sexual agency. Several studies have shown that acknowledging the pleasurable aspects of sex alongside discussions about sexual activities that pose less risk results in better negotiation of such activities, inclusive of condom use (Naisteter & Sitron, 2010; Wong, Boi-Doku, & McWatt, 2012; Wong, Chan, et al., 2012).

With the exception of peer pressure motives, none of the other motivations for engaging in sexual activity (i.e., intimacy, enhancement, self-affirmation, coping, and partner approval motives) differentiated women in the high sexual risk group from those in the low sexual risk group. This is somewhat surprising especially given the strong evidence that supports the view that some women are motivated to engage in sex to establish intimacy with their partner. It is possible that women's
motivations for sex are tied more to overall sexual satisfaction than they are to sexual risk. If women were more interested in the relational benefits of sex, and not their own pleasure, this may be an explanation as to why the enhancement, self-affirmation, coping, and partner approval motives did not differentiate the high and low sexual risk takers. Furthermore, if women viewed sexual intercourse as an inevitable outcome of any sexual encounter, they may not have given much thought to the reasons why they were engaging in sex. More work is required to understand the motivations related to sex and sexual risk.

Women dating for reasons other than to have sex were less likely to engage in high-risk sexual behaviour. Response bias may have influenced this finding. Since the majority of women in this study were dating to find a long-term relationship partner, they may not have wanted to appear "loose" or to invoke the image of someone who engages in casual sex or who has multiple sexual partners, which is still highly stigmatized for women (Rudman, Fetterolf, & Sanchez, 2013). Unlike men, women are expected to explore their sexuality within monogamous, committed relationships. Women, more than men, expect to be socially rejected and to experience negative emotions in relation to receiving an STI diagnosis (Smith, Mysak, & Michael, 2008). Women, therefore, may be more conscientious about their sexual behaviour and the stigma associated with contracting an STI because of the pressure they experience to conform to gendered sexual scripts that restrict their sexual behaviour (Foster & Byers, 2013).

When comparing the women correctly classified into the high sexual risk group with all other women in the sample, those in the high risk group were significantly different from all others when considering their endorsement of gendered sexual scripts (show trust and women's role), peer pressure motives, number of lifetime sexual partners, and dating for sex only. Although there are various reasons why this group of women may differ from the other women in this study, an explanation may be their inherent personality characteristics although these were beyond the scope of the study. For example,
there is some literature indicating that sensation seekers are willing to take more sexual risks (Hoyle, Fejfar, & Miller, 2000; Kalichman et al., 2005; Shuper, Joharchi, & Rehm, 2014). Kalichman, Cain, Knetch, and Hill (2005) examined patterns of sexual risk behaviour change among STI-clinic clients and found that there was an association between being a sexual-risk taker and sensation seeking. These people had higher rates of STIs and demonstrated an accelerated rate of risk behaviour, multiple partners, less condom use, and lower levels of motivation to change. Other reviews that have examined sensation seeking and sexual risk have found similar associations (Hoyle et al., 2000; Shuper et al., 2014).

In relation to differences between women who are dating for sex only compared to those that are not, prevention education for sexual well-being is based on the assumption that everyone wants to avoid sexual risk. Such an approach does not take into account that individuals may make informed choices about engaging in riskier sexual practices because these practices are pleasurable or because they assessed their partner’s sexual risk to be low. There is evidence indicating that some women engage in non-romantic sexual activities with a partner primarily for physical pleasure as opposed to engaging in sexual activities primarily for the purpose of developing emotional intimacy (Lehmiller, VanderDrift, & Kelly, 2011; Moran & Lee, 2012; Seehuus & Rellini, 2013). Moran and Lee (Moran & Lee, 2012) found that women who resisted the conventions of heterosexual sex (i.e., traditional sexual scripts and conventions of femininity) and thus engaged in casual non-romantic sex were still constrained by these conventions, which they concluded posed serious risks to their sexual well-being, both physically and emotionally.

It is important to recognize that this study has several limitations. First, a concern arises from the correlational cross-sectional design of the study (Burns & Grove, 2009; Szklo & Nieto, 2007). A longitudinal study, in which data are collected at more than one time, would have made it possible to make stronger inferences. A second limitation is the reliance on self-reports. One of the weaknesses of self-report measures concerns their validity and accuracy (Holtgraves, 2004b). In this study, it was not
possible to determine the accuracy of the participants' reports. Self-reports of sensitive information, such as sexual information, provide participants with the opportunity to embellish their use of safer sexual practices to conform to current social expectations regarding sexual behaviour (Tourangeau & Yan, 2007). Even though the participants in this study were anonymous, there is still evidence to suggest that people may respond in a way that distorts the information they disclose to conform with prevailing social mores and norms (Hancock & Flowers, 2003). Therefore, the results of this study may be subject to social desirability response bias. Third, the data used in this study were retrospective in nature. This raises some questions about recall bias. Recall bias may have contributed to inaccuracies in the data collection because the participants were required to recall information about events that may have occurred up to one year in the past. Information about the relevant relationship may have been more indicative of beliefs or thoughts at the time of completing the questionnaire than what actually happened at the time of the sexual encounter. This may be especially problematic if negative events occurred with the partner and they caused the woman’s feelings toward the partner to have changed following the first sexual encounters.

Conclusion

The use of new technologies to communicate has become an important and essential part of life for many people. In light of the popularity of CMC and the significant risk of HIV among adult women, especially those who are recently single and initiating new sexual relationships, this study aimed to highlight new areas for consideration in the development of strategies to address women’s sexual risk and sexual well-being. Because primary care providers, such as nurses and physicians, play a key role in the education, prevention, and management of STIs and HIV, the results of this study are particularly relevant to their practice. Nurses especially are well positioned to develop interventions that might raise awareness and provide education about the factors influencing STI and HIV risk, and to stimulate discussions about how women can effectively use new technologies to communicate with potential
sexual partners about sexual well-being. In turn, more effective STI/HIV preventive strategies will reduce the health and economic burden that these infections place on women and the healthcare system.
Chapter 4: Communication about Sexual Practices: 

Does it Influence Sexual Risk?

Introduction

In the analysis reported in Chapter 3, we examined whether dating modality and the time spent per week using CMC or FTF methods to communicate with partners, as well as sexual motivations and sexual pressure, influenced women's sexual risk. We found that while there was no association between the time spent per week using CMC or FTF methods to communicate and sexual risk, there was an association between the expectation to communicate or show trust in a relationship, the belief that it is a woman's responsibility to satisfy a partner through sex, as well as having sex because of peer pressure, dating for sex only and sexual risk. In this chapter, we are also interested in sexual risk as an aspect of women's sexual well-being, but we turn our attention to sexual communication and whether sexual self-disclosure and safer sexual communication influence sexual risk in the context of CMC. To provide some understanding of women's patterns of sexual communication, we first review the literature on sexual communication in relationships that have developed in face-to-face (FTF) situations and then examine how these patterns may change when using CMC.

Research has shown that discussing the topic of sex is difficult for most people (Troth & Peterson, 2000). Sex is not only a private matter, but also one that is subject to social, cultural, religious, and moral norms and constraints. Accordingly, open discussion about sex and sexual practices can be particularly challenging, especially if one is revealing attitudes or behaviour that are socially censured (Fenton, Johnson, McManus, & Erens, 2001). Feelings of intimacy created through the self-disclosure of non-sexual information (e.g., information about themselves, their friends, and their family) between relationship partners can facilitate sexual self-disclosure, especially those disclosures that concern
sexual fantasies, pleasures, and desires (sexual self-disclosure refers to discussion of such topics as sexual preferences, sensations, fantasies, and behaviour). There is evidence to suggest that women self-disclose significantly more sexual information than do men, particularly when information is initially disclosed on non-sexual topics (Byers & Demmons, 1999). Ortiz-Torres, Williams, and Ehrhardt (2003) found that women reported a distinct pattern of communication in romantic encounters. These authors found that, for women, the ideal romantic encounter entails two distinct phases: a flirtation phase and a sexual phase. In the flirtation phase, verbal communication about general topics (e.g., books and school, work) is preferred because this allows women to “get to know” their partners better. Although women were noted to discuss their past relationships, in terms of likes and dislikes about a partner or situation, they do not discuss their sexual history or sexual practices. Once in the sexual phase, the women were reported to prefer to communicate nonverbally, rather than verbally. Any verbal communication that occurs in this phase is limited to discussions about sexual preferences, which most women consider to be a form of foreplay. Thus sexual history and risk are not discussed in either phase. These findings support earlier research conducted by Lear (1995) who concluded that, although people discuss their past relationship patterns, they do not typically discuss their sexual history and rarely discuss condom use prior to a sexual encounter.

The research evidence suggests that communicating with a partner about sexual fantasies, pleasures, and desires is unrelated to communication about safer sex (Quina et al., 2000). In a survey of 816 women engaging in unprotected sexual activity, Quina et al. (2000) found that while low-risk sexual behaviour is associated with communication about safer sex, it is not associated with communication about sexual preferences. Their results suggest that communication about sexual preferences and safer sexual practices represent distinct topics that require different communication processes. Whereas sexual history (age at first sexual intercourse, number of lifetime sexual partners, length of the
relationship, and sexual experience) were found to significantly predict communication about sexual preferences, it did not predict communication about safer sexual practices.

Discussions about safer sex place relationship partners in a paradoxical position because the goals most relevant to communication about safer sex, for instance mutual honesty about sexual history and sexual practices in other relationships, conflict with highly valued relationship goals such as the development of intimacy and trust, especially when relationship stability has not been established (Buysse & Ickes, 1999). Because this paradoxical situation is likely to be distressing, relationship partners often choose to avoid the safer-sex topic altogether (Buysse & Ickes, 1999). This, in turn, may result in less direct problem solving and more defensive and avoidance type behaviour.

For many people, communicating about sexual history and safer sexual practices may be considered unnecessary, especially if a partner is deemed to be “safe” or not infected with HIV. Often these evaluations are not based on the actual results of HIV testing (Lauby, Bond, Eroglu, & Batson, 2006), but rather on how well the partner is known socially. Several studies have shown that people use familiarity to evaluate STI/HIV risk, although this type of indicator is contrary to HIV prevention messages (Marston & King, 2006; Masaro et al., 2008). It is thought that as an individual accumulates more information about a partner, feelings of familiarity increase, resulting in less concern about the risk of STI/HIV transmission (Misovich, Fisher, & Fisher, 1997; Skidmore & Hayter, 2000). Thus, people tend to have safe sex with partners perceived to be risky (i.e., at high risk for infection) but engage in riskier sexual activity with partners perceived to be safe (i.e., do not have an infection). Consequently, communication about and engagement in safer sexual practices is often perceived as unnecessary particularly because the partner is not viewed as a threat for HIV transmission (Kelly & Kalichman, 1995). Several studies have found that the “known partners are safe partners” belief is associated with condom use and that this is significantly associated with less protected vaginal and anal intercourse and condom use intentions, especially among women (Misovich, Fisher, & Fisher, 1996; Thorburn, Harvey, & Ryan,
While most people believe that they have considerable insight into their partner’s character, and express confidence in the accuracy of their impressions, research reveals that an individual’s perception of her partner’s sexual risk factors is often not in agreement with that partner’s self-reported behaviour (Viberga, Odlind, & Lazdane, 2006). Conley and Peplau (2010) found in their study of heterosexual couples that the women perceived the sexual risk of their partners to be much lower than what the partners actually reported. The women believed that their partners had used condoms frequently; however, this contradicted what their partners reported. The women also viewed their partners to be more predictable, sincere, cautious, and monogamous than the partners’ ratings of themselves. Stoner et al. (2003) found that relationship partner agreement was relatively low for several sexual risk factors, including having had other sexual partners in the previous three months, history of sex work for women, and male partner’s use of sex workers. Similarly, Drumright, Gorbach, and Holmes (2004) found that their study participants’ overall predictions about whether their partner had other concurrent sexual relationships were poor. They found that only 26% of the participants were aware that their partners had other sexual partners. Multivariate analyses showed that having an STI diagnosis was significantly and positively associated with a partner’s sexual concurrency, as well as a lack of awareness of this concurrency. Furthermore, Witte (2010) investigated 217 couples enrolled in a sexual risk intervention study and found that the older the women were, the more likely they were to be unaware of their partner’s recent STI diagnosis.

Previous studies examining FTF relationships have shown that knowledge of a partner’s sexual history is often gathered only indirectly through ambiguous communication (Marston & King, 2006; Williams et al., 1992). Very few people ask direct questions about their partner’s sexual history or their STI/HIV status (Crosby et al., 2000). Discussions about safer sex are counter to the heterosexual romantic script (Altman & Taylor, 1973), which idealizes spontaneity and portrays sex as unintentional (Gavey & McPhillips, 1999). Implicit within this script is the assumption that unprotected sex promotes
intimacy, trust, and romance (Galligan & Terry, 1993; Jones, 2006b). Excluded from this script is a discussion about the practicalities of sex, such as concerns about STIs, HIV, and pregnancy (e.g., contraceptive issues) because introducing these topics may negatively impact relational trust and intimacy (Emmers-Sommer & Allen, 2005). Discussions about safer sex also are problematic in that they not only reveal one's intentions and make explicit one's sexual interest, but they also raise the issue of one's past sexual practices. For most people, the disclosure of one’s own prior sexual activity is considered a taboo subject, especially during impression formation (Comer & Nemeroff, 2000; Gold & Skinner, 1996; Misovich et al., 1997). Discussions about safer sex often confront people with the differences between their ideal romantic partner and reality, differences that may possibly challenge the degree of intimacy experienced with a partner (Galligan & Terry, 1993).

In the context of FTF relationships, meta analyses have shown that direct communication (i.e., asking direct non-ambiguous questions) with partners about condom use is one of the strongest predictors of actual condom use (Noar et al., 2006; Sheeran, Abraham, & Orbell, 1999). Because of the dyadic nature of sex, engagement in safer sexual practices requires both communication and cooperation between sexual partners. Preparing to discuss safer sexual practices with a partner is a difficult, yet imperative, step in the process of adopting safer sexual behaviour (Gebhardt, Kuyper, & Dusseldorp, 2006). Several studies have found that women are much more likely than are men to initiate discussions about safer sex (Noar et al., 2006). Reactions of relational partners to such discussions are varied (Emmers-Sommer & Allen, 2005). For example, while some perceive discussions about safer sex to be a matter of personal and social responsibility, others perceive such discussions to be personally offensive, especially for those who believe that individuals initiating such conversations are infected, or those who believe that their own sexual practices and history are being scrutinized (Emmers-Sommer & Allen, 2005). Some evidence indicates that although women may initiate discussions about safer sex, the timing of such discussions often takes place in very close proximity to
vaginal or anal intercourse (Dworkin et al., 2007; Ortiz-Torres et al., 2003). Dworkin et al. (2007) found that the women in their qualitative study (N = 45) described bringing up the use of condoms at the time they were “hot and heavy” or “right before the actual act” (p. 275). Given the timing and context of women’s discussions about safer sex, how likely is it that women are (a) able to initiate such discussions and (b) follow through, particularly given that their partners may not comply? Gebhardt et al. (2006) found that people who plan in advance to discuss the use of condoms with a partner are more than two-and-a-half times more likely to use condoms than are people who do not plan.

Relationships established through CMC are reported to elicit more open and direct communication between relationship partners than are relationships established in FTF settings, primarily because people are likely to take greater risks in disclosing information and, therefore, to feel less constrained in discussing specific topics, ideas, emotions, and behaviour (McKenna & Bargh, 2000; Schouten et al., 2007; Tidwell & Walther, 2002). When people interact via CMC, they are much more likely to violate social and moral norms compared with people who interact FTF (Ben-Ze’ev, 2004). The primary reason for this is that people do not experience shame and guilt as intensely as they do in FTF situations, and therefore feel safer in violating the norms. Also, they may not view their CMC activities as real, that is, their activities are not perceived to exist in reality, but rather in some imaginary space. In relation to romantic and sexual connections, several scholars claim that the use of CMC may result in communication that becomes eroticized very quickly (Ben-Ze’ev, 2004; Cooper & Sportolari, 1997; Ross, 2005). The possibility of having erotic communication with a relationship partner without feeling shame or fearing moral repercussions can be, for some, very sexually exciting (Ben-Ze’ev, 2004). Such erotic conversations may heighten sexual feelings and romantic fantasies to the point that any discussion about safer sex (e.g., condom use, sexual history, STI/HIV testing) runs the risk of destroying the fantasy or romance and threatening the integrity of the relationship especially if, for example, condom use must be negotiated.
Despite the purported ease of direct and open communication via CMC, there is little evidence to indicate that women communicate about or negotiate sexual safety when using this mode of communication (Couch & Liampittong, 2007; McFarlane et al., 2000; Padgett, 2007). Research findings have shown that CMC users infrequently mention safer sex or discuss low-risk sexual behaviour; this is often only alluded to through the use of vague references (e.g., references to wanting a disease-free partner) (Kim et al., 2001). Padgett (2007) examined the personal and sexual safety of women 18 years of age and older who used online personal ads, and found that 73% of the study participants did not discuss STI/HIV sexual risk or protection prior to their initial FTF encounters. Given the rise in popularity of CMC to find potential romantic and sexual partners, the nature of the communication taking place (e.g., highly eroticized conversations and romantic fantasies that heighten sexual feelings), and the likelihood that discussions about safer sex are not undertaken, it is surprising that so little research in this area has been conducted.

The purpose of this study was to examine whether there is an association between women’s sexual self-disclosure (e.g., communication about their sexual preferences -- sexual positions, likes, dislikes), their communication about safer sex (e.g., the practicalities of sex such as condom use and sexual risk) and the types of sexual activity they engage in. We hypothesized that women who disclose more information about their sexual preferences are more likely to engage in sexual activities that are higher in risk for HIV transmission (unprotected oral, vaginal, or anal sexual intercourse) than are those who disclose less information. This occurs because their conversations are more likely to be eroticized and sexual arousal is heightened compared with conversations that include the practical aspects of sex, such as having previous STIs or condom use, which is generally considered to be less arousing. Although the focus of this dissertation is on sexual risk in relation to HIV transmission, discussion about STIs is important as they are a cofactor in HIV transmission and can increase the likelihood of HIV transmission. Furthermore, communication about STIs can also facilitate an easier discussion about HIV. While
communication about safer sex can be considered a non-erotic or practical aspect of sex, we hypothesized that women who communicate about this aspect of sex are less likely to engage in high-risk sexual activity. As in Chapter 3, we were interested in CMC as a key predictor of sexual risk. Accordingly, we examined whether there is an association between the way in which women initially meet their partners (i.e., meeting modality) and the time they spend communicating with their partners using CMC and FTF methods.

Methods

Study design

A cross-sectional, correlational survey design was used to collect the data. The data were collected with a self-report questionnaire that was developed specifically for the study. The questionnaire was made available online to women over the age of 25 years who lived in the United States.

Sample

The population of interest was adult women living in the United States who were dating or recently established in a new, heterosexual relationship (formed within the past year) and whose most recent sexual encounter was with a partner of the opposite sex. We were interested in sampling women who had met their partners in either a FTF environment or in an online format using online technology (e.g., email, dating site, text message, chat, or social networking site). The selection criteria for the sample specified that the women must: (a) be currently dating or in a new relationship formed within the past year, (b) be 25 years of age or older, (c) have had at least one sexual encounter with the dating partner within the past year, and (d) be living in the United States. Women whose last sexual partner was a woman were excluded; they were considered to be at relatively lower risk for transmission of HIV than were women who had had sex with men.
**Data collection**

Amazon Mechanical Turk (AMT) was used to collect data from an online survey. AMT is an online marketplace where tasks, such as surveys, can be distributed and completed by a large diverse population of anonymous individuals (i.e., over 100,000 individuals from over 100 countries) (Buhrmester et al., 2011; Ross et al., 2010). Researchers using AMT are able to collect high-quality data from diverse samples relatively quickly and inexpensively (Buhrmester et al., 2011; Ross et al., 2010).

The participants completed four eligibility questions based on the selection criteria. Eligible participants were invited to start the questionnaire. Ineligible participants were thanked for their interest and redirected from the study site. The questionnaire contained 148 questions, which asked participants to provide information about their dating and sexual experiences, in general. The survey took approximately 30 to 40 minutes to complete. The website also contained a section for participants to blog or post anonymous comments or stories about their dating experiences, if they desired to share them with the other participants.

**Measures**

More detailed information about the sociodemographic, sexual risk factors, meeting modality, and time spent in communication per week using CMC and FTF methods can be found in Chapter 2. An overview is provided below.

**Sociodemographic characteristics and sexual risk factors**

The sociodemographic characteristics of the participants were obtained with closed-ended questions related to their age, marital status, ethnicity/race, household income, and education level (see Appendix A for the questionnaire). Age was measured on a ratio scale, whereas marital status, ethnicity/race, household income, and education level were measured categorically. The sociodemographic and sexual risk factor questions were included for the purpose of describing the
sample. The sexual risk factors were included for the purpose of assessing the participants' sexual risk as well as adjusting for these established sexual risk factors in the analyses; they included: *Age at First Sexual Intercourse, Number of Lifetime Sexual Partners, Number of Sexual Partners in the Last Year,* and whether the participant had a *History of an STI/HIV.* Participants were also asked about the reasons they were dating. One closed ended question gave the participants the option to choose whether they were dating for a *Short-Term Relationship, Long-Term Relationship,* "*Friends with Benefits*" relationship, or *Dating for Sex Only.*

**Meeting modality and time spent communicating with partners**

Meeting modality refers to the environment, either physical or virtual, where people initially meet partners they are interested in dating. The participants were asked how they initially met the dating partner with whom they had most recently had sex. Two response options were provided—meeting via CMC or in a FTF setting. Time spent communicating with partners using CMC or in FTF communication refers to the number of hours per week an individual spent either constructing and reading responses to online messages or chats to and from a partner or the amount of time spent conversing with a partner in a physical environment. The items assessing the time spent communicating with partners were developed by the investigators. The participants were asked to provide an estimate of the number of hours spent communicating per week, on average, using the particular method. The variable, *Total Number of Hours Spent in Online Communication per Week* was constructed by adding the total number of hours per week spent constructing and reading emails as well as chat hours when conversing with a partner. The *Total Number of Hours Spent in FTF Communication per Week* was measured from the item that asked the participants the total number of hours they had spent conversing with their partners in a FTF setting.
**Sexual self-disclosure**

Sexual self-disclosure, defined as the discussion of topics with a partner such as sexual preferences, sensations, fantasies, and behaviour, was measured using a modified version of Snell, Belk, Papini, and Clark's (1989) *Sexual Self-Disclosure Scale* (SSDS). Five of the SSDS subscales were used in this study: *Sexual Behaviour, Sexual Fantasies, Sexual Sensations, Sexual Preferences, and the Meaning of Sex*. Each subscale, consisted of three items with the exception of *Sexual Sensations* which consisted of four items. The scale asked the participants to think about their most recent sexual partner and then to indicate the extent to which they discussed the topics listed in each item statement before they had sex. Examples of the SSDS item statements for each subscale are as follows: *Behaviour*—"the types of sexual behaviour I have engaged in," *Sensations*—"the kinds of touching that sexually arouse me," *Fantasies*—"my private sexual fantasies," *Preferences*—"what I would desire in a sexual encounter," and *The Meaning of Sex*—"what sex in an intimate relationship means." A seven-point Likert-type scale was used with responses ranging from one (not at all) to seven (a great deal). The scores for each scale were summed and averaged to create subscale scores. Higher scores represent greater willingness to disclose personal sexual information to a partner.

**Safer sex communication**

Safer sex communication is defined as the degree to which the safety and risk of certain sexual behaviours or practices related to STI/HIV transmission are discussed, including discussion about previous sexual partners, condom use, previous STI/HIV diagnoses, STI/HIV testing practices, and the last time tested. Although the focus of this dissertation is on the risk of HIV transmission, discussion about STIs is important as STIs increase the likelihood of HIV transmission, and discussion about STIs can provide an entrée into discussions about HIV. The *Safer Sex Communication Scale* consisted of two subscales: (a) *General STI/HIV Discussion* (7 items) and (b) *Sexual History* (4 items). The items for the *General STI/HIV Discussion* subscale were as follows: (a) how to prevent pregnancy, (b) the use of
condoms, (c) how to use condoms, (d) STIs or HIV/AIDS in general, (e) how to prevent STIs, (f) how to prevent HIV/AIDS, and (g) the sexual activities likely to transmit infections. Items for the Sexual History subscale were: (a) partner’s sexual history, (b) whether the partner had been tested for STIs or HIV, (c) the date of the partner’s last STI or HIV test, and (d) discussion about STIs or HIV/AIDS in general. The participants were asked to think about their most recent sexual partner and to describe the extent to which they discussed the topics listed. Their responses were measured on a seven-point Likert-type scale with response choices ranging from one (not at all) to seven (a great deal). The scores for each scale were summed and averaged. Higher scores represent a greater willingness to discuss such topics with a partner.

Data analysis

The Statistical Package for the Social Sciences (SPSS) version 20.0 was used for cleaning the data, calculating descriptive statistics, and completing a multinomial regression analysis. Exploratory factor analysis (EFA) with Mplus version 7.0 was conducted to evaluate the measurement structure of the Sexual Self-Disclosure and Safer Sex Communication measures. Maximum likelihood with robust errors (RML) estimation was used. An acceptable model fit was defined by the following criteria: RMSEA values < .05 indicated good fit, between .05 and .08 indicated reasonable errors of approximation, larger than .08 and less than .10 indicated mediocre fit, and > .10 indicated poor fit (Brown, 2006; Hu & Bentler, 1999a; MacCallum et al., 1996). Satisfactory CFI and TLI values were those ≥ .95. Factor loadings ≥ .40 were considered salient (Brown, 2006). Oblique rotation was used.

Multinomial logistic regression analyses were conducted to determine how meeting modality, time spent communicating with partners per week via CMC or FTF, sexual self-disclosure, and safer sex communication influenced the women’s sexual risk. Model building and the assessment of model fit followed the steps suggested by Hosmer, Lemeshow, and Sturdivant (2013). All of the covariates and factors were entered into the regression model simultaneously. The log-likelihood ratio test (LRT) was
used to assess the significance of the relationships between the outcome and predictor variables in the fitted model. For both the model and the individual regression estimates, the alpha level for the significance tests was set at .05. The Nagelkerke value (a pseudo $R^2$) was examined to provide indication of the percentage of variance in the outcome explained by the predictors in the final model (Meyers et al., 2013). Using a classification matrix, the final multinomial models were characterized as being useful if the overall percentage accuracy rate was 25% more than the proportional by chance accuracy (Bayaga, 2010; Meyers et al., 2013; Schwab, 2007).

Chi-square and $t$ tests were used to determine if those in the highest sexual risk group (i.e., the first quartile who were correctly classified) differed significantly from all the other participants.

**Results**

The details for the final sample have been provided in Chapter 3. For detailed demographic information see Table 3.1 in Chapter 3. Descriptive information about the women’s sexual risk factors and reasons for dating also are described in Chapter 3 (see Table 3.2), as is the type and frequency of communication with the sexual partner (see Table 3.3).

The mean score for the *General STI/HIV Discussion* subscale was 3.5, indicating that, on average, the women had a moderate amount of discussion pertaining to these topics prior to having sex with their partner. The *Sexual History* subscale results were similar. Means for the *Sexual Self-Disclosure* subscales were highest for the *Meaning of Sex, Sexual Preferences, and Sexual Sensations* subscales. This indicated that the participants were more willing to discuss these topics than they were willing to discuss previous sexual behaviour or sexual fantasies. See Table 4.1 for more detailed descriptive statistics for these subscales.
Table 4.1 Descriptive Statistics of Safer Sex Communication and the Sexual Self-Disclosure Subscales

<table>
<thead>
<tr>
<th>Predictors</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safer sex communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General STI/HIV Discussion</td>
<td>1,266</td>
<td>3.51</td>
<td>1.81</td>
</tr>
<tr>
<td>Sexual History</td>
<td>1,266</td>
<td>3.72</td>
<td>1.98</td>
</tr>
<tr>
<td>Sexual Self-Disclosure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Behaviour</td>
<td>1,265</td>
<td>3.62</td>
<td>1.82</td>
</tr>
<tr>
<td>Sexual Sensations</td>
<td>1,265</td>
<td>3.93</td>
<td>1.94</td>
</tr>
<tr>
<td>Sexual Fantasies</td>
<td>1,265</td>
<td>3.47</td>
<td>2.01</td>
</tr>
<tr>
<td>Sexual Preferences</td>
<td>1,265</td>
<td>4.12</td>
<td>1.97</td>
</tr>
<tr>
<td>Meaning of Sex</td>
<td>1,265</td>
<td>4.16</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**Multinomial logistic regression models**

As discussed in Chapter 3, the reference category for the outcome variable in the multinomial regression was low sexual risk scores of zero to two. Analysis of the full model (Model 1) was conducted first with 18 predictors (Sexual Behaviours, Sexual Sensations, Sexual Fantasies, Sexual Preferences, Meaning of Sex, General STI/HIV Discussion, Sexual History, Meeting Modality, Total Number of Hours Spent in FTF Communication per Week, Total Number of Hours Spent in Online Communication per Week, Age at First Sexual Intercourse, Number of Sexual Partners in Last Year, Number of Sexual Partners in Lifetime, History of an STI/HIV, Dating for a Long-Term Relationship, Dating for a Short-Term Relationship, Dating for Sex Only, and Dating for a “Friend with Benefits” Relationship), which were entered into the model simultaneously. Based on the model fitting information contained in Table 4.2, the results indicated that there was a significant relationship between the outcome Sexual Risk and the set of predictors entered into the model.
Table 4.2 Model 1—Sexual Risk Regressed on all Predictors: Model Fit

<table>
<thead>
<tr>
<th>Model</th>
<th>-2 log likelihood</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept only</td>
<td>3,105.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td>2,834.81</td>
<td>268.03</td>
<td>81</td>
<td>.00</td>
</tr>
</tbody>
</table>

The Nagelkerke R-square value of .21 indicated a moderate strength relationship between the outcome and the set of predictors in this model. The likelihood ratio tests (see Table 4.3) indicated that 11 predictors (Sexual Preferences, Meaning of Sex, Sexual History, Meeting Modality, Total Number of Hours Spent in Online Communication per Week, Total Number of Hours Spent in FTF Communication per Week, Number of Sexual Partners in Last Year, History of an ST/HIV, Dating for a Short-term Relationship, Dating for a Long-Term Relationship, and Dating for a "Friends with Benefits" Relationship) did not make statistically significant contributions to the model and thus were dropped from subsequent models.
Table 4.3 Model 1—Sexual Risk Regressed on all Predictors: Likelihood Ratio Tests

<table>
<thead>
<tr>
<th>Predictor</th>
<th>-2 log likelihood of reduced model</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept Only</td>
<td>2,837.18</td>
<td>.00</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sexual Self-Disclosure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Behaviour</td>
<td>2,849.53</td>
<td>12.35</td>
<td>3</td>
<td>0.01</td>
</tr>
<tr>
<td>Sexual Sensations</td>
<td>2,845.57</td>
<td>8.38</td>
<td>3</td>
<td>0.04</td>
</tr>
<tr>
<td>Sexual Fantasies</td>
<td>2,844.96</td>
<td>7.78</td>
<td>3</td>
<td>0.05</td>
</tr>
<tr>
<td>Sexual Preferences</td>
<td>2,838.82</td>
<td>1.64</td>
<td>3</td>
<td>0.65</td>
</tr>
<tr>
<td>Meaning of Sex</td>
<td>2,840.23</td>
<td>3.05</td>
<td>3</td>
<td>0.38</td>
</tr>
<tr>
<td>Safer Sex Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General STI/HIV Discussion</td>
<td>2,857.65</td>
<td>20.48</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>Sexual History</td>
<td>2,841.42</td>
<td>4.23</td>
<td>3</td>
<td>0.24</td>
</tr>
<tr>
<td>Meeting Modality</td>
<td>2,838.62</td>
<td>1.44</td>
<td>3</td>
<td>0.70</td>
</tr>
<tr>
<td>Total Number of Hours Online/week</td>
<td>2,847.96</td>
<td>16.24</td>
<td>6</td>
<td>0.10</td>
</tr>
<tr>
<td>Total Number of Hours of FTF Communication/week</td>
<td>2,853.42</td>
<td>16.24</td>
<td>9</td>
<td>0.06</td>
</tr>
<tr>
<td>Age at First Sexual Intercourse</td>
<td>2,856.20</td>
<td>19.01</td>
<td>9</td>
<td>0.03</td>
</tr>
<tr>
<td>Number of Sexual Partners in Last Year</td>
<td>2,840.72</td>
<td>3.54</td>
<td>9</td>
<td>0.94</td>
</tr>
<tr>
<td>Number of Lifetime Sexual Partners</td>
<td>2,864.07</td>
<td>26.89</td>
<td>9</td>
<td>0.00</td>
</tr>
<tr>
<td>History of an STI/HIV</td>
<td>2,839.70</td>
<td>2.51</td>
<td>3</td>
<td>0.47</td>
</tr>
<tr>
<td>Dating for a Short-Term Relationship</td>
<td>2,843.95</td>
<td>6.76</td>
<td>3</td>
<td>0.08</td>
</tr>
<tr>
<td>Dating for a Long-Term Relationship</td>
<td>2,838.75</td>
<td>1.57</td>
<td>3</td>
<td>0.68</td>
</tr>
<tr>
<td>Dating for Sex Only</td>
<td>2,848.24</td>
<td>11.05</td>
<td>3</td>
<td>0.01</td>
</tr>
<tr>
<td>Dating for a Friends with Benefits Relation</td>
<td>2,837.92</td>
<td>0.74</td>
<td>3</td>
<td>0.86</td>
</tr>
</tbody>
</table>

Note. Statistically significant differences noted with p values in bold typeface.

A second reduced model (Model 2) was estimated with only those predictors entered that made a statistically significant contribution to the model, as indicated by an LRT significance value equal to or less than .05. The Sexual Self-Disclosure predictors included Sexual Behaviour, Sexual Sensations, and Sexual Fantasies, and the Safer Sex Communication predictors included General STI/HIV Discussion. The other variables included Age at First Sexual Intercourse, Number of Lifetime Sex Partners, and Dating for Sex Only. Examination of the likelihood ratio tests indicated that Age at First Sexual Intercourse and
Sexual Fantasies did not make a statistically significant contribution to this reduced model. The final model, therefore, was run without these variables and included four variables (Sexual Behaviour, Sexual Sensations, General STI/HIV Discussion, Number of Lifetime Sexual Partners, and Dating for Sex Only).

See Table 4.4 for the final model fitting information and Table 4.5 for the final model LRT significance values. Parameter estimates for the final model are shown in Table 4.6 below.

Table 4.4 Final Model—Sexual Risk Regressed on Statistically Significant Predictors: Model Fit

<table>
<thead>
<tr>
<th>Model</th>
<th>-2 log likelihood</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept only</td>
<td>3,043.83</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Final</td>
<td>2,861.64</td>
<td>182.19</td>
<td>21</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 4.5 Final Model—Sexual Risk Regressed on Statistically Significant Predictors: Likelihood Ratio Tests

<table>
<thead>
<tr>
<th>Predictor</th>
<th>-2 log likelihood of reduced model</th>
<th>Chi-Square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2,861.64</td>
<td>.00</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sexual Behaviour</td>
<td>2,874.04</td>
<td>12.67</td>
<td>3</td>
<td>0.01</td>
</tr>
<tr>
<td>Sexual Sensations</td>
<td>2874.04</td>
<td>12.40</td>
<td>3</td>
<td>0.01</td>
</tr>
<tr>
<td>General STI/HIV Discussion</td>
<td>2918.66</td>
<td>57.02</td>
<td>3</td>
<td>0.00</td>
</tr>
<tr>
<td>Number of Lifetime Sex Partners</td>
<td>2,913.97</td>
<td>52.33</td>
<td>9</td>
<td>0.00</td>
</tr>
<tr>
<td>Dating for Sex Only</td>
<td>2871.40</td>
<td>9.75</td>
<td>3</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Note. Statistically significant differences noted with p values in bold typeface.
Table 4.6 Final Model—Sexual Risk Regressed on Statistically Significant Predictors: Parameter Estimates

<table>
<thead>
<tr>
<th>Sexual Risk Scores</th>
<th>B</th>
<th>Sig.</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scores 7+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Behaviour</td>
<td>0.19</td>
<td>0.00</td>
<td>1.21</td>
<td>1.06</td>
<td>1.38</td>
</tr>
<tr>
<td>Sexual Sensations</td>
<td>0.07</td>
<td>0.31</td>
<td>1.07</td>
<td>0.94</td>
<td>1.21</td>
</tr>
<tr>
<td>General STI/HIV Discussion</td>
<td>-0.32</td>
<td>0.05</td>
<td>0.73</td>
<td>0.66</td>
<td>0.80</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 1 (16+)</td>
<td>1.19</td>
<td>0.00</td>
<td>3.30</td>
<td>2.13</td>
<td>5.10</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 2 (9–15)</td>
<td>0.38</td>
<td>0.10</td>
<td>1.46</td>
<td>0.93</td>
<td>2.29</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 3 (5–8)</td>
<td>0.06</td>
<td>0.79</td>
<td>1.06</td>
<td>0.68</td>
<td>1.68</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 4 (1–4)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dating for Sex Only = 0 (Yes)</td>
<td>0.73</td>
<td>0.00</td>
<td>2.07</td>
<td>1.29</td>
<td>3.33</td>
</tr>
<tr>
<td>Dating for Sex Only = 1 (No)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scores 4–6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Behaviour</td>
<td>0.17</td>
<td>0.01</td>
<td>1.18</td>
<td>1.04</td>
<td>1.35</td>
</tr>
<tr>
<td>Sexual Sensations</td>
<td>-0.15</td>
<td>0.02</td>
<td>0.86</td>
<td>0.76</td>
<td>0.97</td>
</tr>
<tr>
<td>General STI/HIV Discussion</td>
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<td>0.00</td>
<td>0.76</td>
<td>0.69</td>
<td>0.84</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 1 (16+)</td>
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<td>0.00</td>
<td>2.42</td>
<td>1.55</td>
<td>3.78</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 2 (9–15)</td>
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<td>0.21</td>
<td>1.33</td>
<td>0.85</td>
<td>2.08</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 3 (5–8)</td>
<td>0.45</td>
<td>0.03</td>
<td>1.57</td>
<td>1.04</td>
<td>2.38</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 4 (1–4)</td>
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<td></td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dating for Sex Only = 0 (Yes)</td>
<td>0.18</td>
<td>0.53</td>
<td>1.20</td>
<td>0.69</td>
<td>2.08</td>
</tr>
<tr>
<td>Dating for Sex Only = 1 (No)</td>
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<td></td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scores of 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Behaviour</td>
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<td>0.83</td>
<td>0.98</td>
<td>0.84</td>
<td>1.15</td>
</tr>
<tr>
<td>Sexual Sensations</td>
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<td>0.23</td>
<td>1.10</td>
<td>0.94</td>
<td>1.28</td>
</tr>
<tr>
<td>General STI/HIV Discussion</td>
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<td>0.02</td>
<td>0.87</td>
<td>0.77</td>
<td>0.98</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 1 (16+)</td>
<td>0.36</td>
<td>0.22</td>
<td>1.44</td>
<td>0.81</td>
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<tr>
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<td>0.04</td>
<td>1.73</td>
<td>1.04</td>
<td>2.87</td>
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<tr>
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<td>0.96</td>
<td>1.01</td>
<td>0.59</td>
<td>1.73</td>
</tr>
<tr>
<td>Lifetime Sexual Partners = 4 (1–4)</td>
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<td></td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dating for Sex Only = 0 (Yes)</td>
<td>0.45</td>
<td>0.15</td>
<td>1.57</td>
<td>0.84</td>
<td>2.94</td>
</tr>
<tr>
<td>Dating for Sex Only = 1 (No)</td>
<td>0.00</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Low sexual risk (scores = 0–2) was the reference category. Reference categories for categorical predictors were set to zero and were as follows: Lifetime Sexual Partners = 4 (1–4 partners); Dating for Sex Only = 1 (No). Statistically significant differences noted with p values in bold typeface.

The reference group for the outcome Sexual Risk was the lowest risk group—those with sexual-risk scores of zero to two. Results for the final model showed that there were significant associations between the outcome and all of the predictors (i.e., Sexual Behaviour, Sexual Sensations, General
Comparing those in the highest sexual risk category (scores of 7+) with those in the lowest risk category (reference group, scores 0–2), showed that Sexual Behaviour, General STI/HIV Discussion, and Number of Lifetime Sexual Partners (16+) were significant in distinguishing these two groups from each other while holding all other variables constant. The participants who had higher Sexual Behaviour scores were more likely to be in the group of participants who had the highest sexual risk scores (7+), rather than the group of participants who were lower in sexual risk, while controlling for the influence of the other model variables. For each unit increase in the Sexual Behaviour score, the odds of being in the group that had the highest sexual risk scores increased by 21%. The participants who had higher scores on the General STI/HIV Discussion subscale were less likely to be in the highest sexual risk group. For each unit increase in the General STI/HIV Discussion scores, the odds of being in the group that had the highest risk scores were lower by 27%. For lifetime sexual partners, those who had 16+ partners were three times (OR = 3.30) more likely to be in the highest sexual risk group than were those with fewer partners. Those who were dating for sex only were twice as likely to be in the high risk group, rather than in the low risk group. The relationship between Sexual Sensations and Sexual Risk was not statistically significant.

Comparing those in the second highest sexual risk category (scores of 4–6) with those in the lowest sexual risk category (referent group, scores of 0–2) showed some differences in the predictors that distinguished the women in these two groups. The predictor Dating for Sex Only was not statistically significant in distinguishing these two groups; however, Sexual Sensations and Number of Lifetime Sexual Partners (5–8) were statistically significant, while controlling for the influence of the other variables. Those who had five to eight lifetime sexual partners were 1.6 times more likely to be in the highest sexual risk group, while those with 16+ partners were 2.4 times as likely.

The evaluation of model utility was discussed in Chapter 3. To characterize the model as useful, the overall percentage accuracy rate had to be 25% greater than the proportional by chance accuracy.
rate. This criterion was satisfied suggesting that the model was useful. Similar to the findings in Chapter 3, when comparing the 98 participants who were correctly classified as being at high sexual risk, with all other participants, the t test results showed that for the ratio level variables Sexual Behaviour, Sexual Sensations, and General STI/HIV Discussion, these participants differed significantly from all other participants (see Table 4.7). Levene's test for equality of variances was used to test the assumption of homogeneity of variance for the t tests. Because this assumption was not met, the values for parameter estimates that did not equal variances assumed were reported.

Table 4.7 Comparison of Means of Correctly Classified High Sexual Risk Group and All Other Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>t</th>
<th>df</th>
<th>Sig.</th>
<th>Mean Diff.</th>
<th>Std. Error Diff.</th>
<th>95% CI of Diff.</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Sexual Behaviours</td>
<td>7.9</td>
<td>146.5</td>
<td>0.0</td>
<td>1.2</td>
<td>0.2</td>
<td>0.9</td>
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<tr>
<td>Equal variances not assumed</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Sensations</td>
<td>6.6</td>
<td>142.0</td>
<td>0.0</td>
<td>1.2</td>
<td>0.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General STI/HIV Discussion</td>
<td>-4.1</td>
<td>142.3</td>
<td>0.0</td>
<td>-0.7</td>
<td>0.2</td>
<td>-1.0</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.3</td>
</tr>
</tbody>
</table>

In relation to the categorical variables, when comparing the 98 participants predicted to be in the high sexual risk group with all the other participants, the chi-square results showed that these participants differed significantly in terms of the Number of Lifetime Sex Partners and Dating for Sex Only.
Discussion

Previous research has shown that the most significant predictor of engaging in safer sexual activity (i.e., condom use) with a sexual partner is direct communication with the partner about the matter (Noar et al., 2006; Sheeran et al., 1999). We set out to examine how dating modality (i.e., meeting partners FTF or through CMC), time spent communicating per week with partners (the number of hours spent in FTF communication and CMC), sexual self-disclosure, and safer sex communication influenced women's sexual risk. Unlike Chapter 3, the number of hours per week spent communicating FTF was not a significant contributor in the overall sexual risk model. The fact that communicating with partners using CMC did not predict sexual risk is surprising considering the literature that has suggested that CMC accelerates the “getting to know you” stage compared with FTF interactions (Baker, 2005). CMC has been purported to accelerate this stage primarily because of the increased frequency of communication, which allows for more rapid development of rapport and intimacy (Levine, 2000; Walther, 1996). As previously discussed, an explanation for the finding that neither CMC nor FTF communication influenced sexual risk concerns the fact that today, regardless of how people meet (online or FTF), they are likely using a combination of forms of communication (CMC and FTF) to communicate with partners. This makes it difficult to determine whether one mode of communication is any more influential than the other in terms of relationship development and sexual risk.

In terms of sexual self-disclosure, even though Sexual Sensations was a significant contributor in the overall sexual risk model, it was not a significant predictor of sexual risk for those in the highest risk group. Our findings revealed that women who discuss their previous sexual behaviour with new partners are more likely to engage in high-risk sexual behaviour than are women who do not participate in such discussions. One reason may be that when previous sexual behaviours are discussed with a new partner, they are discussed in a manner that eroticizes them, and as such, facilitates further erotic discussion about sexual desire and a potential future sexual encounter. This can also increase one's
sexual arousal, which has been associated with sexual risk behaviour (Ariely & Loewenstein, 2006). Those using CMC to communicate may be particularly prone to engage in such discussions because this mode of communication provides a sexual space for people to locate themselves that is somewhere between reality and fantasy (Ross, 2005). For many people, expressing one’s romantic fantasy and creating an ideal romantic encounter can be enhanced when using CMC (Finkel, Eastwick, Karney, Reis, & Sprecher, 2012; Lawson & Leck, 2006). The expression of sexual fantasy and desire in a semi-hypothetical interaction can be seen as experimenting with sexual behaviour without actually engaging in it (Ross, 2005). Some studies have shown that such semi-hypothetical interactions do not necessarily include the intention to use condoms or engage in safer sexual activity (Ariely & Loewenstein, 2006). Other studies have found an association between erotic online chatting and sexual risk in “real” life (Adam, Murphy, & de Wit, 2011). Whereas erotic discussions about sexual behavior may be considered a “turn on” by many, discussions about the practicalities of sex (such as previous STI/HIV infection and testing practices) are more mechanical in nature and likely considered to be a “turn off.” Consequently, once communication about sex starts down a trajectory that entails erotic conversation, it seems unlikely that this trajectory can be easily reversed.

This research highlights that women discuss STIs and HIV in general. Our findings support the literature in that those willing to initiate a discussion about STI/HIV prevention, in general, are less likely to engage in high-risk sexual behaviour. Because of the dyadic nature of sex, the engagement in safer sexual behaviour not only requires communication but also requires the cooperation between sexual partners. Condoms are still the best way to prevent STIs/HIV, yet there is a power differential between men and women in heterosexual relationships and women must negotiate with their partner to use a condom (Allen, Emmers-Sommer, & Cromwell, 2002; Noar et al., 2006). Social norms related to femininity conflict with women’s communication about their sexual desire in that their communication may be associated with casual sex and may signal promiscuity, which may be interpreted negatively by a
partner (East et al., 2010). Several studies have shown that women’s inability to communicate about safer sex has resulted in incidents of violence and coercion (Beres, 2010). Other studies have shown that raising a discussion about safer sex arouses suspicion and violates trust. For women, but not for men, this means that they would not be considered a trustworthy or low-risk partner (Gavin, 2000).

The finding that the number of lifetime sexual partners was a significant predictor of sexual risk suggests that more education is needed about having the risk associated with having multiple concurrent sexual partners and many serial sexual partners. While having multiple concurrent partners significantly increases an individual’s risk of acquiring an STI/HIV (Drumright, Gorbach, & Holmes, 2004; Kraut-Becher & Aral, 2003; Mah & Shelton, 2011), a series of monogamous partners may also increase one’s sexual risk (Misovich et al., 1997; Ott, Katschke, Tu, & Fortenberry, 2011). Monogamy, characterized by having one lifetime partner or a long-term relationship, and once promoted as an effective method to protect against contracting STIs/HIV, has become confused with other variations of monogamy, for example, serial monogamy. It is generally believed that those who have been in a committed relationship are at a lower risk of contracting an STI or HIV than are those not in committed relationships. This idea may have contributed to the belief that monogamy serves as a form of safer sex regardless of whether the partner’s STI/HIV status is known. This perception may contribute to a false sense of security among individuals entering into new partnerships because the need to engage in discussions about safer sex may be negated if there is no perceived need to do so. Where serial monogamy is concerned, people make assumptions that each successive partner they are involved with is "clean" despite the fact that no communication about or testing for STIs or HIV has occurred. What many do not realize is that people do not usually purposely pass on STIs/HIV, and if infected, most remain unaware of their infection because of the asymptomatic nature of many STIs and HIV. While most people believe that they have considerable insight into a partner’s character, and express

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See Serial monogamy refers to a series of brief sexually exclusive relationships.
confidence in the accuracy of their impressions, research findings indicate that an individual’s
perception of their partner’s STI risk factors are often not in agreement with that partner’s self-reported
behaviour (Stoner et al., 2003; Viberga et al., 2006).

Currently, few interventions exist to assist women in communicating about their sexual desire
and concerns about sexual risk. Prevailing gendered sexual scripts place women at a disadvantage in
initiating discussions about safer sex. Despite the development of egalitarian views about men’s and
women's romantic and sexual relationships, research demonstrates that sexual scripts and dating
expectations are still very traditional in nature (Smith & Duggan, 2013).

The current study had several limitations, many of which have been discussed in Chapter 2.
Additional limitations relate to most of the literature pertaining to sexual risk being focussed on sexual
risk among adolescents and young adults and not among adults 25 years of age and older. Therefore,
generalizing to the adult population is limited. Furthermore, much of the research has been conducted
with convenience samples of college students. College students represent a biased sample of the
population because they tend to be healthier and better educated than the general adult population.
Additional limitations concern the sample itself. Because the women in this sample were not
representative of all adult women, the value of generalizing many of these findings to other
subpopulations of women is unknown. In addition, while STI/HIV research problems do not ethically
lend themselves to experimental designs, further longitudinal studies would provide more support of
the causal links between the study variables.

To date, few studies have focused on women’s communication with their male partners about
sex, and how this may influence the type of sexual behaviour they engage in. Traditional prevention
education has focussed more on the mechanics of sex and promoted a "condoms are good for all"
message. This has had a detrimental effect on the sexual well-being of people, particularly women,
because the realities of their everyday lived experiences regarding sexual encounters have not been
considered. The evidence indicates that although women have the desire to discuss sexual well-being issues with their healthcare practitioners (Dyer & das Nair, 2013; Kramer, Lorenzon, & Mueller, 2004; Wendt, Lidell, Westerståhl, Marklund, & Hildingh, 2011), the majority of healthcare practitioners avoid the subject (Gott, Galena, Hinchliff, & Elford, 2004; Verhoeven et al., 2003). The findings from this study, along with further research, may assist in developing and implementing an enhanced safer-sex communication intervention that takes into account the power dynamics within heterosexual relationships. Such an intervention might provide adult women with direct and planned instructions for functional sexual communication skills that could be used in typical sexual situations, in an effort to prevent them from engaging in unwanted high-risk sexual activity. Healthcare professionals are well positioned to initiate and discuss these sexual well-being issues with women, and to deliver an intervention that is relevant to the context of women's sexual lives.
Chapter 5: Do Gendered Sexual Scripts Influence Whether Women Fake Orgasm?

Introduction

In chapters 3 and 4, we examined the factors that influence women’s sexual risk and found that there is an association between women’s expectation to communicate trust and relationship closeness with a partner and high risk sexual behaviour. We also found that there is an association between higher risk sexual behaviour and conformance to traditional sexual scripts. Furthermore, our findings indicate that when women communicate about STIs/HIV, they are more likely to engage in safer sexual activity. In this chapter, we focus not on sexual risk, but rather on another important aspect of women’s sexual well-being, namely orgasm.

Orgasm can be defined as the "combination of waves of a very pleasurable sensation and mounting of tensions, culminating in a fantastic sensation and release of tension" (Bancroft, 1989 p. 81). During penile-vaginal intercourse (PVI),¹⁹ men are much more likely than are women to achieve orgasm (Richters, de Visser, Rissel, & Smith, 2006; Salisbury & Fisher, 2013; 2008). Although several studies have shown that orgasm is considered to be a socially desirable outcome and goal of a sexual encounter (Jackson & Scott, 2001; Lavie & Willig, 2005; Opperman et al., 2014), most women do not reliably and consistently achieve orgasm during PVI (Lavie-Ajayi & Joffe, 2009; Potts, 2000a; Salisbury & Fisher, 2013; Wallen & Lloyd, 2008).²⁰ This occurs because the majority of women require direct clitoral stimulation to achieve orgasm, which is often lacking during PVI. While 75% to 95% of men report achieving orgasm

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¹⁹ In this paper, PVI is also referred to as sexual intercourse in the context of heterosexual sex.
²⁰ We acknowledge that orgasm is not always the goal of sex; however, research has found that women and men report greater levels of satisfaction when they achieve orgasm during sex.
most of the time during PVI, only 25% to 39% of women achieve orgasm this way (Hite, 1976; Laumann & Mahay, 2002; Salisbury, 2010; Wade et al., 2005).

There has been a societal expectation for heterosexual women to orgasm during PVI, which according to Tiefer (1995), has been part of a socially constructed gender role. According to sexual script theory (Simon & Gagnon, 2003), the expectation for women to orgasm during PVI has been predicated on beliefs of masculinity and femininity that translate to a patterned way of interacting between men and women in romantic and sexual encounters (Simon & Gagnon, 1986). Many scholars argue that the societal emphasis on PVI, and orgasm for both men and women during PVI, not only renders women's lack of orgasm as problematic and dysfunctional, but also pressures women into feeling they must end a sexual encounter with PVI because this sexual act usually signifies the end a sexual encounter and thus is expected to occur (Cacchione, 2007; Hayfield & Clarke, 2012; Holland et al., 2004; Lavie-Ajayi, 2005; McPhillips et al., 2001). Other scholars agree and have asserted that PVI is a compulsory part of heterosexual sex, which dictates an expected prescriptive sequence of sexual activities (Morokoff, 2000; Schick et al., 2008): foreplay (kissing, caressing, manual and/or oral stimulation) leads to PVI, which in turn usually leads to orgasm for men (Braun, Gavey, & McPhillips, 2003; Cacchione, 2007). PVI signifies the final sexual act regardless of whether women have achieved orgasm (McPhillips et al., 2001).

This sequence of events has been referred to as the standard heterosexual sexual script with the majority of men and women holding the belief that women should orgasm during PVI. As a result, they feel pressure to achieve this endpoint (Muehlenhard & Shippee, 2010; Salisbury & Fisher, 2013). This not only creates pressure for men to provide women with an orgasm during PVI, but also pressures women to show their partners that they have had an orgasm, more to prove the value of their partner's technique than to provide pleasure for themselves (Bryan, 2001; Hite & Hinchliff, 2004; Muehlenhard & Shippee, 2010; Wade et al., 2005).
Reassuring men about their sexual technique becomes a necessary aspect of sexual encounters for some women (Cacchione, 2007; Roberts et al., 1995). For many women (and for some men), such pressure can lead to the phenomenon of faking an orgasm (Holland et al., 2004; Muehlenhard & Shippee, 2010; Roberts et al., 1995). Indeed, the research evidence indicates that some women fake orgasms because it serves the needs of their partners. For example, their partner’s orgasm may be forthcoming, or their partner is waiting for or expecting them to reach orgasm. Some evidence shows that some women may fake orgasm because of the perceived positive relational benefits gained, for instance, a happy and satisfied partner (Wade et al., 2005). Others report faking orgasm as a broader strategy to retain a partner and to prevent infidelity (Kaighobadi, Shackelford, & Weekes-Shackelford, 2012). Other reasons for faking orgasm have included the need for sex to end, the fact that orgasm was unlikely to occur, and not wanting to hurt a partner’s feelings (Bryan, 2001; Muehlenhard & Shippee, 2010; Wiederman, 1997).

It appears that some women can place emotional and relational aspects of their relationships over and above their own sexual pleasure and safety in an effort to satisfy their male partners (Jones & Oliver, 2007; Ortiz-Torres et al., 2003; Wingood & DiClemente, 2000). This can create serious barriers for many women in terms of their sexual well-being as women may not mention or acknowledge their sexual desires or what they find sexually pleasurable or satisfying.

Although a lack of orgasm for many women does not mean an absence of sexual enjoyment, Armstrong et al. (2012) found that women in their study who experienced orgasm during a sexual encounter were five to six times more likely to report that they enjoyed the encounter. Some women, however, appear ambivalent about whether they achieve orgasm for their own enjoyment and satisfaction, but rather care more about it for the sake of their partner’s enjoyment and satisfaction (Nicolson & Burr, 2003). The ambivalence some women feel may be influenced by the emphasis they place on love and the emotional or relational aspects of their relationship, rather than on sexual
intercourse itself (Roberts et al., 1995). Muehlenhard and Peterson (2005) coined the term the “missing discourse of ambivalence” to represent the notion that women's interest in sexual activity is linked more to the outcomes of the sexual activity (i.e., intimacy with a partner, satisfying a partner's needs, reducing any strain in the relationship) than to the actual sexual activity itself.

The difference between the genders in terms of the occurrence of orgasm during PVI is often referred to as the “orgasm gap” (Conley, Moors, Matsick, Ziegler, & Valentine, 2011; Potts, 2000a; Wade et al., 2005). Is it the case that women simply do not orgasm as easily as men? Hollway (2004) argued that there exists in society a “male sexual drive discourse” in which men's sexuality has been constructed as an inherent biological need or drive that is strongly sexually motivated, and in need of satisfying, usually by PVI resulting in orgasm. Women's sexuality on the other hand has been viewed primarily as a response to men's sexuality and the male sexual drive discourse (Hollway, 2004). As Fine (1988) identified, there is no equivalent or corresponding discourse of desire or sexual drive for women. Little to no acknowledgment has been given to the complexity of women's sexuality (Morokoff, 2000; Nicolson & Burr, 2003). In considering ability and the time needed to achieve orgasm without PVI, some studies have shown that little difference exists between men and women (Graham, 2010). According to Connell (2005), gender differences in sexuality have been developed within traditional models of masculine sexuality. Although heterosexual masculinity and femininity are often presented in opposition to each other, Holland et al. (2004) argued that heterosexuality is in fact defined and regulated by masculine ideology. Accordingly, femininity has been constructed on male terms and in relation to men’s expectations (Holland et al., 2004).

Studies that have considered the influence of gender on the occurrence of orgasm have shown that the orgasm gap narrows in relation to men’s and women’s experiences of orgasm depending on the type of sexual activity engaged in and the nature of their relationship (Alexander et al., 2012; Conley et al., 2011; Graham, 2010). For example, Alexander et al. (2012) found that the gap between women and
men's frequency of orgasm decreased when women were in long-term relationships with partners who were more likely to engage in non-PVI practices involving direct clitoral stimulation during sexual encounters, rather than being involved in short-term relationships or “hook ups.” These results indicate that biological differences between men and women do not appear to affect women's ability to orgasm. Conley et al. (2011) also examined well-established gender differences in sexual behaviour, and found that several of these purported differences were not what they seemed in that they narrowed considerably or were completely eliminated when empirically scrutinized.

Currently, there is little understanding about the way in which the positive and pleasurable aspects of women's sexual experiences in relation to orgasm affect their sexual well-being and sexual satisfaction, and consequently their sexual risk. A lack of consideration has been given to the broader cultural and social contexts that influence and shape sexual behaviour for women. Although several qualitative studies have examined the experience of women's orgasms, there have been few recent quantitative studies contributing to the literature in this area. What has not been addressed is how often adult women fake orgasm and whether the predictors of faking orgasms, which have been described in the qualitative research literature, would be reported by women 25 years of age and older. It should be noted that we do not intend to suggest that faking an orgasm is always a negative experience. Indeed, the act of faking an orgasm might play an important role in a relationship. For example, vocalizations that suggest pleasure might encourage a partner to continue with a particular practice that a woman finds pleasing. Alternatively, faking an orgasm can lead to the cessation of which may be the desired outcome.

The purpose of this study was to determine the prevalence of faking orgasm among heterosexual women who were dating and sexually active, and to examine the phenomenon of women's faking an orgasm and the factors that contribute to this during a sexual encounter. Orgasm, as it relates to women's sexual pleasure and ultimately their sexual well-being, is not well understood in the context
of their sexual relationships. We were specifically interested in determining the prevalence of faking orgasm among adult heterosexual women who were dating and sexually active. We were also interested in examining whether there was an association between feelings of pressure to orgasm, the importance placed on achieving orgasm, satisfaction with and frequency of orgasm and having ever faked an orgasm. We hypothesized that all four of these factors would significantly influence women’s propensity to fake an orgasm, particularly considering the societal emphasis placed on orgasm and the influence that gender roles exert.

Methods

Study design

A cross-sectional, correlational survey design was used to collect the data. Data were collected with a self-report questionnaire that was developed specifically for this study. The questionnaire was made available online to women over the age of 25 years who lived in the United States.

Sample and data collection

The population of interest was adult women living in the United States who were dating or recently in a new relationship (formed within the past year) and whose most recent sexual encounter was with a partner of the opposite sex. The selection criteria for the sample specified that the women must: (a) be currently dating or in a new relationship formed within the past year, (b) be 25 years of age or older, (c) have had at least one sexual encounter with the dating partner within the past year, and (d) be living in the United States.

Amazon Mechanical Turk (AMT) was used to collect the data through an online format. Social scientists have described AMT as an online source that provides researchers with a relatively inexpensive and rapid way of obtaining high-quality data from diverse samples (Buhrmester et al., 2011; Ross et al., 2010). The online questionnaire contained 148 questions, which asked participants to report
on their dating and sexual experiences in general. The survey took approximately 30 to 40 minutes to complete. Participants were paid a nominal fee ($1.00) for a completed questionnaire.

**Measures**

*Age and number of sexual partners in the last year*

Detailed information about the sociodemographic and sexual risk factor questions that were asked of participants can be found in Chapter 2. Hosmer, Lemeshow, and Sturdivant (2013) suggest that predictor variables should be chosen based on bivariate relationships ($p$ values $\geq .25$) between the outcome and a predictor, or if the predictor is deemed to be theoretically relevant. While all of the sociodemographic variables were deemed to be theoretically relevant none of these variables met the $p$ value criteria. Because of their particular importance to the outcome variable, we retained, *Age* and the *Number of Lifetime Sexual Partners*, in the analysis. One closed-ended question was asked of the participants about their age, and one about the number of sexual partners in the last year.

**Orgasm**

As discussed above, orgasm refers to very pleasurable sensations and the mounting of tensions, which can vary in intensity and frequency, and that culminate in an extraordinary sensation and release of tension during sexual activity (Bancroft, 1989 p. 81). In women, orgasm can occur as the result of various sexual activities, most often involving direct stimulation of the clitoris and sometimes as a result of penile-vaginal penetration. To measure the frequency and occurrence of orgasm, as well as women's satisfaction with orgasm, the participants were asked to complete McIntyre-Smith and Fisher’s (2011) *Female Orgasm Scale* (FOS), which consists of two subscales, one measuring the frequency of orgasm during different sexual activities (4 items) and the other measuring satisfaction with orgasm (2 items). The participants were asked to indicate the percentage of times that orgasm occurred during specified sexual activities using an 11-point scale that ranged from 0% to 100% (increasing by increments of 10%).
To measure satisfaction with orgasm, the participants were offered a seven-point scale that ranged from one = “very unsatisfied” to seven = “very satisfied”. Higher scores on the frequency of orgasm scale represented a higher frequency of female orgasm during partnered sexual activities, while higher scores on the satisfaction with orgasm scale represented greater satisfaction with their orgasms overall.

**Importance of and pressure to achieve orgasm**

The importance and pressure to achieve orgasm refers to the degree of importance placed on achieving orgasm as well as perceived pressure for this to happen for women during vaginal-penile penetration. The items for the *Importance of Orgasm* and *Pressure to Achieve Orgasm* scales (see Table 5.1) were gathered from the unpublished Coital Orgasm Questionnaire (COQ) developed by Salisbury (Salisbury, 2010). All of these items were measured on a seven-point Likert-type scale that ranged from one = "strongly disagree" to seven = "strongly agree". The predictors, *Importance of my Orgasm to me*, *Importance of my Orgasm to my Partner*, and *Pressure to Orgasm*, were created by the investigators after discussing the COQ items with Salisbury and grouping those items that were deemed to be conceptually similar. The grouped items were summed and averaged to create an overall subscale score for each measure. Higher scores represented more agreement with the construct. The grouped items were as follows:

**Importance of My Orgasm to Me**: 1) The occurrence of my orgasm is important to me, 2) Orgasm is my goal in having sexual intercourse, and 3) I expect to have an orgasm during sexual intercourse.

**Importance of My Orgasm to My Partner**: 1) The occurrence of my orgasm is important to my partner, 2) My orgasm is my partner’s goal in having sexual intercourse, and 3) My partner expects me to have an orgasm during sexual intercourse.

**Pressure to Orgasm**: 1) I feel pressure to have an orgasm during sexual intercourse and 2) My partner feels pressure to make me orgasm during sexual intercourse.
**Ever faked an orgasm**

*Ever Faked an Orgasm* refers to a woman faking an orgasm during sexual intercourse. In other words, she acted out an orgasm without having had one. The participants were asked to agree or disagree with the statement, "I have (at one time or several times) faked an orgasm during sexual intercourse." The item was measured using a seven-point Likert-type scale with anchored response options ranging from one = *strongly disagree* to seven = *strongly agree* to capture variations in the frequency of faking and the varying degrees of faking. For example, a participant may have selected “slightly agree” if they had faked orgasm once or twice in their lifetime (e.g., by making certain sounds) or if they had infrequently responded affirmatively to the question, "Did you have an orgasm" when they did not. In comparison, someone may have selected “strongly agree” because they frequently faked an orgasm or frequently responded affirmatively to questions about whether they had experienced an orgasm when they had not. The response option coded as four was categorized as a neutral response because the response option anchor stated neither agree nor disagree. This variable was then dichotomized as agree or disagree with responses of five through seven recoded as one = *agree*, had faked an orgasm, and responses one through three recoded as zero = *disagree*, had not faked an orgasm. Neutral responses (i.e., 4) were coded as missing and not included in the analysis.

**Analyses**

Univariate statistics (frequencies and percentages) were computed for the variables age and number of lifetime sexual partners, responses to questions about the frequency and satisfaction of orgasm during different sexual activities in general, and the importance of and pressure to achieve orgasm during PVI. We used hierarchical logistic regression analysis to examine the relationships between the outcome variable, *Ever Faked an Orgasm*, and the variables, *Age* and *Number of Lifetime Sexual Partners*, as well as the factors related to the *Importance of and Pressure to Achieve Orgasm* (i.e., *Importance of My Orgasm to My Partner, Importance of My Orgasm to Me, Pressure to Achieve Orgasm*,
Frequency of Orgasm, and Satisfaction with Orgasm). The covariates Age and Number of Lifetime Sexual Partners were entered in step one of the logistic regression analysis to examine the influence of the other predictors while holding these variables constant.

Results

Descriptive statistics of orgasm occurrence, satisfaction, and faking orgasms

The sample characteristics have been described in detail in Chapter 3 (see Table 3.1). The occurrence of an orgasm during PVI was identified as important to 80.0% of the participants with 59.0% agreeing that orgasm was their goal in having PVI. Although the occurrence and goal of orgasm was important, an overwhelming majority of the participants (85.0%) reported that their ability to achieve orgasm during PVI was more important to their partner, and more of an expectation of their partner than it was for them. Of interest, 63.0% of the participants had faked an orgasm during PVI, with just over one half of the participants (56.0%) reporting that during PVI, their partners felt pressure to make them achieve an orgasm. A small percentage of women (7.5%) reported that they did not know whether they had faked an orgasm. Overall, the majority of the women reported being satisfied with their orgasms during sexual activity with a partner (see Table 5.1).
Table 5.1 Descriptive Statistics—Occurrence, Satisfaction, and Faking an Orgasm during Penile-Vaginal Intercourse

<table>
<thead>
<tr>
<th>Question</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occurrence of MY orgasm during sexual intercourse (penile/vaginal intercourse),...</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance of my Orgasm to me</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is important to me</td>
<td>1,010 (79.8)</td>
<td>106 (8.4)</td>
<td>150 (11.8)</td>
</tr>
<tr>
<td>My goal in having intercourse</td>
<td>741 (58.5)</td>
<td>210 (16.6)</td>
<td>315 (24.9)</td>
</tr>
<tr>
<td>I expect to have an orgasm during intercourse</td>
<td>838 (66.2)</td>
<td>136 (10.7)</td>
<td>292 (23.1)</td>
</tr>
<tr>
<td>Importance of my Orgasm to my Partner</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is important to my partner</td>
<td>1,076 (85.0)</td>
<td>102 (8.1)</td>
<td>88 (7.0)</td>
</tr>
<tr>
<td>Is my partner's goal in having intercourse</td>
<td>843 (66.6)</td>
<td>188 (14.8)</td>
<td>235 (18.6)</td>
</tr>
<tr>
<td>My partner expects my orgasm during intercourse</td>
<td>986 (77.9)</td>
<td>138 (10.9)</td>
<td>142 (11.2)</td>
</tr>
<tr>
<td>Pressure to Orgasm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel pressure to have an orgasm during intercourse</td>
<td>569 (44.9)</td>
<td>209 (16.5)</td>
<td>488 (38.5)</td>
</tr>
<tr>
<td>My partner feels pressure to make me orgasm during intercourse</td>
<td>711 (56.2)</td>
<td>206 (16.3)</td>
<td>348 (27.6)</td>
</tr>
<tr>
<td>I have Faked an Orgasm During Sexual Intercourse</td>
<td>795 (62.8)</td>
<td>95 (7.5)</td>
<td>376 (29.7)</td>
</tr>
<tr>
<td>Satisfaction with Orgasm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction with Number of Orgasms During Sexual Activity with a Partner</td>
<td>879 (69.4)</td>
<td>95 (7.5)</td>
<td>292 (23.1)</td>
</tr>
<tr>
<td>Satisfaction with Quality/Experience of Orgasms During Sexual Activity with a Partner</td>
<td>934 (73.8)</td>
<td>101 (8.0)</td>
<td>231 (18.2)</td>
</tr>
</tbody>
</table>

*Note.* For Satisfaction with Number of Orgasms, and Satisfaction with Quality/Experience of Orgasm, the responses “very satisfied”, “moderately satisfied”, and “slightly satisfied” were categorized as “satisfied” whereas the responses “slightly unsatisfied”, “moderately unsatisfied” and “very unsatisfied” were categorized as “unsatisfied”. For both groups the responses “neither agree nor disagree” and “neither satisfied nor unsatisfied” were categorized as “neutral”.

In terms of the frequency with which the participants in this study achieved orgasm during different sexual activities with a partner, two-thirds reported achieving orgasm at least 80% or more of
the time when they themselves manipulated or rubbed their clitoris. Slightly more than one-half reported achieving orgasm at least 80% or more of the time during PVI when direct clitoral stimulation was applied. Of interest, slightly less than one-half reported achieving orgasm at least 80% or more of the time when their partner stimulated their clitoris manually using his hand or orally (see Table 5.2).

**Table 5.2 Frequency of Orgasm during Various Sexual Activities**

<table>
<thead>
<tr>
<th>Frequency of Orgasm (% of time)</th>
<th>Associated with intercourse with a partner, including vaginal penetration and direct clitoral stimulation</th>
<th>Associated with manual stimulation of the clitoris by a partner</th>
<th>Associated with manipulation or rubbing the clitoris by oneself when with a partner</th>
<th>Associated with oral stimulation of the clitoris by a partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>53 (4.3)</td>
<td>103 (8.3)</td>
<td>66 (5.9)</td>
<td>116 (9.6)</td>
</tr>
<tr>
<td>10%</td>
<td>47 (3.8)</td>
<td>71 (5.7)</td>
<td>40 (3.6)</td>
<td>59 (4.4)</td>
</tr>
<tr>
<td>20%</td>
<td>36 (2.9)</td>
<td>50 (4.0)</td>
<td>39 (3.5)</td>
<td>51 (4.2)</td>
</tr>
<tr>
<td>30%</td>
<td>60 (5.6)</td>
<td>70 (5.6)</td>
<td>43 (3.8)</td>
<td>54 (4.5)</td>
</tr>
<tr>
<td>40%</td>
<td>66 (5.3)</td>
<td>68 (5.6)</td>
<td>43 (3.8)</td>
<td>74 (6.1)</td>
</tr>
<tr>
<td>50%</td>
<td>100 (8.1)</td>
<td>104 (8.4)</td>
<td>79 (7.0)</td>
<td>100 (8.3)</td>
</tr>
<tr>
<td>60%</td>
<td>90 (7.3)</td>
<td>95 (7.7)</td>
<td>66 (5.9)</td>
<td>86 (7.1)</td>
</tr>
<tr>
<td>70%</td>
<td>127 (10.3)</td>
<td>128 (10.3)</td>
<td>77 (6.8)</td>
<td>116 (9.6)</td>
</tr>
<tr>
<td>80%</td>
<td>179 (14.5)</td>
<td>131 (10.6)</td>
<td>98 (8.7)</td>
<td>136 (11.2)</td>
</tr>
<tr>
<td>90%</td>
<td>206 (16.7)</td>
<td>189 (15.3)</td>
<td>159 (14.1)</td>
<td>152 (12.6)</td>
</tr>
<tr>
<td>100%</td>
<td>262 (21.2)</td>
<td>230 (18.6)</td>
<td>416 (36.9)</td>
<td>265 (21.9)</td>
</tr>
<tr>
<td>Missing/Not applicable</td>
<td>31</td>
<td>27</td>
<td>140</td>
<td>57</td>
</tr>
</tbody>
</table>

**Logistic regression analysis**

The results of the logistic regression analysis showed that there was a significant association between *Ever Faked an Orgasm* and the selected predictors in the model. The overall model was significant at < .001 (95% confidence level) based on the chi-square statistic (see Table 5.3) with 70.8% of the responses predicted correctly (see Table 5.4).
Table 5.3 Omnibus Tests of Model Coefficients of Logistic Regression of Ever Faked an Orgasm on Selected Predictors

<table>
<thead>
<tr>
<th>Omnibus Tests of Model Coefficients</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Chi-Square</td>
<td>df</td>
<td>Sig.</td>
</tr>
<tr>
<td>Step 1</td>
<td>79.76</td>
<td>5</td>
<td>0.00</td>
</tr>
<tr>
<td>Block</td>
<td>79.76</td>
<td>5</td>
<td>0.00</td>
</tr>
<tr>
<td>Model</td>
<td>80.02</td>
<td>7</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Table 5.4 Classification Table of Predicted versus Observed Cases of Ever Faked an Orgasm

<table>
<thead>
<tr>
<th>Predicted</th>
<th>Faked an Orgasm</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree</td>
<td>Agree</td>
<td>Percentage Correct</td>
</tr>
<tr>
<td>Observed</td>
<td>Disagree</td>
<td>Agree</td>
<td>17.7</td>
</tr>
<tr>
<td>Faked an Orgasm Disagree</td>
<td>52</td>
<td>241</td>
<td></td>
</tr>
<tr>
<td>Faked an Orgasm Agree</td>
<td>47</td>
<td>647</td>
<td>93.2</td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
<td></td>
<td>70.8</td>
</tr>
</tbody>
</table>

Table 5.5 shows the odds ratios (OR) of the outcome Ever Faked an Orgasm given the predictors in the model, after controlling for Age and Number of Lifetime Sexual Partners. The regression coefficients for the predictors Pressure to Orgasm and Satisfaction with Orgasm were statistically significant (as measured by Wald statistics), indicating that they were associated with the outcome, whereas the regression coefficients for Age, Number of Lifetime Sexual Partners, and Frequency of Orgasm were not statistically significantly associated with Ever Faked an Orgasm. These results show that participants' perceived pressure to orgasm (from themselves or from their partner) increases the likelihood of having Ever Faked an Orgasm by 1.35 times. For each one unit increase in Pressure to Orgasm, the odds of faking increased by 35%. Satisfaction with orgasm decreased the odds of faking orgasm. For each one unit increase in satisfaction with orgasm, the odds of faking decreased by 13%. See Table 5.5.
### Table 5.5 Logistic Regression—Ever Faked an Orgasm

<table>
<thead>
<tr>
<th>Parameter</th>
<th>B</th>
<th>Sig.</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever faked an orgasm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.25</td>
<td>0.59</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.01</td>
<td>0.31</td>
<td>1.01</td>
<td>0.99</td>
<td>1.03</td>
</tr>
<tr>
<td>Number of Lifetime Sexual Partners</td>
<td>0.00</td>
<td>0.78</td>
<td>1.00</td>
<td>0.99</td>
<td>1.01</td>
</tr>
<tr>
<td>Step 2&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orgasm is Important to my Partner</td>
<td>0.11</td>
<td>0.11</td>
<td>1.12</td>
<td>0.97</td>
<td>1.28</td>
</tr>
<tr>
<td>Orgasm is Important to me</td>
<td>0.04</td>
<td>0.46</td>
<td>1.04</td>
<td>0.93</td>
<td>1.17</td>
</tr>
<tr>
<td>Pressure to Orgasm</td>
<td>0.30</td>
<td>&lt;sup&gt;0.00&lt;/sup&gt;</td>
<td>&lt;sup&gt;1.35&lt;/sup&gt;</td>
<td>1.24</td>
<td>1.47</td>
</tr>
<tr>
<td>Frequency of Orgasm</td>
<td>-0.00</td>
<td>0.69</td>
<td>1.00</td>
<td>0.99</td>
<td>1.01</td>
</tr>
<tr>
<td>Satisfaction with Orgasm</td>
<td>-0.13</td>
<td>&lt;sup&gt;0.01&lt;/sup&gt;</td>
<td>&lt;sup&gt;0.87&lt;/sup&gt;</td>
<td>0.80</td>
<td>0.96</td>
</tr>
</tbody>
</table>

<sup>Note:</sup> Variables entered at Step 1: Age and Number of Lifetime Sexual Partners. Variables entered at Step 2: Importance of my Orgasm to my Partner, Importance of my Orgasm to me, Pressure to Orgasm, Frequency of Orgasm, Satisfaction with Orgasm. Statistically significant differences noted with p values in bold typeface.

### Discussion

The present study examined the prevalence and predictors of ever faking an orgasm in adult women who were dating. The findings from this study indicate that almost two-thirds of the participants reported that they had faked an orgasm during PVI at one time or another. These findings lend support to other studies that also have examined this phenomenon (Opperman et al., 2014). For example, Mialon (2012) found that 74% of women and 27% of men had faked an orgasm in their current or most recent relationship. To explore some of the factors that might contribute to this phenomenon, we examined whether the importance of orgasm, pressure to achieve orgasm, frequency of orgasm, and satisfaction with orgasm influenced women’s propensity to fake an orgasm during PVI. Our findings highlight that one of the most important factors associated with faking an orgasm was the pressure the participants in this study experienced in trying to achieve an orgasm during PVI. Several research findings have indicated that many men and women feel pressure to orgasm during intercourse (Bryan, 2001; Hite & Hinchliff, 2004; Muehlenhard & Shippee, 2010; Wade et al., 2005). In this study, the
participants not only placed pressure on themselves, but also perceived that their partners felt pressure to ensure that orgasm is achieved. Thus, the more pressure there was to achieve an orgasm during PVI, the more likely the participants were to fake an orgasm. Feeling satisfied with the quality and quantity of their orgasms had the opposite effect in that the more satisfied women were, the less likely they were to fake achieving an orgasm.

The majority of women in this study indicated that the occurrence of their orgasm during PVI was more important to their partners than it was to them. This finding is congruent with traditional sexual scripts and is supported by other studies, which have found that men's pleasure is emphasized and prioritized over women's. Accordingly, during heterosexual sex, many women are more concerned about meeting their partner's needs than their own. Many strive to maintain romantic ideologies and will forgo their own physical pleasure in an effort to satisfy their male partners (Jones & Oliver, 2007; Ortiz-Torres et al., 2003; Wingood & DiClemente, 2000). Of interest, Wade et al. (2005) found that although women were knowledgeable about the role of clitoral stimulation in achieving orgasm, this knowledge only correlated significantly with the frequency of achieving orgasm during masturbation and not during PVI. These authors concluded that even though the majority of women were aware of what was necessary for them to achieve an orgasm, somehow they did not communicate this when having sex with a partner, which appeared to hinder rather than promote the occurrence of their orgasm.

Although we did not examine the frequency of orgasm during masturbation versus partnered sex, our findings are similar to Wade's findings in that our participants more frequently achieved orgasm when they manipulated or rubbed their clitoris compared to when their partner manipulated or rubbed their clitoris.

One of the factors contributing to the lack of women's communication about orgasm and PVI is that heterosexual sex continues to be viewed by many as the idealized and “normal” or “real” way to have sex. This is largely because heterosexual sexual scripts predominately focus on male-centred sexual
activity, which prioritizes men's sexual needs and gendered constructions of heterosexuality (Farvid & Braun, 2006). In recent decades, achieving orgasm during PVI has come to represent the ultimate romantic sexual highlight, with its absence, especially for women, signifying distress and dysfunction. As this can negatively affect women's sexual experiences and consequently their sexual well-being, it is not surprising that the majority of women in this study not only felt pressure to achieve an orgasm during PVI, but in fact had faked an orgasm at one time or another. Although women are often depicted as sexually liberated and possessing sexual agency, overwhelmingly women are represented as wanting sex for the desired outcome or goal of obtaining relational or emotional intimacy, and not for seeking physical pleasure for themselves (Farvid & Braun, 2006). The lack of consideration given to the broader cultural and social contexts that influence and shape sexual behaviour has resulted in the perpetuation of the orgasm gap between the genders as well as rendering women's lack of orgasm during “real” sex as problematic and dysfunctional.

While many women do not consider a lack of orgasm through PVI, or a lack of orgasm itself, as necessarily unsatisfactory, there exists a gap between what they consider satisfactory and what their partners consider satisfactory. Indeed other research findings suggest that there may be considerable discrepancy between what many men and women think when it comes to orgasm during PVI. This was demonstrated in a study conducted by Salisbury and Fisher (2013) in which 37% of the enrolled men incorrectly assumed that the clitoris was directly stimulated during PVI, and more than 32% incorrectly assumed that most women achieved orgasm from PVI alone. By not communicating information about clitoral stimulation (self-stimulation or from a partner) to their partners, women may be unknowingly limiting their sexual pleasure when having sex with a partner. In accordance with sexual script beliefs, these authors also found that both men and women believed that it was the man's responsibility to physically provide the woman with an orgasm. Men's egos also were significantly tied to the occurrence
and non-occurrence of women achieving an orgasm. Similar findings have been reported by others (Miller & Byers, 2004).

Although achieving orgasm during PVI was seen as important, and an expectation for the majority of the women in this study, considerably fewer women considered this a goal of PVI. It is interesting that the majority of the participants expected to have an orgasm during PVI despite the fact that for many women, orgasm from PVI alone (without direct clitoral stimulation) is unlikely to occur. Other studies have reported similar findings whereby participants reported being satisfied with the quality and quantity of their orgasms despite the fact that the majority did not reliably achieve orgasm during PVI or partnered sex (Dawood, Kirk, Bailey, Andrews, & Martin, 2005; Lloyd, 2005).

There is a need to understand women's sexual experiences separate from a male-centred perspective. Faking an orgasm by many women is but one example of women's conformity with sexual norms. Social pressures to conform to traditional gendered sexual scripts mean that women may not mention or acknowledge their sexual desires, or what they find sexually pleasurable or satisfying. For many women, sexual intercourse signifies the final sexual act regardless of whether they have achieved orgasm (McPhillips et al., 2001). Women may comply with this final step because it is assumed that this is what men want (Holland et al., 2004). Alternatively, faking an orgasm might for some women, be productive mechanism for directing sexual activity (either encouraging it or terminating it). Indeed, the term faking might be too broad to capture the variety of strategies used by women.

Regardless, it would appear that women's control over their sexual well-being has in part been undermined by sexual scripts and gendered power relations that are active in shaping sexual behaviour, and which have positioned women as complicit in male-centred activity (Holland et al., 2004). Thus, the control women have in a sexual encounter is often problematic and not guided by individual rational choice, but rather by unequal power relations. Further exploration may provide some explanation as to why some women may make decisions that endanger their emotional and physical sexual well-being. It
may also contribute to new prevention strategies that will diminish negative sexual well-being outcomes for women.

**Limitations and Implications**

The limitations of this study were discussed in Chapters 3, 4, and 5. Additional limitations, worthy of note, include the lack of consideration given to men’s perspectives and experiences as they pertain to women's orgasm. The focus of this research was on adult women; however, if we are to better understand women's experiences of orgasm in terms of heterosexual relationships, we must also include the men with whom women are having sex. This could be a focus of future research. We also acknowledge that those who volunteer to participate in research about orgasm in their sexual encounters may be different from those who do not, therefore, we must exercise caution in considering the generalizability of our results. Furthermore, the use of an anonymous survey may have captured a wider range of participants than what would have been possible in FTF interviews; however, the participants were restricted in their choice of answers, thereby limiting the depth and detail of the data collected. We also did not define the term “orgasm” in the survey questionnaire because we assumed that we were measuring a shared cultural understanding of the term.

The implications of the study findings underscore the need for more education about gender inequality and sexual scripts. The research indicates that some women are not only unable to say no to unwanted sex (Frith & Kitzinger, 2001; Katz & Tirone, 2009, 2010), but also are unable to critique their experiences of sex (Bay-Cheng & Eliseo-Arras, 2008). Educators need to address the sexual scripts that reinforce and prioritize men’s sexual pleasure over women’s. This can be achieved by developing comprehensive sexual education curricula that provides information about the conventional topics (i.e., sexual reproduction, pregnancy, abortion, and STIs/HIV), and also includes content on how gendered power relations and taken-for-granted ideas and assumptions about gender roles and sexual scripts can negatively impact sexual well-being. There is a need for education and intervention research that focus
on increasing women’s communication skills about the type of sexual activity they find most pleasurable and encouraging such discussions with their partners. Discussions addressing beliefs about how women achieve orgasm are needed because incorrect assumptions about women’s pleasure may affect sexual functioning and overall sexual well-being.
Chapter 6: Conclusion

Summary of Findings

In this dissertation, we focused on examining adult women’s dating experiences, specifically in relation to their sexual well-being in terms of sexual risk in relation to HIV transmission and sexual pleasure in relation to orgasm, in a nonprobability convenience sample of heterosexual women aged 25 years and older living in the United States. In Chapter 1, we reported that the published literature shows that HIV rates continue to rise in adult women, yet there has been little research conducted to examine why they continue to rise or the factors that may be impacting the sexual well-being of women. Although many factors may influence the sexual well-being of this population, we presented an argument for examining two important, but overlooked aspects of adult women’s sexual well-being, namely the changing context of dating and the gendered nature of heterosexual relationships. Despite these factors having been acknowledged as important influences of sexual well-being, little is known about how they affect women’s sexual risk and the expression of sexual pleasure in terms of orgasm.

In Chapter 2, we presented the theoretical and methodological approach to the overall study. This included information about the theoretical models and hypotheses. It also included conceptual definitions of the main study variables and information about how they were operationalized. In addition we provided details about the statistical analyses conducted and presented the findings of the EFAs and CFAs that were conducted to evaluate the structure of the measures used.

In Chapter 3, a model examining the predictors of sexual risk in relation to HIV transmission was presented. These predictors included meeting modality, time spent communicating with partners via CMC and FTF, sexual motivations, and sexual pressure. Contrary to what we expected to find, the results in this chapter demonstrated that meeting modality and the time spent communicating with partners via CMC and FTF were not associated with sexual risk. The fact that people now communicate
through a variety of means may provide some explanation for this finding. As expected, our results demonstrated that behavioural risk factors, including the number of lifetime sexual partners, as well as aspects of women's motivations for sex and pressure to engage in sex were associated with sexual risk. Specifically, our findings suggested that women who felt pressure to have unprotected sex (not use a condom) with their partner as a way of showing they trusted their partner, and those that more strongly endorsed the notion that it is a women's responsibility to sexually please a male partner, were more likely to engage in higher sexual risk activities. These findings lend support to the idea that the gendered nature of heterosexual relationships influences women's sexual risk.

Another important finding reported in this chapter pertains to peer pressure. The women who worried more about what their peers would say if they did not engage in sexual activity were less likely to engage in high risk sexual behaviour. This finding may have been the result of more open communication about sex occurring among women. Discussions about sexual activities and the sharing of information among peers may be beneficial and educational, especially if the peers are more sexually aware and convey information about sexual well-being that women might otherwise be embarrassed to ask about.

In Chapter 4, we presented a model that examined the communication that occurs between sexual partners. We specifically examined how communication about topics such as sexual preferences, sensations, fantasies, and behaviour (i.e., sexual self-disclosure) influence women’s sexual risk, and how communication about STIs/HIV in general influences their sexual risk. Our analysis revealed that the women who discussed their previous sexual behaviour with their new partners were more likely to engage in high-risk sexual behaviour than were women who did not have these discussions. Communication of this nature may not only have a tendency to eroticize past sexual behaviour, but may increase one's sexual desire and arousal for one’s current partner, which may lead to sexual risk in future encounters with that partner.
We also found that communicating with sexual partners about STIs/HIV in general was associated with less sexual risk. These findings underscore the importance of developing interventions that assist women in communicating about STIs and HIV; the research evidence indicates that those who are willing to initiate discussions about STIs and HIV are less likely to engage in high-risk sexual behaviour. This finding offers some optimism that prevailing gendered sexual scripts may be changed. In other words, if women are more easily able to communicate about such matters with their partners, they might not be as disadvantaged when initiating discussions about sex or advocating for what they desire.

Finally, Chapter 5 focused on a different aspect of sexual well-being, the phenomenon of faking an orgasm. In this chapter, we were specifically interested in examining the prevalence of faking an orgasm and some of the factors purported to influence women's propensity to fake an orgasm. The factors we examined were pressure to orgasm, importance of orgasm, satisfaction with orgasm, and frequency of orgasm. Our findings revealed that the majority of our participants had faked an orgasm at least once and possibly several times during PVI. We also found that one of the most significant factors influencing the faking of an orgasm by women was the pressure they felt to achieve an orgasm, particularly during PVI. The research evidence indicates that when women feel pressured to achieve orgasm they may fake one to avoid hurting their partner’s feelings or making him feel incompetent. In accordance with sexual script theory, women may fake an orgasm because they conform to sexual scripts that value men’s sexual pleasure over women's.

Because PVI continues to be upheld as the “real” way to have sex among heterosexuals, it is frequently conflated with orgasm. It is this belief that perpetuates and shapes the heterosexual script, which is male focused in terms of assumptions and desires, and which prioritizes men’s sexual needs over women’s. The majority of women in this study reported that achieving an orgasm during PVI meant more to their partners than it did to them. Of interest, the majority of the women in our study achieved
orgasm more easily when they manipulated or rubbed their own clitoris as opposed to when a partner performed the same activity.

**Unique Contributions**

The research findings in this dissertation provide several unique contributions to the broad body of knowledge pertaining to women's sexual well-being. In particular, they add to the limited knowledge related to the sexual well-being of women 25 years of age and older. There are five key findings that are worthy of highlighting.

First, our findings provide a basis from which to begin evaluating the influence of CMC on sexual risk. Although we did not find any significant differences between FTF and CMC in terms of sexual risk, our findings have methodological implications that need to be taken into account to further our understanding of how various modes of communication may influence sexual behaviour. Future studies need to frame CMC and FTF communication not as mutually exclusive concepts that follow a linear trajectory, but rather as communication modalities that are intertwined, iterative, and evolving. (For example, over the course of the data collection for this study, CMC technology was rapidly evolving as new dating applications for smart phones [e.g., iPhones and Androids] were becoming popular.) This will require innovative research designs to capture the use of these ever-changing technologies and the resultant implications.

Second, our findings call attention to the need to critically examine gendered sexual scripts in relation to heterosexual women's sexual well-being, particularly aspects pertaining to expectations and motivations for engaging in sexual activity. These findings provide evidence that trust and conformance to gendered sexual scripts influence heterosexual women's sexual well-being. Thus, they underscore the need to view sexual well-being in broader terms (i.e., as more than the avoidance infection) and to consider the realities of women's everyday lived experiences regarding their sexual relationships. These findings can provide some basis for developing interventions that aim to minimize gender inequity,
which can lead to improved sexual well-being for women. As Wade et al. (2005) concluded, “We cannot expect individual women to make smart choices about their sexual health as if they had equality with individual men, when they are embedded in a social structure in which they do not” (p. 136).

Third, we provide evidence that women are able to communicate about some aspects of sex with their partners. For example, the women appeared to be able to discuss their past sexual behaviour, and were able to discuss STIs and HIV in general with their partners. There appears to be a need to provide more education to adult women, particularly pertaining to the implications these communications have on their sexual well-being. For instance, women need to be aware that discussing past sexual behaviour may eroticize discussions about sex, which may make discussions about existing sexual risk more difficult. It may also lead to greater risk taking in future sexual encounters, which only perpetuates the problem. Although our findings show that communication about STIs and HIV in general is less likely to lead to high-risk sexual activity, we do not know if women are able to apply this communication to their particular situations and discuss specific sexual activities that could keep them safe. Further research is needed to explore how adult women can engage in more direct communication that is applicable to their situation. Women may have the knowledge but not the skills to successfully engage in the types of conversations that would be most beneficial to their sexual well-being.

Fourth, the findings from this study support those from other studies that have shown that many people are guided by inaccurate assumptions about heterosexual sexual encounters (Salisbury & Fisher, 2013). As our data illustrate, the majority of women indicated that they felt pressured by their partner, and they themselves expected to achieve orgasm through PVI, despite reporting that they achieved orgasm more frequently through sexual activities involving direct clitoral stimulation. Thus, our findings indicate that there is a need to further examine the sexual beliefs, practices, and understanding of adult women. This will help elucidate the role that gendered power relations play in the construction and practice of heterosexual sex and how this impacts overall sexual well-being.
Fifth, our findings lend support to the validity of the instruments used to measure the constructs of interest in this research. The CFAs conducted on the measures of interest produced similar psychometric properties to what has been reported in the literature. The EFAs also contribute to the literature in that they provide the basis for new measures, and that can be further validated in future research.

Limitations

This study had several limitations. One limitation concerns the sample population itself. Although we were anticipating a larger proportion of the sample to represent women over the age of 35, the majority of this sample was between 25 and 35 years of age. Therefore, we cannot generalize our results beyond this age group. Additionally, because this was an online survey with recruitment occurring through AMT, the adult women who were drawn to answer this survey may be very different from adult women who were not online answering surveys about their sexual experiences. Those completing the survey were required to be open to answering questions about their sexual experiences, including orgasm. Consequently, these women are not representative of all adult women who are dating; these women may have had more liberal attitudes towards sex or could have been more sexually experienced. Thus, the results of this study may contain a selection bias because of the sampling procedure. Furthermore, we recognize that sexual risk, particularly in terms of HIV transmission affects subpopulations of women disproportionately. Our sample was a nonprobability convenience sample, which was in no way representative of these subpopulations and future research is needed to further explore sexual risk in these subpopulations. Also, the majority of the sample identified as single. Because we did not define our understanding of single, it is difficult to know how the question about marital status was interpreted by the participants. Based on the definition of single found on dating websites, we were operating under the assumption that women who were separated or divorced for any period of time would have described themselves as single, whereas anyone newly separated or divorced may not
have described themselves as such. We also did not define orgasm in the survey and made the assumption that we were measuring an agreed upon cultural definition of this word. Moreover, the grouping of items that formed some of the constructs of interest in the logistic regression analyses was based on our opinion of what theoretically fit together. In retrospect, the question that asked the participants about whether they had ever faked an orgasm should have been asked as two questions. The first question should have established if the participant had ever faked an orgasm and the second question should have asked how often they faked an orgasm. The wording of this question may have resulted in an ambiguous interpretation of the question.

Another limitation concerns the correlational cross-sectional design of the study. This type of design is weaker than experimental studies (Burns & Grove, 2009; Szklo & Nieto, 2007). Although an experimental design would not have been feasible because of ethical considerations, a longitudinal study, that collected data at various time points, would have provided stronger support for any associations found. Some research has shown that data collected about the frequency of sexual behaviour is a more accurate measure of sexual risk, and which would be more accurately assessed over time (Scott-Sheldon et al., 2006).

Additional limitations include the collection of data in an online format. Although validity checks were put in place, and AMT assigns the users an identification number, we cannot confirm that the data collected were in fact accurate because we had no way of verifying that the participants were in fact women who were at least 25 years of age and older. Consequently, our study relied on self-reports, which raises concern about the validity of the responses; their accuracy cannot be determined (Holtgraves, 2004a, 2004b).

Because the survey was posted on the AMT website, only those with computer access could complete the questionnaire. Although a paper copy was available, the participants would not have known about this unless they accessed the information on the website. Confidentiality and security may
have been an issue for some of the participants, which may have affected how they answered the questions even though confidentiality was addressed and assured. Furthermore, the data used in this study were retrospective in nature so recall bias is a concern. Because the participants were required to recall events that may have occurred up to one year ago, the information they reported may have been embellished or more indicative of beliefs or thoughts at the time of completing the questionnaire than when they actually occurred.

Finally, limitations pertaining to the measures used in this study must be considered; some of the measures were newly developed and had not been validated. Also, while some of the other measures had satisfactory psychometric properties, as reported in previous research, they had been established with adolescents and young adults and not with adult women. Further reliability and validity assessments of these measures are required.

Since the time this research commenced, the dating context has evolved. More people have smart phones, and dating applications such as Tinder\textsuperscript{21} have become a popular way of meeting new partners. Future research needs to take into account the dynamic nature of dating in the digital era if we are to fully understand how different communication technologies influence sexual well-being.

**Implications**

Adult women have not been considered at risk for HIV and, therefore, are not asked routinely about the matter by their healthcare professionals, even if they are newly single. Life transitions such as divorce, separation, or death of a spouse return women to the “dating scene” and into new sexual relationships, so it is important for healthcare providers and the women themselves to recognise their vulnerability and the possibility of acquiring an STI/HIV. There is some evidence to indicate that many

\textsuperscript{21} Tinder is a dating application that uses an individual’s location through GPS to locate other individuals who fall within a specified age range, gender, location and who may be romantic matches. A Tinder profile consists of age, gender, first name, and photographs. When a potential match is found, the user decides if he or she likes the look of someone, based on the photograph. If the recipient likes the sender’s photograph, they are considered a match and can start messaging each other.
healthcare professionals are uncomfortable about discussing sexual matters with their clients, and that some can be judgmental and not accepting of their client’s sexual behaviour (Darroch, Myers, & Cassell, 2003; Gilmore & Somerville, 1994). Healthcare professionals, such as nurses, who specialize in sexual health, may be better able to establish rapport and approach health interviews with a non-judgemental and accepting attitude that will put clients at ease, and create an environment that is more conducive to information seeking and disclosure by the client. Many of these healthcare professionals have long played a role in STI/HIV assessment and management, and have been practicing in an advanced role whereby they are currently performing comprehensive sexual health examinations and engaging in discussions about relationship issues. They have a unique opportunity to expand their role. In addition to anticipating adult women’s needs, they can play an active role in providing tailored information about STIs and HIV that addresses the reality and everyday lived experiences of adult women’s sexual lives. This will better prepare adult women to enter into new sexual relationships, and assist them in making informed choices about the type of sexual activity they are willing to participate in, based on the risk of infection and health consequences associated with each activity.

Information about the health consequences and treatment of HIV and different STIs is essential because many people do not realize that several STIs are curable with antibiotics. Stigma is still prevalent (Foster & Byers, 2013), which may discourage women from engaging in open, honest discussions about their sexual realities. In addition, it may prevent or delay women from getting tested for various infections or seeking information. Education is needed to begin to de-stigmatize sexually-acquired infections, which may increase the uptake of testing. Healthcare professionals specializing in sexual health are in a unique position to develop sexual well-being curricula that not only change the content of sexual health information but also the manner in which it is delivered. Because education is often not sufficient to induce behaviour change, skill-building interventions that allow women to role play or practice their communication and negotiation skills would be highly advantageous.
Sexual health promotion and prevention strategies for adult women can be extremely beneficial, particularly at times when adult women navigate major life transitions. To be effective, sexual health messages need to be targeted specifically to this population and relevant to their sexual practices. If the information is not valued or not deemed to be useful, it is unlikely to be incorporated. Many have argued that the limited effect of prevention efforts, to date, has been, in part, due to “scare tactics that emphasize the adverse consequences of sexual acts” (Philpott, Knerr & Boydell, 2006, p. 208; see also Allen & Carmody, 2012). Such efforts invoke fear in an attempt to bring about compliance. Scare tactics and negative messages undermine, rather than promote, engagement in safer sexual behaviour (Higgins & Hirsch, 2007). To be effective, safer-sex messages must address the range of concerns that motivate people to have sex. Campaigns could be more effective if they acknowledge rather than ignore the pleasurable aspects of sex and view sex more holistically (Higgins & Hirsch, 2007; Higgins & Hirsch, 2008; Hillier et al., 1998; Philpott, Knerr, & Maher, 2006).

Conclusion

The findings in this dissertation highlight the associations between the gendered nature of heterosexual relationships and communication about sexual practices and sexual well-being in adult women who are dating. They demonstrate the importance of understanding adult women's dating experiences, specifically their sexual experiences as they relate to their sexual well-being. These findings emphasize the need for healthcare professionals to play more active roles in educating women about their sexual well-being and in assisting them to advocate for themselves with respect to the type of sexual behaviour they want to engage in and for their sexual pleasure. For example, nurses who specialize in sexual health are well positioned to develop effective strategies and interventions to assist women in achieving healthy sexual relationships, and to begin to effect change in terms of their awareness about gender inequality, and the impact that taken-for-granted gender roles have on their overall sexual well-being.
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Appendices

Appendix A: Study Questionnaire
Kristen Houghton, the author of the article, explores some of the reasons why older women are less likely to be seen as sexual beings. We appreciated that she raises a variety of internal and external factors—not only changing bodies and labidos, but also social norms about sexuality that have changed over time and mass media depictions of sex and sexiness.

Houghton also emphasizes that every person deserves to have a health care provider who considers sexual health and desire as important as other aspects of your health. Too often people feel embarrassed or discouraged from talking about sex with their doctor, but as this piece reminds us, sex keeps us healthy, happy and living longer!

International Women’s Day!
By Dating Confidential | March 08, 2012 | 2 Comments
Today, March 8th, marks International Women’s Day! We hope you find the time today to celebrate the women in your life and think about all the great progress women have made in the past hundred years.

Dating Confidential is a study promoting women’s health. In order to improve sexual health services and education for women, we need a better understanding of their health needs. That’s why by filling out the survey, and forwarding it to friends, you are helping to improve the health and education of women across North America. Thank you for your support!

One of the reasons Dating Confidential is necessary is because women are staying single longer—dating and having new relationships throughout their life. This is partly because there are many more opportunities for women besides early marriage & children. Women are staying single to pursue their education or careers, or raising children outside traditional marriages, or re-entering the dating world after long relationships. These are great advances that require new research so that the health and education services can keep up.

A recap of the Orgasm Inc screening!
By Dating Confidential | February 10, 2012 | 0 Comments
Thanks to everyone who came out last night and made the Orgasm Inc. screening a huge success! We had a full house and as you can see from the photo, a great discussion afterwards with the panel of speakers!

This morning we were even more delighted to see an article by Erin Ellis on the front page of the Vancouver Sun about Orgasm Inc and Dating Confidential! You can read it here.

Here’s some of the other great coverage of the event:

- UBC, UVIC experts to discuss the medicalization of female sexuality (UBC Public Affairs)
- Study examines adult women, sex, and risk (Georgia Straight)
- We were also pleased to give away a basket of goodies, including Good Clean Love products and an Orgasm Inc DVD, to one lucky attendee!

Campaign Supporters

HELLO COOL WORLD.COM
Dating in the Digital Age - Eligibility to participate in the Survey

Please read the following letter from the study's creator for details on the goals of this research, what participants can expect, and how your privacy is being protected:

Dear potential study participant:
People meet their dating partners in many ways. Some people may be introduced to a dating partner through friends, or they may meet someone at work or a social event. Others may meet people through the internet—sites such as Facebook, Plenty of Fish, chat rooms, email, and/or text messaging.

In this survey, we are interested in learning about how women meet their male dating partners. We are particularly interested in women’s experiences, including sexual experiences, with these partners. If you participate in this survey, you will be asked questions about how you met your most recent male dating partner (with whom you have had sex), and the topics you discussed prior to having sex with this partner.

Because we are interested in women’s sexuality, we will be asking you questions about the reason(s) you initially had

To help us determine if you are eligible, please check “yes” or “no” for each of the statements below.

Within the last year I have been actively dating
- Yes - No

I have had at least one sexual encounter with a male partner within the last 12 months. A sexual encounter for this research is considered to be any type of oral sex (giving or receiving), and/or vaginal/anal penile penetration, as well as any genital to genital (skin to skin) contact that does not necessarily involve penetration.
- Yes - No

I am a woman 25 years of age or older
- Yes - No

I live in Canada or the United States of America
- Yes - No

If you cannot complete the survey in one sitting, you may exit at any time and return later on (Provided you use the same computer and browser). Your work will be saved automatically. When you return to the survey, you will begin from where you left off. You will not be able to go back and change previous answers.

Proceed

Technical difficulties? Contact us.

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Member Login
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Because we are interested in women’s sexuality, we will be asking you questions about the reason(s) you initially had...

To help us determine if you are eligible, please check “yes” or “no” for each of the statements below.

Within the last year I have been actively dating  
Yes  No
I have had at least one sexual encounter with a male partner within the last 12 months. A sexual encounter for this research is considered to be of any type of oral sex (giving or receiving), and/or vaginal/anal penile penetration, as well as any genital to genital (skin to skin) contact that does not necessarily involve penetration.
Yes  No
I am a woman 25 years of age or older  
Yes  No
I live in Canada or the United States of America  
Yes  No

If you cannot complete the survey in one sitting, you may exit at any time and return later on. (Provided you use the same computer and browser). Your work will be saved automatically. When you return to the survey, you will begin from where you left off. You will not be able to go back and change previous answers.

Proceed

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Member Login
Dating in the Digital Age - Page 1

In this section please think about your most recent sexual dating partner. This must be a dating partner that you’ve had sex with recently (within the last year). Again, by “sex” we mean any type of oral sex (giving or receiving), genital to genital rubbing (skin to skin contact), penile/vaginal intercourse (penis in vagina), or penile/anal intercourse (penis in bum).

We are interested in learning about how you met this partner, and the different ways you communicated with this partner before you had sex with him.

1. Please tell us the reason or reasons you are dating. (Please click all that apply)
   - to meet short-term partners
   - to meet a long-term partner
   - to meet friends with benefits
   - to have sex only
   - Other

2. How did you first meet your most recent sexual dating partner? (please select one)
   - Online (Facebook, Craigslist, Plenty of Fish, Skype, or Webcam)
   - Offline (met in a face-to-face environment - e.g., through friends, family, at a party, bar/club, etc.)
   - Do not wish to Answer

3. For how long did you, or have you been seeing/dating this partner?
   Number of Days, Months
   Number:

4. Are you currently still seeing/dating this partner?
   Yes/No:

The next few questions are about the way you communicated (e.g., email, text message, chat), and how often you communicated with this partner before you had sex with him.

5. Did you talk to your dating partner during the week by phone?
   Yes/No:
   Average number of times per week?
   Number:
   Average number of hours spent in conversations per week?
   Hours:

6. Did you speak face-to-face with your dating partner during the week?
   Yes/No:
   Average number of times per week?
   Number:
   Average number of hours spent in conversations per week?
   Hours:

7. Did you text message your dating partner or did they text message you during the week?
   Yes/No:
   Average number of text messages sent and received with partner per week?
   Number:

8. Did you communicate with your dating partner using the internet during the week?
   8.1 Emails - Yes/No:
   Average number of emails sent and received with partner per week?
   Number:
   Average time spent writing and reading emails with partner per week?
   Hours:

   8.2 Chats - Yes/No:
   Average number of times chatting with partner per week?
   Number:
   Average time spent chatting with partner per week?
   Hours:
### 8.3 Social networking site messages - Yes/No:

Average number of messages sent to partner per week?
Number: [ ]

Average number of messages received from partner per week?
Number: [ ]

### 8.4 Did you talk to your dating partner during the week by webcam (e.g., Skype) - Yes/No:

Average number of times per week?
Number: [ ]

Average number of hours spent in conversation per week?
Hours: [ ]

### 8.5 Other means of Communication - Yes/No:

If YES, specify What Other means of Communication you use:

Average number of times per week?
Number: [ ]

Average number of hours per week?
Hours: [ ]
Dating in the Digital Age - Page 2

In this next section there are several statements that deal with how people may experience their relationship with a dating partner. Again, think about your most recent sexual dating partner and answer the questions with this person in mind. We recognize that some people may still be dating the same person they are describing in this survey, while others may no longer be seeing/dating this person.

BEFORE I had sex with my partner....

9. I shared my deepest thoughts with my partner even if he didn't understand them
   1 2 3 4 5 6 7 8 9

10. I felt free to reveal the most intimate parts of myself to my partner
    1 2 3 4 5 6 7 8 9

11. My life was an "open book" for my partner to read
    1 2 3 4 5 6 7 8 9

12. I openly shared my thoughts and feelings about other people with my partner
    1 2 3 4 5 6 7 8 9

13. I disclosed my deepest feelings to my partner even if there is a chance he may not share them
    1 2 3 4 5 6 7 8 9

14. I was totally myself when I was with my partner
    1 2 3 4 5 6 7 8 9

15. I consistently told my partner the real reasons and motivations behind the things that I did
    1 2 3 4 5 6 7 8 9

16. There were no topics that were "off limits" between my partner and me
    1 2 3 4 5 6 7 8 9

17. When I was hurt by something my partner said, I let him know about it
    1 2 3 4 5 6 7 8 9

18. I answered my partner's questions about me honestly and fully
    1 2 3 4 5 6 7 8 9

19. I confronted my partner if I suspected he was not being completely open with me
    1 2 3 4 5 6 7 8 9

Submit
Dating in the Digital Age - Page 3

This section still refers to how you experienced your dating relationship with your partner.

**BEFORE I had sex with my partner....**

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Very Strongly Agree</th>
<th>Strongly Agree</th>
<th>Mildly Agree</th>
<th>Neutral</th>
<th>Mildly Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
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<tbody>
<tr>
<td>20</td>
<td>My partner was primarily interested in his own welfare</td>
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<td>21</td>
<td>There were times when my partner could not be trusted</td>
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<td>22</td>
<td>My partner was perfectly honest and truthful with me</td>
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<td>23</td>
<td>I felt that I could trust my partner completely</td>
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<td>24</td>
<td>My partner was truly sincere in his promises</td>
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<td>25</td>
<td>I felt that my partner did not show me enough consideration</td>
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<td>26</td>
<td>My partner treated me fairly and justly</td>
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<td>27</td>
<td>I felt that my partner could be counted on to help me</td>
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</table>

Submit
Dating in the Digital Age - Page 4

This next section is concerned with some of the topics (both general and sexual) that people may discuss with their dating partners. Please think again about your most recent sexual dating partner.

BEFORE I had sex with my partner, we discussed...

28. My political views
29. My general outlook on life
30. My cultural interests (such as books, movies, music)
31. My feelings toward my closest friends of my own sex
32. The things about myself that I am most proud of
33. My feelings about my classes or my work
34. My feelings toward my parents
35. The things about myself that I am most ashamed of
36. My religious views
37. My previous opposite-sex relationships
38. The things in life I am most afraid of
39. My accomplishments at school or at work
40. The things I liked most about him (your partner)
41. The things I liked least about him (your partner)
42. My thoughts about the future of our relationship
43. My past sexual experiences
44. The types of sexual behaviours I have engaged in
45. The sexual positions I have tried
46. The kinds of touching that sexually arouse me
47. The sensations that are sexually exciting to me
48. The types of sexual foreplay that feel arousing to me
49. My private sexual fantasies
50. My “juicy” sexual thoughts
51. The sexual episodes that I daydream about
52. The sexual preferences that I have
53. What I would desire in a sexual encounter
54. The things I enjoy most about sex
55. What sex in an intimate relationship means to me
56. What it means to me to have sex with my partner
57. What I think and feel about having sex with my partner
Dating in the Digital Age - Page 5

Still thinking about your most recent sexual dating partner, read each statement below and click on the button beside the number that best describes the extent to which you discussed the topics listed below with your partner before you had sex with him.

BEFORE I had sex with my partner, we discussed...

58. How to prevent pregnancy
59. The use of condoms
60. How to use condoms
61. Sexually transmitted infections (STIs) or HIV/AIDS in general
62. How to prevent sexually transmitted infections
63. How to prevent HIV/AIDS
64. The sexual activities that are likely to transmit infection
65. My partner’s sexual history (including history of STIs)
66. Whether my partner had been tested for STIs or HIV
67. The date of my partner’s last STI or HIV test.

67.1. If you discussed the date of your partner’s last STI/HIV test, approximately how many weeks had gone by since he tested last?

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## Dating in the Digital Age - Page 6

People have sex for many different reasons. Below is a list of some of these reasons. For each statement below please tick on the number that best describes the extent to which each statement describes the reason you had sex the first few times (or first time if only once) with your most recent sexual dating partner. Remember -- there are no right or wrong answers. We just want to know what you think.

**In thinking about the first few times you had sex (or first time if only once) with your most recent sexual dating partner, to what extent did you have sex ...**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Not at all</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>68. to become more intimate with your partner?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>69. to express love for your partner?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70. to make an emotional connection with your partner?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>71. to become closer with your partner?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72. to feel emotionally close to your partner?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73. because you felt ‘horny’?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>74. because it felt good?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75. just for the excitement of it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>76. just for the thrill of it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>77. to satisfy your sexual needs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>78. to prove to yourself that your partner thinks you’re attractive?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>79. because it made you feel like you’re a more interesting person?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80. because it made you feel more self-confident?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81. to reassure yourself that you are sexually desirable?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82. to help you feel better about yourself?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83. to cope with upset feelings?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84. to help you deal with disappointment in your life?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85. because it helped you feel better when you were lonely?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>86. because it helped you feel better when you were feeling low?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>87. to cheer yourself up?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>88. because you worried that people would talk about you if you didn’t have sex?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>89. because people would think less of you if you didn’t?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90. because others would kid you if you didn’t?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>91. just because all your friends were having sex?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>92. so that others wouldn’t put you down about not having sex?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>93. out of fear that your partner wouldn’t love you anymore if you didn’t?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>94. because you didn’t want your partner to be angry with you?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95. because you wanted that your partner wouldn’t want to be with you</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
If you didn’t?

96. because you were afraid that your partner would leave you if you didn’t?
## Dating in the Digital Age - Page 7

In this part of the survey you will be asked about sex with your most recent dating partner. There are also some questions that will ask your thoughts about sex in general. When answering the questions about your dating partner, please think about the first few times you had sex with this partner (or first time if only once).

### 97. I did not ask my partner to use a condom because he may have thought I did not trust him

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 98. After we’d had sex without a condom, I couldn’t start asking my partner to use a condom, even if I thought he’d been with someone else

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 99. I was afraid to ask my partner to use a condom because he might have said NO

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 100. I did not ask my partner to use a condom because he might have thought I caught something from someone

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 101. I did not ask my partner to use a condom because he might have thought I had sex with someone else

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 102. Sometimes my partner made me feel like I owed him something and that I should have sex with him

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 103. There were times I felt my partner would leave me if I did not have sex with him

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 104. There were times my partner made me feel he would cheat if he got tired of having sex with me

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 105. Sometimes I had sex with my partner because I was afraid of losing the things he did for me

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 106. My partner made me feel like I should try new ways to have sex (i.e., new position, toys, watch/look at porn, or a threesome)

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 107. It’s a woman’s responsibility to satisfy a man sexually

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 108. A woman needs to please a man sexually to hold onto him

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 109. If my partner wants sex, it is my responsibility as a woman to have sex with him

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>

### 110. Having sex with my partner will show him that I am the best woman for him

<table>
<thead>
<tr>
<th>Agree</th>
<th>Mostly Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Mostly Disagree</th>
<th>Completely Disagree</th>
</tr>
</thead>
</table>
111. I felt I should have sex with my partner because there are plenty of women who are willing to have sex with him
   ○ Completely Agree  ○ Mostly Agree  ○ Slightly Agree  ○ Slightly Disagree  ○ Mostly Disagree  ○ Completely Disagree

112. My partner has physically hurt me (for example, slap, hit, or pushed me) after I’ve told him I would not have sex with him
   ○ Completely Agree  ○ Mostly Agree  ○ Slightly Agree  ○ Slightly Disagree  ○ Mostly Disagree  ○ Completely Disagree

113. My partner has threatened to hurt me after I’ve told him I would not have sex with them
   ○ Completely Agree  ○ Mostly Agree  ○ Slightly Agree  ○ Slightly Disagree  ○ Mostly Disagree  ○ Completely Disagree

114. My partner has yelled or cursed at me after I’ve told him I would not have sex with him
   ○ Completely Agree  ○ Mostly Agree  ○ Slightly Agree  ○ Slightly Disagree  ○ Mostly Disagree  ○ Completely Disagree

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Dating in the Digital Age - Page 8

The length of time from when people meet a dating partner to when they decide to have sex with that partner is different for everyone. In this section we are interested in knowing how long it was from the time you first met your most recent dating partner, to the time you had sex for the first time with this partner. By sex we mean any type of oral sex (giving or receiving), genital to genital rubbing (skin to skin contact or rubbing), penile/vaginal intercourse (penis in vagina), or anal intercourse (penis in bum).

1.15. How many days was it from when you first began communicating (e.g. this includes emails, chats, or face-to-face encounters) with your partner to when you had sex with this partner?

   Time in Days: [ ]

1.16. How many days was it from when you first met your partner face-to-face to when you had sex with this partner?

   Time in Days: [ ]

People engage in many different types of sexual activities or sexual acts. In this section we are interested in the different types of sexual activities you engaged in with your most recent sexual dating partner.

1.17. The first few times (or first time if only once) you had sex with your most recent sexual dating partner, what type(s) of sex did you have?

   (Please click all that apply)

- Oral sex (No condom or dental dam used)
- Oral sex (Condom or dental dam used)
- Vaginal sex - penis in vagina (no condom used, condoms used for part of the time or only sometimes)
- Vaginal sex - penis in vagina (condoms used 100% of the time - no penetration occurred without a condom)
- Anal sex - penis in anus/bum (no condom used, condoms used for part of the time, or only sometimes)
- Genital to genital rubbing/contact (no condom and skin to skin contact)
- Genital to genital rubbing/contact (condom on, or no skin to skin contact)

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Dating in the Digital Age - Page 9

Sexual pleasure is an important aspect of sexual health. The following questions are concerned with your overall experience of orgasm during different types of sexual activities. Women are rarely asked about this topic and we appreciate that your responses are highly personal. Your overall experience includes all your previous sexual experiences with partners.

118. How often do you have an orgasm from vaginal penetration only (no direct clitoral stimulation or rubbing to this area) during intercourse with a partner?
   - 0%  10%  20%  30%  40%  50%  60%  70%  80%  90%  100%
   - OR
     - Does not apply to me (e.g., I do not have sexual interactions involving vaginal penetration only with a partner)

119. How often do you have an orgasm from intercourse with a partner that includes both vaginal penetration and direct clitoral stimulation?
   - 0%  10%  20%  30%  40%  50%  60%  70%  80%  90%  100%
   - OR
     - Does not apply to me (e.g., I do not have sexual interactions involving vaginal penetration and simultaneous clitoral stimulation)

120. How often do you have orgasm from HAND/MANUAL stimulation of your genitals/clitoris by a partner?
   - 0%  10%  20%  30%  40%  50%  60%  70%  80%  90%  100%
   - OR
     - Does not apply to me (e.g., I do not have sexual interactions involving manual stimulation of genitals / clitoris)

121. How often do you have an orgasm when you yourself manipulate or rub your own genitals/clitoris when you are with a partner?
   - 0%  10%  20%  30%  40%  50%  60%  70%  80%  90%  100%
   - OR
     - Does not apply to me (e.g., I do not have sexual interactions where I self-manipulate my own genitals / clitoris when I am with a partner)

122. How often do you have an orgasm from ORAL stimulation of your genitals/clitoris by a partner?
   - 0%  10%  20%  30%  40%  50%  60%  70%  80%  90%  100%
   - OR
     - Does not apply to me (e.g., I do not have sexual interactions involving oral stimulation of genitals / clitoris with a partner)

123. In general, how satisfied...unsatisfied are you with the number of orgasms that you have during sexual activity with a partner?
   - Very Satisfied  Moderately Satisfied  Slightly Satisfied  Neither Satisfied/Unsatisfied  Slightly Unsatisfied  Moderately Unsatisfied  Very Unsatisfied

124. In general, how satisfied...unsatisfied are you with the quality or experience of orgasm that you have during sexual activity with a partner?
   - Very Satisfied  Moderately Satisfied  Slightly Satisfied  Neither Satisfied/Unsatisfied  Slightly Unsatisfied  Moderately Unsatisfied  Very Unsatisfied

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Connect Date Relate

Dating in the Digital Age - Page 10

The following questions are concerned with your experience of orgasm during sexual intercourse only. In this questionnaire, sexual intercourse refers to penile/vaginal (penis in vagina) penetration.

The occurrence of MY orgasm during penile/vaginal intercourse is...

125. Important to me
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

126. Important to my partner
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

127. More important for my partner than for me
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

128. My goal in having sexual intercourse
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

129. My partner’s goal in having sexual intercourse
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

130. More important for me than my partner
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

131. I expect to have an orgasm during sexual intercourse
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

132. My partner expects me to have an orgasm during sexual intercourse
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

133. I feel pressure to have an orgasm during sexual intercourse
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

134. My partner feels pressure to make me orgasm during sexual intercourse
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

135. If I orgasm during intercourse, my partner would feel a sense of accomplishment
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree

136. If I did not orgasm during intercourse, I would feel that there is something wrong with me
   ○ Strongly Agree  ○ Moderately Agree  ○ Slightly Agree  ○ Neither Agree nor Disagree  ○ Slightly Disagree  ○ Moderately Disagree  ○ Strongly Disagree
137. I have (at one time or several times) faked an orgasm during sexual intercourse

- Strongly Agree
- Moderately Agree
- Slightly Agree
- Neither Agree nor Disagree
- Slightly Disagree
- Moderately Disagree
- Strongly Disagree

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Dating in the Digital Age - Page 11

This section asks some questions about your background. Remember, all your answers will remain anonymous and not linked back to you in any way.

138. Your Birthdate (YYYYMMDD):

139. What is your current Marital Status?
- Single
- Married
- Separated
- Common Law
- Divorced
- Widowed
- Do not wish to Answer

140. What is your ethnic/cultural background?
- Aboriginal / First Nation
- White / Caucasian
- Hispanic
- Black
- Asian (China, Japan, Korea)
- South Asian (India, Pakistan)
- South East Asian (Philippines, Indonesia, Thailand)
- Western Asian (Armenia, Iran)
- Middle Eastern (Israel, Saudi Arabia, Iraq)
- European
- Do not wish to Answer

141. What is your best estimate of your total household income in the past 12 months before taxes and deductions?
- Less than $10,000
- $10,000 to $19,999
- $20,000 to $49,999
- $50,000 to $79,999
- $80,000 to $99,999
- $100,000 or more
- Do not wish to Answer

142. What is the highest level of education that you have completed?
- Grade 9 or less
- Some High School
- Graduated High School
- Some Trade, Vocational, Technical, or Business School
- Diploma from Trade, Vocational, Technical, or Business School
- Some Community College
- Diploma from Community College
- Some University
- Bachelor's Degree or Undergraduate Degree
- Master's Degree
- Degree in Medicine, Dentistry, Veterinary Medicine, Chiropractic, or Naturopathic Medicine
- Earned Doctorate
- Do not wish to Answer

143. How old were you when you first had sexual intercourse (penis in vagina or penis in rectum/anus)

144. How many different people have you had sex with in the last year?

145. How many different people have you had sex with in your lifetime?
146. Have you ever been diagnosed with a Sexually Transmitted Infection (STI)?
   (e.g. Chlamydia, Gonorrhea, Syphilis, Genital Warts or HPV, Genital Herpes, Hepatitis B, Trichomoniasis, NGU (Nongonococcal Urethritis)).

   Yes/No: 

147. How many different people are you currently having sex with?

   Number: 

148. What province or state are you in?

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Dating in the Digital Age - Survey Completion

Thank you for your participation! You are now eligible to have your name entered for a free draw for the contest prizes! To enter, you will have to provide us with an email address so we may contact you. This will NOT be associated with your answers to the survey.

Email Address:  

Submit

Spread the word about the study!

Participants are helping us understand issues important to women’s health and sexuality to inform health services offered to women.

1. Send an e-card to your friends and family
2. Share on Facebook
3. Post on Twitter

Tell us your stories & give us feedback

Share any comments or stories about your dating and sexual experiences with other study participants and the researchers in our blog. Comments or stories will be anonymous and in no way linked to your questionnaire.

Post a Comment>>

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Appendix B: Confirmatory Factor Analysis Flow Chart

- CFA
  - Fit the model using Mplus
  - Examine fit indices
  - Examine residuals

Model Does Not Fit
- Examine residual matrix for areas of strain/misfit
- Consider running separate CFAs for each subscale in measure
- Consider EFA

Model Fits
- Calculate scale score
- Retain
Appendix C: Exploratory Factor Analysis Flow Chart

- EFA
- General sense of number of factors
  - K1 rule (eigenvalues > 1)
  - PCA Scree Plot
  - Parallel Analysis
- Run EFA in Mplus
  - Examine fit indices (RMSEA)
  - Examine residual matrix for areas of strain/misfit
- Examine interpretability