IT TAKES TWO TO TANGO: PARTNER SUPPORT AND THE PHYSICAL ENVIRONMENT AS DETERMINANTS OF CONTRACEPTIVE USE AND CONTRACEPTIVE METHOD

by

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Abstract

This study explored how adult heterosexual males perceived decisions about contraception with their female partner. A modified grounded theory approach was used whereby six participants were interviewed using a semi-structured interview guide. Contraceptive decision-making was found to be context-specific, influenced primarily by personal factors and relationship dynamics. Personal factors included reasons for using contraception and attitudes toward specific methods. Participants did not consider the physical environment in their contraceptive decisions. Relationship dynamics included whether the relationship was new or established, with a primary or casual partner, and female contraceptive status. Participants influenced contraceptive decisions through gender dynamics and their role in decision-making, communication, and intimacy. These findings suggest that the context of the relationship and gender dynamics can influence contraceptive use. To improve sexual health outcomes, prevention messages need to emphasize the role of the male in safer sexual decision-making while acknowledging broader gender and relationship dynamics.

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Chapter 1: Introduction

Despite the wide availability of contraceptive methods in Canada, an estimated 40 to 50 percent of pregnancies are unintended ("Emergency Contraception," 2005). The number of abortions in Canada is also on the rise, increasing from 28.6 to 32.2 per 100 live births between 1995 and 2000 (Black, Francoeur, & Rowe, 2004). Encouraging the effective and consistent use of contraception is one way to reduce the risk of unintended pregnancy, thus helping improve the reproductive health of Canadians (Canadian Institute for Health Information [CIHI], 2003). Clearly, heterosexual males have an active role in the sexual relations and practices that lead to unintended pregnancy, but their involvement has not been extensively analyzed (Forste & Morgan, 1998; Fortunati & Floerchinger-Franks, 2001; Hutchinson, Marsiglio & Cohan, 2002; Marsiglio, 2003). For example, no theories or models of male contraceptive decision-making were found in the literature reviewed. As a result, there is a need to better understand male sexual health to effectively address issues such as unintended pregnancy and HIV (Armstrong et al., 1999; Bustamante-Forest & Giarratano, 2004; Coleman & Ingham, 1999; Yamey 1999). One of the needs identified in the sexual health literature was to better understand the motivation to use contraception in adult heterosexual males (Sonenstein, Goldberg, Lamberty, Newcomer and Miller, 1997). The focus of this research was to explore how decisions about contraception were made in a sample of young adult heterosexual males, including their motivation to use contraception.

The general health of Canadians is influenced by a number of factors, including education, employment and working conditions, physical environments, biology and genetics, personal health practices and coping skills, healthy child development, health and social services, social environments, gender, culture, income and social status, and social support networks (Health Canada, 2003). These determinants of health are influential in the sexual and

reproductive health of Canadians (Public Health Agency of Canada [PHAC], 2004). To put this concept in a more practical sense, whether an individual uses contraception and, if so, the method chosen are decisions subjected to a multitude of diverse influences. These influences can be dissimilar and even competing. The influences can be both individual and social in nature, but it is the social determinants that are of particular interest in this paper.

The influence of the social environment, the physical environment, and gender as they relate to the motivation to use contraception provided a broad framework on which this thesis was founded. In particular, this research explored heterosexual males' perceptions of decisions surrounding contraception with their female partner. To this end, concepts such as partner approval and support, communication, trust, intimacy, and gender were all key features of interest in the contraceptive decision-making process of adult males. The possible influence of the physical environment on decisions around contraception was also explored. Discussion of this last point centered on the ecological effects of estrogen released from oral contraceptives.

The Research Issue

The current study focused on the inconsistent and ineffective use of contraception by exploring heterosexual males' perceptions of contraceptive decisions, and it discussed the role of health promotion in addressing the issue. There are many possible causes for the inconsistent and ineffective use of contraception. A lack of knowledge about the contraceptive options available or how to use contraception effectively could lead to ineffective contraceptive use. Social factors pertaining to the heterosexual couple - the dyad - such as communication, decision-making, and gender could also lead to ineffective contraceptive use. These social factors that affect the dyad were the centre of the current study. The consequences of inconsistent and ineffective contraceptive use include pregnancy and sexually transmitted infections (STIs). To illustrate,

while STI rates in Canada have been steadily increasing since 1997 (Canadian Federation for Sexual Health [CFSH], 2007), Nova Scotia has some of the highest rates of STIs in the Maritime provinces (PHAC, 2007a). Furthermore, the rate of HIV/AIDS has been steady since 2002, but it is more prevalent in Nova Scotia than the other Maritime provinces (PHAC, 2007b). The prevalence of STIs, including HIV/AIDS, and the aforementioned statistic on unintended pregnancy, underscore the importance of consistent and effective contraceptive use.

Reproductive health risks can be minimized in heterosexual relationships by, for example, building mutually satisfying sexual relationships free of unintended pregnancy and STIs (Black et al., 2004). While encouraging the effective and consistent use of contraception is one way to reduce the risk of unintended pregnancy and STIs (Beckman, 2006; CIHI, 2003; Noone, 2004), effective communication about contraception between couples is another (Blonna & Levitan, 2005; Marston, 2004). These could essentially be considered knowledge-based and skill-based attributes. Although it is necessary to possess adequate knowledge of contraceptive use to develop healthy sexual behaviour, it is clear that knowledge alone is not sufficient (Brown & Eisenberg, 1995; Lamvu, Steiner, Condon & Hartmann, 2006; Landry & Camelo, 1994; Langille, Andreou, Beazley & Delaney, 1998; PHAC, 2003). For example, an individual (male or female) may know that the male condom would reduce the risk of contracting HIV and may know how to use it properly, but still decides to not use one. Thus, there is a disconnect between knowledge of effective contraceptive use and actual behaviour. This disconnect is the area that I wished to explore.

The decision-making process concerning contraceptive use is informed, in part, by sexual attitudes and behaviours, the quality of the relationship, and the level of respect between males and females (Black et al., 2004). Partner support has been identified as a strong correlate of contraceptive use (Commendador, 2003; Davis & Bibace, 1999; Greene, 2006; Herndon, 1998; Pulerwitz & Dworkin,

2006; Reproductive Health Outlook [RHO], 2004; Sable & Libbus, 1998), and it is a major feature of the current study. Another fundamental feature studied was communication. Young males are typically less comfortable talking about sexual activity than young females, especially if it is with their opposite sex partner (Gahagan, Rehman, Barbour & McWilliam, 2007). Although males are usually willing to discuss safe-sex issues, it is females who tend to initiate the conversation (Cleary, Barhman, MacCormack & Herold, 2002; Lock, Ferguson & Wise, 1998). In order to promote the health of both partners, males need to become more actively involved in discussing contraceptive use with their female partner because this increases knowledge about their sexual health and encourages contraceptive use (Cleary et al., 2002). Sexually active individuals who do not discuss contraception with their partner put themselves, and their partner, at greater risk of unintended pregnancy and STIs (Lock et al., 1998).

The nature of communicating the desire to use contraception between heterosexual partners has not been examined to any great extent (Lock et al., 1998). Some discussion has been generated recently, but the literature remains incomplete (Cleary et al., 2002; Coleman & Ingham, 1999; Hutchinson et al., 2002; Noone, 2004; Seal & Ehrhardt, 2004). None of the literature reviewed to date explored the circumstances of when males initiate communication about contraceptive use. The current study added to the existing literature by exploring the circumstances of when adult heterosexual males did, and did not, initiate discussions about sexual health and contraception.

The Purpose

The purpose of the current study was to explore adult heterosexual males' perceptions of decisions surrounding contraception with their female partner. Specifically, this study asked adult males about their role in the process of determining contraceptive use and contraceptive method. The context surrounding the decision to use contraception is important, and qualitative

research is aptly suited to elicit such details. A modified grounded theory approach was used to integrate the thoughts of adult males in Nova Scotia regarding support for their female partner and initiating the contraceptive decision-making process. A secondary objective of this research was to discover what, if any, consideration was given to the natural environment in the decision-making process. The rationale for my inclusion of the natural environment can be found in the section about the role of the researcher in Chapter 3.

The idea for this thesis was partly influenced by research that suggested the difference between couples who use contraception consistently and those who are inconsistent can be found in differences between realized and expected levels of intimacy. Couples with mutually dissatisfying levels of intimacy were more likely to use contraception inconsistently (Davis & Bibace, 1999). This research was significant in the formation of this study because it showed how inconsistent contraceptive use could be partially explained by differential levels of intimacy, highlighting the role of relational dynamics.

Significance of the Study

Identifying information gaps and obstacles to adult heterosexual male involvement in contraception decision-making may help inform additional sexual health promotion and health education, in particular HIV/AIDS and pregnancy prevention efforts. Exploring what this population perceives to be their role in the contraceptive decision-making process may provide greater insight into how males relate to their female partner.

Discovering the circumstances that facilitate or hinder communication about sexual risk behaviour would help in the development of communication strategies that promote discussion between sexual partners. In developing these strategies, it may be valuable to understand how differences in gender affect communication about sexual risk behaviour (Lock et al., 1998). This research will also attempt to determine if concern about the natural environment is a factor in

the contraceptive decision-making process between heterosexual partners. If such concerns are relevant, then this knowledge may be used to engage adult heterosexual males in the contraceptive discourse. Ultimately, a greater understanding of the involvement of adult heterosexual males in the contraceptive decision-making process could help inform existing strategies that promote the development of male and female sexual health. For example, sexual health promotion policies could build upon traditional gender roles, such as males being sexual initiators, by encouraging males to proactively initiate communication about sexual desire, sexual satisfaction, and safer sex (Campbell, 1995; Seal & Ehrhardt, 2004).

Definition of Key Terms

As the current study pertains to the role of health promotion in improving the sexual health of adult heterosexual males and females, it would be prudent to define some key terms before continuing. A complete list of terms is defined in Appendix I, and these terms will be explained in the text as they are encountered.

Health promotion is "the process of enabling people to increase control over, and to improve, their health" (World Health Organization [WHO], 1986, p. 1). Within the context of health promotion, health is considered a means to an end. Health is the ability to identify and realize aspirations, satisfy needs, and change or cope with the environment in order to reach a state of complete physical, mental and social well-being (WHO, 1986). As such, health is a "resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities" (WHO, 1986, p.1). By extension, health promotion programs "combine educational, organizational, procedural, environmental, and financial supports to help people change negative health behaviours" (Donatelle, Davis, Munroe & Munroe, 2001, p. 6).

Health promotion recognizes the importance of the determinants of health in improving health. The determinants of health are a broad range of personal, social, economic and environmental factors that influence the health of individuals and populations (Health Canada, 2003). Health promotion strategies that could incorporate the determinants of health include creating supportive environments, developing personal skills, reorienting health services, strengthening community action, and building healthy public policy (WHO, 1986). These strategies can be directed at various levels within society, such as the individual, family and friends, community, sector or system (e.g., education, housing), and society as a whole (PHAC, 1996). The determinants of health provide a framework for the current study, and are described in more detail in Chapter 2. The determinants of health are valuable to the current study because of their influence on the sexual and reproductive health of Canadians (PHAC, 2004).

A common definition of sexual health, as put forward by the World Health Organization, was adopted for the purposes of this research. The World Health Organization (2002) defined sexual health as

> a state of physical, emotional, mental and social well-being related to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled.

Until recently, sexual health was closely linked to reproductive health. However, sexual health is now considered to be broader in scope than reproductive health because it is not confined to the reproductive years of life (WHO, 2004). Thus, sexual health is a necessary precursor of reproductive health (WHO, 2004), the purpose of which is to enhance life and personal relations and

not be confined to the provision of care related to reproduction and sexually transmitted infections (Bustamante-Forest & Giarratano, 2004).

The World Health Organization developed a draft definition of environmental health as "those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social, and psychosocial factors in the environment" (Environmental Health Policy Committee, 1998, Recommendations section, ¶ 2). This research concentrated on the social and physical aspects of environmental health. So just what do the social environment and the physical environment mean? The social environment refers to the social conditions that foster health and ill health; it is made up of indicators such as access to social support (e.g., friends and family), personal security (e.g., violence in the home), role overload (e.g., balancing work and family commitments), volunteering, and civic participation (PHAC, 2004). The physical environment includes the built environment and the natural environment. The built environment includes housing, indoor air quality, and community design and transportation systems (PHAC, 2004). The natural environment includes the water, air, and food upon which human health depends. Henceforth, the term "natural environment" will be used to be consistent with the intent of this research, how it was typically discussed with participants, and the above definition.

Summary

There is a need to better understand male sexual health to effectively address issues such as unintended pregnancy and STIs. Current literature suggested concepts such as partner support, communication, trust, intimacy, and gender were important considerations and so were included in this research. The possible influence of the natural environment on decisions about contraception was also explored. However, no theory or model of contraceptive decision-making in men was found in the literature reviewed. The current study

explored males' perceptions of decisions surrounding contraception with their female partner. Qualitative research methods were used to help develop a theory of contraceptive decision-making. Investigating the circumstances that facilitate or hinder male involvement in contraceptive decisions may help inform HIV/AIDS and pregnancy prevention efforts in Nova Scotia.

Chapter 2: Literature Review

Sexual and reproductive health, partner support, gender, and the environment were important considerations in the decision to use contraception in the current study. These topics are presented to provide an understanding of the concepts and identify gaps in the literature. Although it is males who were involved in this research, and they are the focus of the study, it is nearly impossible to untangle their sexual health from that of their female partner. As such, it was imperative to include issues related to female sexual health in the literature review to provide an appropriate context.

This chapter begins by providing a very brief introduction to the literature on male and female sexual health as it relates to the concepts under study. It then situates these concepts within a research framework and explores the concepts in greater detail. Contraceptive decision-making is presented first, as all the other influences flow from this. Following that is an exploration of how dynamics within the relationship (including support from the male partner) and communication affect contraceptive decision-making. Gender is presented next, as it weaves together and underpins all of these influences. The natural environment is then introduced and connected to sexual health. It is then shown how estrogen from hormonal contraception can have a negative ecological effect and possibly impact human health, the notion that inspired me to determine whether the environment was perceived by males to be a factor in the contraceptive decision-making process.

Review of the Sexual Health Literature

Much research has been conducted on female sexual health (e.g., Forste & Morgan, 1998; Jones, 2004; Noone, 2004; Wyatt et al., 2000; Yamey, 1999). A disproportionate amount of this research is biomedical, with the concomitant result of greater knowledge surrounding female reproduction (Baylis, Downie & Sherwin, 1998). This knowledge translates to an unfair burden of risk and

responsibility for females to manage their fertility (Baylis et al., 1998). Limiting the focus of contraceptive research to females can then propagate an unequal relationship between males and females in contraception (Population Council, 1995). In this way, the conventional view that females are primarily responsible for reproductive health is reinforced through traditional gender roles (Baylis et al., 1998). Males may then assume little responsibility toward contraception, thus creating an unequal partnership (Population Council, 1995). This situation also raises the importance of gender differences in safer sexual decision-making (Buysse & Van Oost, 1997).

The decision to engage in safer sexual practices in a heterosexual relationship is not limited to the individual male or female. The decision is a dyadic one in which both individuals are involved (Amaro, 1995; Seal & Palmer-Seal, 1996). Indeed, contraceptive use and effectiveness depend directly on male involvement (Dudgeon & Inhorn, 2004). Therefore, to effectively address issues such as unintended pregnancy and STIs, males must be included in reproductive health care both as individuals and as intimate partners of females (Bustamante-Forest & Giarratano, 2004).

Until recently, little attention was given to the role that males might have in influencing female sexual health decision-making and behaviour (RHO, 2004). Most reproductive health programs focused on family planning and targeted their services to females. This began to change in the 1990s, when female health programs broadened their scope to include STI and HIV prevention in response to the AIDS epidemic. At this time, reproductive health programs began to focus on the role of males as it related to female access to and use of reproductive health services (Edwards, 1994; RHO, 2004). The role of males, and their shared responsibility in improving female health, was singled out in the 1994 International Conference on Population and Development Program of Action and at the 1995 World Conference on Women in Beijing (RHO, 2004).

Peer health education programs are one strategy used to improve male and female sexual health outcomes (Campbell, 1995; RHO, 2004). Peer health educators may be particularly successful with health promotion interventions aimed at adolescents (McKay, 2000). Some adolescents may be more comfortable receiving sexual health information from peers than from adults. Furthermore, peer health educators can increase their own knowledge and skills in HIV prevention (Dunn, Ross, Caines & Howorth, 1998). Peer health education programs should be considered to maximize sexual health promotion interventions (McKay, 2000), especially those that focus on males, gender roles, and responsibility (RHO, 2004).

Including males in the contraceptive decision-making process would be consistent with certain societal expectations. Current public policy holds males financially accountable for their offspring (Edwards, 1994; Sable & Libbus, 1998). As such, it would be reasonable to include males in decisions related to pregnancy and have them share responsibility for the decisions and their outcomes, including unintended pregnancy.

There is often an unspoken assumption when discussing male support of female contraceptive decision-making. Involving males in family planning programs and encouraging them to take on greater responsibility for contraception assumes that male are (or will become) empathetic toward female reproductive health needs (Greene & Biddlecom, 2000). However, it is possible that involving males in decisions concerning sexual health, including contraception, could subvert female authority.

With the renewed focus on the role of males in improving female sexual health, greater attention was paid toward various aspects of male sexual health (e.g., Armstrong et al., 1999; Bustamante-Forest & Giarratano, 2004; Fortunati & Floerchinger-Franks, 2001; Ndong, Becker, Haws & Wegner, 1999; Watt, 2001; Wegner, Landry, Wilkinson & Tzanis, 1998). In particular, qualitative research

made key contributions in studying male sexual health (Gahagan et al., 2007; Hutchinson et al., 2002; Marsiglio, 2003).

It has been found that male reproductive health has changed over the past few decades in the form of declining sperm counts (and quality of semen), a rising incidence of testicular cancer, and other disorders of the male reproductive tract (Toppari et al., 1996). Despite these changes, male reproductive health has received scant attention (Torrari et al., 1996). Bustamante-Forest and Giarratano (2004) remark that male reproductive health has been generally ignored until a disease or disability (such as an STI or cancer) appears that requires immediate attention.

Although there has been more of a focus on male sexual health, adult heterosexual males are not typically the center of research efforts (Flood, 2003; Forste & Morgan, 1998; Fortunati & Floerchinger-Franks, 2001; Hutchinson et al., 2002; Marsiglio, 2003). Research has tended to focus almost exclusively on adolescent populations (e.g., Armstrong et al., 1999; Commendador, 2003; Gage, 1998; Kirby, 2002; Lock et al., 1998; Ott, Adler, Millstein, Tschann & Ellen, 2002; Sonenstein et al., 1997; Watt, 2001). For this reason, Sonenstein et al. called for a better understanding of the motivation of young adult males to use contraception.

Seal and Ehrhardt (2003) looked at how males viewed their courtship, romantic and sexual interactions with females. The authors found that sexual and emotional intimacy were two central motivations for males to engage in courtship, romantic and sexual interactions. But the authors suggest that sexual intercourse is not always the primary motivation for males' courtship interactions with females, and cite emotional intimacy as the primary goal when seeking a partner (Seal & Ehrhardt, 2003). Although the authors name sexual and emotional intimacy as motivators to have sex with females, these may not be the same motivators for males to use contraception.

In general, males are motivated to use contraception to help prevent pregnancy and STIs (Grady, Klepinger and Nelson-Wally, 1999). Bustamante-Forest and Giarratano (2004) found that males were motivated to use contraception by the protection certain methods offer against STIs and the perceived increase in economic status that results from smaller families. Similarly, Landry and Ward (1997) found that economic issues and a concern for the health of the female were factors in the decision to have a vasectomy. Another motivation for the use of contraception in males - one more relevant to the current study - was a concern for the impact of overpopulation on the natural environment (Bustamante-Forest & Giarratano, 2004). This was the only link found in the literature reviewed between male contraceptive use and the natural environment.

Males do not bear as great a burden as females with regard to the consequences of unprotected intercourse (Harvey, Henderson & Branch, 2004). Obviously, females are affected by pregnancy more than males. Females are disproportionately affected by STIs because they can be more susceptible biologically, there is a greater chance of an STI going undetected, and STIs have more severe health effects (Eng & Butler, as cited in Harvey et al.). For this reason, females could be at greater risk of both pregnancy and STIs.

However, the most effective means of preventing pregnancy is not the most effective for prevention against STIs (Harvey et al., 2004). Hormonal contraception would be the most effective means of pregnancy prevention, but it offers no protection against disease. The female condom is the only method available to females that can prevent the transmission of STIs. But the female condom is not very effective at preventing pregnancy, nor is it a prevalent contraceptive option for females overall. Therefore, many females may adequately protect themselves against one risk (e.g., pregnancy), but not the other (e.g., STIs). And if avoiding disease is important, then the male condom is the most effective and prevalent method.

The most effective contraceptive method that provides protection against disease is the male condom (Black et al., 2004; Centers for Disease Control and Prevention, 2000). The male condom is the single most effective method for preventing pregnancy *and* STIs (Wulff & Lalos, 2004), and is also one of a few contraceptive methods that are available to males. However, some males may be reluctant to use condoms and females may be unable to negotiate their use as a result (Amaro, Raj & Reed, 2001; Amaro, 1995). It is this context that provided the foundation for this research. If a female decided she did not want to use the birth control pill (for whatever reason), what would be the reaction of her partner? Would males accept using a condom? Would they be reluctant?

The parameters of the current study stemmed from the consideration of ecological effects from estrogen in oral contraception. Therefore, the focus was on hormonal contraception and pregnancy prevention. However, avoiding STIs was also an important consideration and was not ignored. The logic for this was simple: condoms are the primary contraceptive method used by males. Male condoms are also the most effective contraception for avoiding STIs. Therefore, if either partner were concerned about preventing STIs, it would likely be a relevant topic for males because they are the ones who must wear the condom. Furthermore, unprotected heterosexual sexual behaviour is the second most common route of both total and new HIV infection in Canada (CFSH, 2007; PHAC, 2007b). The proportion of new HIV infections due to heterosexual contact has been increasing since 1996 (CFSH, 2007; PHAC, 2007b). Finally, unprotected heterosexual sexual behaviour is the primary exposure category among females. As such, one must seriously consider the motivation for those behaviours that interfere with the prevention of HIV and other STIs (Severy & Newcomer, 2005). As one objective of this research was to better understand adult males' motivation for using contraception, this research could also offer insights into those behaviours that interfere with condom use, and thus, STI prevention.

Research Framework

There are many models that pertain to sexual health and preventative behaviour in general. These include the Health Belief Model, the Theory of Reasoned Action, the Subjective Expected Utility Theory, and the Protection Motivation Theory. These models were not ideally suited to my research for a couple of reasons. First, they fail to consider the context of the individual's decision, such as their social environment, interactions with their partner, and issues of gender. Second, there is an assumption of rationality within these models; affective processes are not sufficiently considered. Third, these models tend to focus on preventative measures such as condom use. But condoms may not be the contraception of choice within the dyad. Although condoms are expected to be a key contraceptive choice in this research for many reasons (e.g., the participants are male, and condoms are one of the few forms of contraception available to males; condoms are one of the most prevalent forms of contraception), the reliance on oral contraception may also be common within the relationship. Further, if the prevention of STIs is not of primary concern to the couple, then condoms may not be used.

The relationship context in which sex occurs is vital to the concept of preventative behaviour, as will be explained. Safer sex is usually defined as vaginal or anal intercourse with the use of a condom (Miner, Robinson, Hoffman, Albright & Bockting, 2002). Conversely, unsafe sex is usually defined as intercourse without a condom. Limiting the definition of unsafe sex to penetrative sex without a condom ignores other factors that contribute to the level of risk from an individual's sexual behaviour. For example, individuals in a mutually monogamous relationship in which both partners are known to be HIV-negative are at minimal risk of infection through sexual contact regardless of their use of condoms (Miner et al., 2002). This example demonstrates that having unprotected sex in a trusting relationship does not necessarily represent

risky sexual behaviour. Blonna and Levitan (2005) suggest that the risk of acquiring an STI "decreases as sexual relationships move away from multiple, anonymous, sexual encounters toward monogamous (with uninfected partner), trusting partnerships" (p. 478). Clearly, sexual risk is not just characterized by sexual behaviour but also the behaviour in the context of the relationship. Therefore, it is important to account for the context of the sexual relationship, as well as not limit the definition of contraception to condom use.

No cohesive theory or model of contraceptive decision-making in males was found in the literature reviewed. Further evidence of this can be found in Free, Ogden and Lee (2005) and Noone (2004), who suggest understanding how males make decisions about birth control as an area of future research. This may not be surprising when one considers that most studies on adolescent sexual decision-making were not grounded in a theoretical framework. An integrative review of 38 research studies found that only one-third named a theoretical framework (Hulton, 2001). Of these, only two studies focused on sexual decision-making (in adolescent males).

As a result, this research was guided by particular theories identified in the literature. Among the theoretical frameworks and models of sexual health reviewed was a model that addressed the relationship between gender and adolescent sexuality (Tolman, Striepe & Harmon, 2003). The authors discussed the construction of a new model that initially focused on female adolescent sexual health. However, the serendipitous inclusion of adolescent males in the study revealed how both adolescent males and females needed to be included for a complete understanding of female sexual health. The authors seemed surprised that there were as many similarities due to gender as there were differences. Despite the noted similarities, Tolman et al., presented a model of female adolescent sexual health, with the promise of building an integrated model of adolescent sexual health in the future.

This research was important to the current study for two reasons. One, it highlighted the importance of including gender as a key aspect of sexuality research. The authors noted a contradiction in sexual health research: although there is empirical and theoretical evidence supporting the significance of gender, it is often absent in models of adolescent sexual health. Two, there appeared to be no model of male sexual health, though the authors discussed similarities adolescent males had to their model of adolescent female sexual health. For example, Tolman et al., (2003) suggested adolescent males need to "be sensitive to and have respect for the needs and feelings of partner, balanced with awareness of own needs and feelings"; the researchers made a similar suggestion for adolescent females (p. 10). This particular example indicates a gap in the literature and a need to study male sexual health in terms of building healthy sexual and romantic relationships.

Sable and Libbus (1998) proposed using the Contraceptive Knowledge, Attitude and Practice Model (C-KAP) to study gender differences regarding factors that influence contraceptive use. Sociocultural factors were among those that this model addressed. Sociocultural factors of contraceptive use included the influence of one's partner. One's partner could influence contraceptive use in the following ways: role in decision-making, level of communication, couple negotiation, degree of intimacy, and length of relationship. These variables influencing contraceptive use helped organize the findings from this research.

Warren Miller developed a theoretical framework describing the psychological sequence that culminated in male reproductive behaviour (Sonenstein et al., 1997). The framework outlined how motivation, desire, and intention lead to reproductive behaviour in males. Most importantly, Miller's framework acknowledged the interaction of dyadic influences. This framework was used to help identify some of the concepts for this research, namely the motivations of males to use contraception and their perception of contraceptive responsibility (Sonenstein et al., 1997). As would be expected, heterosexual

males use condoms for a combination of pregnancy prevention and avoiding STIs. Facilitators to condom use include fear of AIDS and a positive attitude toward male contraceptive responsibility; barriers to condom use include embarrassment and less pleasure. Another important motivation named was the belief that their female partner would appreciate the use of condoms. In terms of contraceptive responsibility, issues raised were whether the male initiated a discussion about contraception, whether he knew if his partner was using contraception, whether he used contraception, whether he would assume joint responsibility for a pregnancy, and who paid for contraception. Non-traditional attitudes about male gender roles were listed as predictors of endorsing male contraceptive responsibility. All of these concepts were valuable considerations for this research.

However, the framework did not address the precursors to motivation. Sonenstein et al. (1997) acknowledge motivations can be shaped by gender roles and normative influences from family and peers, and these may have a significant effect on male reproductive behaviour. Therefore, a Determinants of Health model was used to build upon Miller's theoretical framework.

The Determinants of Health are a set of interrelated factors that include social and economic influences, the physical environment, and individual behaviour (see Appendix I for a complete list of the 12 Determinants of Health). These factors do not exist in isolation, and it is their combined influence that determines health. The Determinants of Health was chosen as a research framework for the current study because it recognizes that these complex interactions do not exist in isolation, and it acknowledged two factors that were key components in this research: gender and the natural environment. Health promotion has not specifically addressed the connection between gender and the natural environment in the way that is proposed in this study. Recognizing the natural environment as a determinant of health is important from a health policy perspective. Our individual and collective actions can impact the natural

environment and, in turn, influence our health. Recognizing the natural environment as a determinant of health was important to the current study because of the notion that estrogen from oral contraception could have an ecological impact and that some individuals consider this when making decisions.

Decision-Making

Although sexual decision-making remains understudied (Civic, 2000; Hulton, 2001; Michels, Kropp, Eyre & Halpern-Felsher, 2005; Seal & Ehrhardt, 2004), many factors that influence the process have been identified. This section will provide a starting point from which some of the factors that influence the contraceptive decision-making process will be identified.

Severy and Newcomer (2005) proposed a definition of decision-making as it relates to contraception. The authors declared that decision-making involved two partners acting in a dynamic fashion and influencing the acceptability and use of a contraceptive method (Severy & Newcomer, 2005)[1]. This definition was well suited to the current study because it acknowledged that contraceptive decisions involve two partners and are dynamic. This is important because decision-making is more than just those factors that influence the individual. These decisions occur with one's partner and in circumstances that ought to be considered. Until now, research has tended to focus on individual factors regarding contraceptive decision-making while ignoring the context of the decision (Free et al., 2005).

In an analysis of the literature, Noone (2002) identified four categories of influence on female contraceptive decision-making: method properties, external influences, relationship dynamics, and personal characteristics. These categories

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[1] Although acceptability is not as relevant to the current study, Severy & Newcomer (2005, p. 47) defined it as "the voluntary sustained use of a method in the context of alternatives."

were useful in identifying themes related to the contraceptive decision-making process of adult heterosexual males in the current study. Noone continued by developing a grounded theory of the process of contraceptive decision-making in females (Noone, 2004). Noone found that the core category of "finding the best fit" best described the female decision-making process. The related categories of "becoming aware," "weighing what's best for me," and "navigating a course" were all stages related to the core category (Noone, 2004). Finally, Noone (2004) found that some females chose not to use the birth control pill because it was too "foreign" or "chemical," and females also avoided the hormonal effects of certain contraceptives to protect a child who was being breastfed. Along this line, some females stopped taking hormonal contraception because of concerns about health risks and to stay healthy (Free et al., 2005).

Severy and Newcomer (2005) offered a list of variables that influence contraceptive decision-making similar to the one provided by Noone (2002). In addition to those variables provided by Noone, Severy and Newcomer suggested potential or imagined partners and manufacturers of contraceptive products. Hardy, de Padua, Jimenez and Zaneveld (as cited in Severy & Newcomer, 2005) also made the important point that the relative influence of these variables fluctuates among contraceptive users of different ages and relationship statuses. This point is important to the current study because it demonstrates, again, the significance of the perceived status of the relationship.

Langer, Zimmerman, Warheit and Duncan (1993) distinguished whether peers, parents, or the individual (i.e., self) directed decision-making. This is important because in a group of adolescents, those who were self-directed in their decision-making process were less likely to engage in sex. Furthermore, a gender difference was found: adolescent females were more likely to be self-directed and adolescent males were more likely to be directed by their peers (Langer et al.). Exploring who directs the contraceptive decision-making process

in adult males may help inform current strategies that promote male and female sexual health.

Commendador (2003) did a concept analysis of contraceptive decision-making in adolescent males and females. From this analysis, four themes were identified: intimate long-term relationships; positive parental, partner, and peer influences; internal locus of control; and positive self-image (Commendador, 2003). These concepts helped inform the early stages of the current study.

Chambers and Rew (2003) discussed the conflict theory of sexual decision-making in adolescent females. Females who did not meet all the criteria of the conflict model were considered to have engaged in maladaptive decision-making. One component of maladaptive decision-making was defensive avoidance. Defensive avoidance was when one avoided conflict by procrastinating, rationalizing, or passing the responsibility of a decision on to others (Janis & Mann, as cited in Chambers & Rew, 2003). Defensive avoidance provided additional insight into how contraceptive decisions were made, and elements of it were identified in this research.

Lamvu et al., (2006) conducted a study in the United States to determine the percentage of females who used a birth control method that was consistent with their most important reason for using contraception. That is, were those females who prioritized STI prevention using condoms, and were females who prioritized pregnancy prevention using hormonal contraception or sterilization? Twenty-five percent of their sample used a contraceptive method inconsistent with their most important reason for using a contraceptive. The authors found that for some females, factors influencing method choice may differ from those factors influencing successful contraceptive use. The authors also suggested that contraceptive knowledge is independent of the consistency between reasons for contraceptive use and the method actually used. Finally, the authors concluded that in addition to basic facts about contraceptive effectiveness, it is equally

important to understand individual priorities when selecting a method (Lamvu et al., 2006).

There were other noteworthy findings from the literature on contraceptive decision-making. Snowden (as cited in Severy & Newcomer, 2005) suggested most females and males would prefer to not use any form of contraception during intercourse. Because no single contraceptive method is fully supported, contraceptive decisions are based on the least offensive or intrusive approach (Severy & Silver, as cited in Severy & Newcomer, 2005). This notion of choosing the "least bad alternative" was echoed by Brown and Eisenberg (1995) and Walsh (1997). Using the contraceptive method of choice (for that particular individual, at that given time) would maximize user satisfaction, effectiveness, and continuation of use, therefore minimizing the likelihood of unintended pregnancy (Walsh).

This section has shown how contraceptive decision-making often involves more than one individual. Typically, these decisions involve one's partner, and it is the context of the relationship and how it can influence decisions surrounding contraception that will be discussed next.

Relationship Dynamics

The dynamics of the relationship can have a major impact on decisions about contraception (Blonna & Levitan, 2005; Herndon, 1998; Landry & Camelo, 1994; Lock, 1998; Miner et al., 2002; Noone, 2004, 2002; Pulerwitz & Dworkin, 2006). Recall that Blonna and Levitan (2005) suggested that the risk of acquiring an STI decreased as relationships moved away from multiple, anonymous sexual encounters toward monogamous and trusting relationships with an uninfected partner. In this way, the dynamics of the relationship could influence contraceptive decisions such as whether or not contraception will be used or which method is chosen. These decisions, in turn, could have an impact on sexual health outcomes by influencing how consistently and effectively

contraception is used. The role of males in this process is a central tenet of the current study.

In the current study, relationship dynamics were those dyadic factors that could influence contraceptive use. As such, factors that could positively influence contraceptive use were construed as partner support. A number of definitions of partner support that helped identify the relationship factors that could influence contraceptive use were found in the literature. Sable and Libbus (1998) proposed a model to study gender differences regarding factors that influence contraceptive use. Part of this model addressed socio-cultural factors of contraceptive use, including the influence of one's partner. The authors suggested that one's partner can influence contraceptive use in the following ways: role in decision-making, level of communication, couple negotiation, degree of intimacy, and length of relationship (Sable & Libbus, 1998).

Further to this description of how one's partner can influence contraceptive use, Cabral, Galavotti, Armstrong, Morrow and Fogarty (2001) offered a useful definition of partner support. In their study on reproductive and contraceptive attitudes as predictors of condom use in females, they defined support along three categories: instrumental (e.g., paying, obtaining, carrying, or keeping contraceptive products available); emotional (e.g., encouraging use, providing reminders, or talking over problems related to use); or actual participation in contraceptive use (e.g., putting on condoms). A study focusing on partner support and pregnancy wantedness (Kroelinger & Oths, 2000) used a similar definition, adding weight to the one by Cabral et al.

The duration of the relationship and the type of relationship (e.g., casual versus long-term) can influence contraceptive use. Condom use tends to decrease as the duration of the relationship increases (Fisher & Boroditsky, 2000; Harvey et al., 2006). In a study about the male's role in contraceptive practice, Landry and Camelo (1994) conducted focus groups with sexually experienced young females and males. Males were more likely to discuss, support, and

practice contraception if they were in a long-term relationship with a strong emotional bond to their partner, versus males in casual relationships. Manning, Longmore and Giordano (2000) studied the role of relationships in adolescent decision-making at first intercourse. The authors found that young females who were going steady with their partner were more likely to use contraception at first intercourse than those who were not in a romantic relationship. Interestingly, how males *define* their relationship (e.g., casual versus long-term) may have a greater impact on their willingness to use condoms than their beliefs about disease status or contraceptive efficacy (Flood, 2003).

Research suggests that concern about their partner influences how males practice contraception (Forste & Morgan, 1998; Landry & Ward, 1997). The amount of concern males had for their partner may be reflected in how they describe their sexual involvement with a female (Forste & Morgan, 1998). Fostering awareness and concern in males for their partner's contraceptive needs may increase effective contraceptive use and is another reason to include males in intervention efforts (Forste & Morgan, 1998).

The use of hormonal contraception can also influence contraceptive use in the relationship. There is much research that suggests there is a link between oral contraceptive use and decreased condom use (Cates & Steiner, 2002; Christianson, Johansson, Emmelin & Westman, 2003; Civic, 2000; Fisher & Boroditsky, 2000; Ott et al., 2002; Sangi-Haghpeykar, Horth & Poindexter, 2001; Seal & Palmer-Seal, 1996). Contrary to this research, Sayegh, Fortenberry, Shew and Orr (2006) chose to study links between a decline in condom use and relationship quality, coital frequency, and hormonal contraceptive status. From a sample of adolescent females, the authors determined that condoms were used less often because of increased coital activity and relationship characteristics that were present early in the relationship. The decrease in condom use was not associated with the use of hormonal contraceptive methods or the duration of the relationship in itself (Sayegh et al., 2006). This is important because it indicates

that certain characteristics of the relationship, namely coital frequency, could influence condom use. Similarly, Ku, Sonenstein, and Pleck (1994) found that an increase in coital frequency was associated with a decrease in condom use.

So we can see that it is not only the length and type of relationship (or how males perceive the relationship) that can influence contraceptive use, but also characteristics of the relationship such as the presence of a strong emotional bond, concern for the female partner, and possibly coital frequency. Relationship characteristics such as trust and intimacy are other factors that can influence contraceptive decisions.

Trust is one aspect of sexual risk behaviour, and it plays an intricate role. Lock et al. (1998) defined the concept of building trust as "the process of developing confidence that the sexual partner is truthful about his or her sexual history" (p. 280). Once trust was established, the respondents were more likely to discuss sexual risk behaviour with their partner. However, females usually initiated the conversation, and some expressed frustration over this (Lock et al., 1998). Furthermore, respondents indicated dialogue would be halted if the male partner were not willing to engage in the conversation. Although they rarely initiated conversation about sexual risk behaviour, most male respondents were willing to discuss the issue once it was broached (Lock et al., 1998). Other research has added to our understanding of how trust impacts sexual risk behaviour. Among males willing to use condoms, they used condoms more consistently with females who felt condoms promoted trust (Santelli et al., 1996). Also, females suggested the main reason condom use decreased as their relationship progressed was because they knew and trusted their partner (Fisher & Boroditsky, 2000).

However, trust can impact condom use in other ways. Jones (2004) examined the relationship between sexual imposition, dyadic trust, and sensation seeking with sexual risk behaviour in young urban females. The research revealed that dyadic trust was negatively associated with risk

behaviour. In other words, females engage in sexual risk behaviour, such as not using condoms, with males they distrust. Sometimes, sexual intercourse is how trust is established in a relationship (Flood, 2003; Landry & Camelo, 1994). Trusting one's partner could lead females to believe that it is safe to stop using condoms. Further, females may not use condoms as a symbol of intimacy and trust, or because condoms are perceived to undermine the establishment of a loving relationship (Free et al., 2005; Lock et al., 1998; Rosenthal, Gifford & Moore, 1998). Males may express how sexual intercourse symbolizes emotional intimacy between partners, and that condoms block this intimacy (Flood, 2003).

Davis and Bibace (1999) found that couples with mutually dissatisfying levels of intimacy were more likely to use contraceptives inconsistently. Schaefer and Olson (as cited in Davis & Bibace, 1999) defined intimacy as enhancing personal well-being along five dimensions: emotional, intellectual, social, recreational and sexual. It is interesting to note that this study found mutually dissatisfying levels of *sexual* intimacy did *not* seem to predict inconsistent contraceptive use. Instead, inconsistent contraceptive use was thought to be the result of mutually dissatisfying levels of emotional, intellectual, or social intimacy (Davis & Bibace, 1999).

Contrary to the study by Davis and Bibace (1999), more recent research has shown that sexual intimacy can influence contraceptive use. In a study about intimacy in adolescent sexual relationships, Gebhardt, Kuyper and Greunsven (2003) found that the desire for intimacy and emotional closeness diminished the perceived need for condom use. According to Severy and Newcomer (2005), the majority of evidence indicates acceptance of a contraceptive method is a function of the couple's belief that it could have an impact on sexual intimacy. Contraceptive users may accept a less effective method because they can use it more easily, with enhanced pleasure, or covertly. The desire for pleasure often drives the sexual episode so that sensual enjoyment overrides considerations of prevention efficacy (Civic, 2000; Severy & Newcomer, 2005). Therefore, one

strategy for using contraception is to understand what makes prevention acceptable in the heat of the moment (Severy & Newcomer, 2005).

Research by Rosenthal et al. (1998) found that females tended to associate sex with love and romantic relationships. Male respondents expressed similar views, but also acknowledged sex could be separate from love and romance by suggesting sex could be a conquest, driven by lust and pleasure. Male respondents admitted to manipulating the romantic ideal held by females to achieve casual sex. Further, some males refused to use condoms with the knowledge that they were putting their partner in the position of choosing between risky sexual behaviour and possible abandonment (Rosenthal et al., 1998). Such situations show how males can be barriers to condom use, as well as to the desire for a romantic relationship.

Cabral, Pulley, Artz, Brill and Macaluso (1998) did a study about the importance of male partners as barriers to condom use. Using a sample of economically disadvantaged females in the United States, the authors examined links between gender, power, and barriers to condom use. It was found that among those who used condoms inconsistently, features such as communication, sexual pleasure, trust and caring might influence condom use more than male power, control, and violence (Cabral et al., 1998). The former features were relevant aspects to the current study.

In addition to the relationship dynamics mentioned above, effective communication about contraception is thought to be a key to good health (Blonna & Levitan, 2005; Marston, 2004). The connection between partner support and communication was reflected by Santelli et al, as cited in Harper, Callegari, Raine, Blum and Darney (2004, p. 20) when they proposed that "support from and communication with male partners can help to increase contraceptive use and to decrease the likelihood of adolescent pregnancy." Further, Marston (2004) pointed out that effective communication was needed to improve sexual health outcomes, which necessitated the active involvement of

males. The role of communication in contraceptive decision-making will be discussed next.

Communication

Communication is a process by which information is exchanged among individuals, and it encompasses the spoken word as well as non-verbal communication (e.g., gestures, facial expressions, and body signals) (Blonna & Levitan, 2005). Communication involves a range of issues from emotional comfort to discrete behavioural skills. In romantic relationships, non-verbal communication can be used to express feelings, ask for things, and reinforce pleasurable activities through a moan, a hug, or a seductive look. Non-verbal communication can be the precursor to verbal communication by signaling the approachability and desire to communicate. Two barriers to effective sexual communication are failing to initiate and lack of specificity (Blonna & Levitan, 2005).

Increased communication between partners is one recommendation from the United States Agency for International Development (USAID) Interagency Gender Working Group (IGWG) when designing male reproductive health programs (Ndong & Finger, 1998). The benefits of increased communication are twofold. First, some of the consequences of poor communication, such as unintended pregnancy, can be reduced. Second, reproductive health decisions are more likely to be implemented when made collaboratively by both partners.

Communication about contraception can positively influence the decision to use contraception and use it effectively (Fortunati & Floerchinger-Franks, 2001; Lock et al., 1998; Marston, Juarez & Izazola, 2004; Wulff & Lalos, 2004). The ability of an individual to communicate with their partner about sexual health behaviours has a major influence on the contraceptive decision-making process (Marston et al., 2004). In the existing literature on adolescent sexual behaviour, there is a clear connection between discussion of contraception and condom use

(Lock et al., 1998; Wulff & Lalos, 2004). A survey of adult males' perceived health care needs and involvement in family planning showed almost all believed communication about safer sex was important (Fortunati & Floerchinger-Franks, 2001). The majority of males also reported having discussed the use of birth control before the initiation of a sexual relationship with their female partner. But, as the authors point out, it is not known what type of discussion took place, or whether contraception was used or would continue to be used. Knowing the details of a discussion is important because there may be differences in the ways males and females communicate (Marston, 2004). For example, it would be important to know who initiated the conversation. Some research suggests conversations about sexual activity tend to be initiated by females more often than males (Christianson et al., 2003; Watt, 2001). Focusing on this gender difference in communication from the perspective of the male may help encourage effective and consistent contraceptive use (Watt, 2001). But few studies provide details about the nature of the discussion over contraception (Lock et al., 1998).

Lock et al. (1998) used grounded theory to develop a model of communication of sexual risk behaviour among late adolescent females and males. The variables identified, such as building trust, females initiating safe sex talk and males willing to converse, and the presence of a caring relationship, were used to inform this research. Exploring why males tend to refrain from initiating discussions about safer sex was one component of the current study.

Coleman and Ingham (1999, p. 475) present two "dominant and contrasting" communication strategies used by youth when negotiating condom use. The strategies are categorized as verbal communication and non-verbal communication. The former is defined as conversations explicitly about contraceptive use that take place sometime before intercourse, whereas the latter is when one partner initiates condom use without discussing it with the other. The authors noted that both males and females used the non-verbal strategy

(although it was predominantly used by males), and it seemed to be related to the type of relationship (steady versus a one-night stand). Coleman and Ingham (1999) argued that non-verbal communication strategies are important and should be promoted as a complimentary approach to encouraging condom use. This non-verbal communication strategy was interesting because it was a unique suggestion in the sexual health literature, and the strategy tends to counter prevailing notions of responsible sexual health behaviours (e.g., discussing contraception).

Although encouraging non-verbal communication as a strategy appeared to be somewhat unique, the presence of non-verbal communication has credence in the sexual health literature. Early in a relationship, communication about sexual encounters tends to be non-verbal (Lear, 1995). There is very little spoken communication in order to maintain ambiguity in case the other person decides not to proceed. If a sexual encounter does develop, then remaining vague gives credence to the explanation that it "just happened" (Lear, 1995).

Cleary et al. (2002) also focused on communication skills as they relate to sexual health, but the authors offered a slightly different perspective than Coleman and Ingham (1999).[2] Cleary et al. offered vague criticism, directed at both society in general and the education system, of the failure to adequately meet the needs of youth with regard to sexual communication skills. The only solution Cleary et al. offered was the desire to have youth recognize the importance of sexual health communication and utilize it. The authors called these conversations health protective sexual communication (HPSC). Cleary et al. strongly forwarded the issue of HPSC, as reflected in their study. The authors interviewed 22 young, heterosexual females about conversations they may have had with their partner relating to sexual health. Cleary et al. stated that, contrary

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[2] It is interesting to note that Cleary et al. (2002) did not cite the research of Coleman & Ingham (1999), even though the latter was published three years earlier.

to the literature, condom use (protecting sexual health was explained only in terms of condom use) for the first sexual intercourse with their new partner was common, and it appeared HPSC was not essential. The authors made the distinction that condom use was common in their sample without HPSC but did not explore why this occurred. Instead, Cleary et al. continued by discussing the need for HPSC in spite of this evidence, and suggested the lack of discussion by the participants was related to their lack of understanding for the need of HPSC. Although the authors discussed gender differences and were aware of the role of social context in sexual health, they focused on communication skills as a solution.

Communication, however, cannot be the limiting factor to attaining healthy sexuality. It should now be clear that a variety of factors contribute to healthy sexuality, and limiting it to communication is a narrow view. Understanding the circumstances that influence discussion about sexual risk behaviour, especially gender differences, is essential for developing strategies that promote effective communication between sexually active heterosexual couples (Lock et al., 1998). The influence of gender and masculinity on sexual health will be discussed next.

Gender and Masculinity

There are many different theories of that attempt to define masculinity and explain male behaviour. Hegemonic masculinity is one theory that refers to males having power, including dominance, over females (Connell & Messerschmidt, 2005). The concept of hegemonic masculinity offers insights into idealized ways of being male (Connell & Messerschmidt, 2005). This type of masculinity largely references males who are in their early mid life, educated, professional, Caucasian, and visibly heterosexual (Lorber, 1998). The demonstration of hegemonic masculinity may include the denial of weakness or vulnerability, a strong and healthy appearance, and the display of aggressive

behaviour and physical dominance (Courtenay, 2000). With regard to sexual health, hegemonic masculinity portrays males as being sexually active and knowledgeable about sex, having a ceaseless interest in sex, engaging in multiple sexual partnerships, risk-taking, and being in control of sexual decision-making (Campbell & Aggleton, 1999; Courtenay, 2000; Gahagan et al., 2007; Pulerwitz & Dworkin, 2006). These sexual health-related beliefs and behaviours are important because they demonstrate expectations about masculinity and femininity and how gender is negotiated in relationships.

Gender, as one key determinant of sexual and reproductive health, impacts on health outcomes, particularly the differential access of males and females to preventive sexual health services and programs (Gahagan et al., 2007; PHAC, 2004). It is the tie that binds all the aforementioned concepts in the current study (e.g., decision-making, relationship dynamics, communication). According to Health Canada (2000), gender refers not only to the biological sex of an individual, but also to the

> array of socially constructed roles and relationships, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to two sexes based on a differential basis. Gender is relational - gender roles and characteristics do not exist in isolation, but are defined in relation to one another (p. 14).

Gender is important to sexual and reproductive health because it can influence the ways in which males and females interact with each other (Rao Gupta, 2000). In North American society, males are traditionally regarded as sexual initiators and females are often perceived as subordinate in heterosexual relationships, or to set limits on sexual activity (Amaro, 1995; Lock et al., 1998; Pulerwitz & Dworkin, 2006; Pulerwitz, Amaro, De Jong, Gortmaker & Rudd, 2002; Seal & Ehrhardt, 2004). To illustrate, females may not insist on safer sex practices with their male partner because they are socially conditioned to assume

a submissive or passive role (PHAC, 1999). Gender also influences how males and females interact with each other because gender differences exist in sexual knowledge, attitude and behaviour (Lock et al., 1998). Most adolescent males and females believe that the female is primarily responsible for the sexual health of the dyad (Gahagan et al., 2007). In addition, there was an expectation that young females were responsible for protecting themselves from unintended pregnancy. The authors suggest this is evidence of a normative view that sexual and reproductive health is a female issue, and reinforces the perception that many males are not interested in sexual and reproductive health. There was also a sexual double standard in which males were expected to be knowledgeable about sex and therefore have no need to ask questions about it (Gahagan et al., 2007). This could be a barrier to getting accurate information regarding sexual health.

Research suggests that young females can only express and receive sexual pleasure when they are able to safely negotiate sexual boundaries with their partner (Holland, Ramazonoglu, Sharpe and Thomson, 1992; Wyatt et al., 2000). Negotiating sexual boundaries was heavily influenced by how heterosexual females interpreted the sexual needs and behaviour of their male partner (Holland et al., 1992). If the partner's views about contraception are unknown, and communication does not occur, then individuals may be more concerned with what they think they should be doing rather than what might be best for them or their partner (Marston, 2004). Similarly, Lock et al. (1998) found that adolescent males and females were more likely to discuss sexual risk behaviours after trust was established. However, it was usually females who initiated a discussion about safer sex with their partner (Christianson et al., 2003; Gahagan et al., 2007; Lock et al., 1998).

Many researchers have taken the position that females usually have less power than their male partners, which inhibits their ability to protect themselves from HIV risk (e.g., Amaro, 1995; Amaro et al., 2001; Pulerwitz & Dworkin, 2006;

Pulerwitz et al., 2002; Wulff & Lalos, 2004; Wyatt et al., 2000). These gendered power relationships can be found in experiences of decision-making dominance or relationship control. How safer sex decisions are negotiated, especially with regard to condom use, has been a central tenet of gender power dynamics and HIV risk. Males' negative reactions to condom use (despite their female partner's wishes) and the subsequent lack of condom use have often been cited as evidence for the importance of gender power relations. Some researchers feel that males have an obvious power advantage both because of gender-based power differentials and because females do not actually wear male condoms (therefore females must negotiate with males, while the reverse is not true) (Pulerwitz & Dworkin, 2006).

Pulerwitz and Dworkin (2006) speculated that relationship power is more complex and fluid than what is discussed in the literature. The authors examined the ways in which power dynamics are fluid and how this insight can inform program interventions. They interviewed eleven female and eight male participants between 18 and 29 years old, and used grounded theory to analyze the data. Key themes found were that females requested the use of condoms early, often, and firmly, female ambivalence toward condoms, many males were willing to negotiate condom use, and the impact of previous gender inequality on current negotiations.

The results from Pulerwitz and Dworkin (2006) were important in shaping the findings of the current study. Respondents gave a number of reasons for having unprotected sex, such as the couple feeling that condoms were not necessary (because they were in a trusting, monogamous relationship), and lacking the energy to address condom use. It wasn't unusual for one partner to want to use a condom and the other not. The majority of respondents felt that negotiating condom use was the responsibility of the female. When negotiating condom use, females felt it was more appropriate to focus on pregnancy prevention or be indirect (e.g., "just to be safe"), rather than being aggressive or

implying distrust. The majority of females described their own ambivalence toward condom use because of a lack of pleasure or emotional/physical closeness. The majority of male partners suggested they were willing to use condoms *if* their partner wanted to use them; males tended to avoid condoms if their partners did not express clear and consistent interest. However, another gender dynamic is introduced when males expect females to promote condom use (Christianson et al., 2003). Because many males were willing to negotiate condom use and supported it if their partner expressed clear interest, these males did not define condomless sex or power over sexual decision making as an important expression of their masculinity. Some males took either joint or sole responsibility for safer sex. The authors wondered if males were more open to safer sex negotiation with their partners so that they could establish more egalitarian relationships and greater emotional commitment. Finally, Pulerwitz and Dworkin (2006) suggested that female ambivalence toward condom use be acknowledged more openly in the literature as well as in HIV/AIDS prevention and condom promotion programs. The authors also thought the support for shared decision making that some males demonstrated should be better understood so it can be promoted more successfully in prevention programs.

Males can play a vital role in preventing STIs, including HIV (Herndon, 1998; RHO 2004). For example, two key strategies aimed at reducing the transmission of STIs rely on male behaviour: the active participation in using condoms correctly and consistently, and maintaining a monogamous relationship by remaining faithful (Herndon, 1998). In this way, males play a crucial role in supporting a couple's sexual health needs as they relate to contraception.

Birnbaum and Laser-Brandt (2002) present an appealing perspective on intimacy in their study on gender differences in the experience of heterosexual intercourse. The authors offer compelling evidence that argues males tend to adopt a recreational orientation toward their sexuality, whereas females develop

a more emotional and interpersonal orientation. As a result, females are expected to experience sexual intercourse as a sign of love, symbolic of the positive emotions their partner feels toward them. Males are expected to be more occupied with the pleasure and satisfaction derived from the sexual act itself. Thus, there may be a gender difference in the "emotional, cognitive, and motivational aspects of the experience of sexual intercourse" (Birnbaum and Laser-Brandt, 2002, p. 144). Other research has drawn similar conclusions (Christianson et al., 2003; Rosenthal et al., 1998). If there is a gender difference in the motivation toward sexual intercourse, for example, then there may be gender differences in the motivation toward contraception.

In an effort to explore the gender differences in contraceptive decision-making, Grady et al., (1999) wanted to understand the priorities and perceptions of contraception that males and females bring to the decision-making process. The authors expected males and females to have different perspectives about the various forms of contraception based on four reasons: females are exposed to more information about contraception than males, females have more experience making decisions about contraception (because the responsibility tends to fall on them), some forms of contraception require much more involvement on the part of the female, so females may not think highly of these forms, and there are differences in the consequences of not using contraception (and in using contraception, such as side effects from the birth control pill). The authors examined how gender was related to seven contraceptive characteristics (effectiveness in preventing pregnancy; effectiveness in protecting the user from STIs, effectiveness in protecting the partner from STIs, health and side effects, interference with sexual pleasure, ease of use, and amount of prior planning needed). Some notable findings were that females perceived pregnancy prevention to be more important, whereas males thought prevention against pregnancy and STIs were almost equally important (but males ranked prevention against STIs as more important than did females). Females preferred

the pill over condoms whereas males preferred condoms over the pill. Males did not rank the need to plan ahead very highly. Unsurprisingly, males rated condoms as interfering with sexual pleasure more than females. But a counterintuitive finding was that males thought this characteristic was the least important factor in method selection. The authors concluded that a loss of sexual pleasure might not be the crucial barrier to condom use, as it is generally thought to be (Grady et al., 1999).

Sexual Health and the Environment

Although the link between sexual and reproductive health and the environment may not be apparent, it does exist. One example involves the bleaching process used to whiten tampons or pads (Bobel, 2006). Tampons are typically made of cotton, rayon, or a cotton-rayon blend. Rayon is derived from wood pulp and, until recently, chlorine gas was used to bleach the wood pulp, producing trace levels of dioxin in the tampons (Bobel, 2006). Dioxin (in addition to being an endocrine disrupting chemical) is part of a larger class of chemicals called organochlorines, which have been associated with cancer, birth defects, endometriosis, toxic shock syndrome, and other problems related to the immune, nervous and reproductive systems (Birnbaum & Cummings, 2002; Shen et al., 2008; WHO, 2007). An ancillary topic was toxic shock syndrome, a rare bacterial infection associated with the use of tampons (Bobel, 2006). The threat of toxic shock syndrome and the environmental impact of organochlorines were important topics because they could influence female decisions to use an alternative menstrual product, such as the Keeper. Another example is how environmental factors may contribute to human infertility, as a growing body of experimental research indicates a variety of chemicals are impairing fertility in laboratory animals (Vallombrosa Consensus, 2005).

Concern about the impact of overpopulation on the environment has been previously reported as a factor in male contraceptive use (Bustamante-Forest &

Giarratano, 2004). If concern exists about the environment, then individuals who want to minimize their ecological impact may desire information such as that described in this study. Therefore, knowledge about the link between sexual health and the environment may be relevant to some individuals when making reproductive decisions.

The Endocrine System and Endocrine Disruptors.

The endocrine system is a complex mechanism responsible for growth, development, and reproduction by releasing hormones that act as chemical messengers in the body (Environment Canada, 1999). These chemical messages can be adversely affected by a variety of substances in different ways (Environment Canada, 1999). Disturbances in endocrine function, especially during critical periods of the life cycle such as development, pregnancy, and lactation, can lead to profound and lasting effects (Kavlock et al., 1996).

When an environmental agent alters the endocrine system, it is commonly referred to as an "endocrine disrupting chemical" (McLachlan, 2001). Endocrine disruptors are a very broad category of chemicals that encompass pesticides, plastics, and synthetic estrogen, to name a few. One of the most complete definitions of an endocrine disruptor, as defined by Kavlock et al. (1996) and adopted by the US Environmental Protection Agency, is "an exogenous agent that interferes with the production, release, transport, metabolism, binding, action or elimination of natural hormones in the body responsible for the maintenance of homeostasis and the regulation of developmental processes" (p. 716).

There are a host of chemicals that are considered to have effects on the endocrine system. Some of these include pesticides (e.g., DDT), alkylphenols and polyethoxylates, Bisphenol A, phthalates, natural hormones produced by animals and synthetic steroids found in contraceptives, and phytoestrogens found in plant material. Alkylphenols and polyethoxylates are used as

surfactants for removing oil, as plasticizers, and in spermicides. Bisphenol A is used as a dental sealant and to seal some canned foods. Phthalates are used to soften materials made of plastic and are found in rubber gloves, IV bags, teethers, and baby bottle nipples. Information about these chemicals can also be found in Appendix I. Diethylstilbestrol (abbreviated DES) is probably the most famous endocrine disrupting chemical. It was a synthetic estrogen developed in 1938 and for decades was administered to prevent miscarriages in pregnant females (Colborn, Dumanoski & Myers, 1997). Later, it was found to cause cancer in the daughters of those mothers who took DES during pregnancy.

Although much is unknown about the consequences of endocrine disrupters, they could have a detrimental effect on reproduction (Gist, 1998). The effect of endocrine disruptors on reproduction in humans will be discussed next.

Endocrine Disrupters and Human Health.

It has long been recognized that human health depends on the natural world. To thrive, we need good quality air, water, food, and freedom from exposure to harmful toxins (PHAC, 2004). The effect of endocrine-disrupting chemicals on the natural environment, and their implication for human health, is an emerging concern (PHAC, 2004). Recent media coverage has highlighted the problems associated with endocrine disruption and has raised its public profile (Cohen, 2007), but few studies have addressed the role of endocrine disruptors in the natural environment (Batt, 2003; Daughton & Ternes, 1999; Gist, 1998). Some research in Canada and other countries has demonstrated that endocrine disrupting chemicals can affect the endocrine systems of many species, having a negative impact on growth, development, or reproduction (Environment Canada, 1999; Larsson et al., 1999; Nash et al., 2004; Timms et al., 2005). These animal studies have provided a foundation upon which a link between

endocrine disruptors and human health has been built (e.g., Gist, 1998; Kavlock et al., 1996; McLachlan et al., 2006; Swan et al., 2005).

Exposure to environmental estrogens may cause adverse health effects in humans (Colborn et al., 1997; Kavlock et al., 1996; Kozak, D'Haese & Verstraete, 2001; Kulin & Skakkebaek, 1995; Swan et al., 2005; Toppari et al., 1996). Some possible effects noted in the scientific literature on humans include an increase of incidence in some cancers (breast, prostate, and testicular), reported declines in the quality and quantity of sperm production in males, and premature puberty, increased endometriosis and reproductive cancers in females (Gist, 1998; Kavlock et al., 1996). In addition, Knopper (2003) reported that dioxins and PCBs (endocrine disruptors) have been linked to endometriosis and low sperm counts.

Although every parent prays for a healthy child, there is evidence that endocrine-disrupting chemicals can negatively impact the health of unborn offspring during critical periods of pregnancy. Prenatal exposure to phthalates adversely impacted reproductive development in male infants (Swan et al., 2005). Estrogen from oral contraceptives may also affect the reproductive health of an exposed fetus. A female taking oral contraception may become an unexpected source of ethinylestradiol as a result of an unintended pregnancy. Dickey, as cited in Timms et al. (2005), explained that among the 60 million females who use oral contraception in the United States and Europe, there are almost two million unintended pregnancies each year, mostly because of missed pills. Situations such as this could have drastic implications for the health of the unborn baby, especially considering the exposure to estrogen is likely to occur during critical periods of development in the fetus.

The exact cause of these disturbances in endocrine function may be difficult to identify in humans because the effects of endocrine disrupters are not usually evident at birth and do not manifest themselves until puberty or adulthood (Gist, 1998; Kulin & Skakkebaek, 1995). And though the actual risk of adverse effects of pharmaceuticals on humans via drinking water appears to be

negligible (Kummerer, 2001), concern persists for a few reasons. First, some compounds are carcinogenic, mutagenic, or reproductively toxic, and deserve special attention because "there are no procedures to assess the risks connected to their emission into the environment" (Kummerer, 2001, p. 5). No knowledge of risk is not equivalent to no risk being present. Second, conventional risk assessments analyze single substances and do not consider possible synergistic effects of mixtures of compounds (Kummerer, 2001). Finally, some substances act as persistent pollutants because they are continually introduced to the aquatic environment (Daughton & Ternes, 1999). To demonstrate these three reasons why concern persists, consider estrogen from a contraceptive patch. Because many people use the contraceptive patch on a regular basis, estrogen is continually being added to the environment and is therefore persistent. The estrogen may also mix with other endocrine disruptors in the environment, such as Bisphenol A and phthalates, producing unknown effects. Finally, estrogen - like all endocrine disruptors - impacts the endocrine and reproductive systems. These reasons may explain why concern remains about pharmaceuticals in drinking water and their effect on human health.

Ultimately, the question is "whether sufficiently high levels of endocrine-disrupting chemicals exist in the ambient environment to exert adverse health effects on the general population" (Kavlock et al., 1996, p. 715). Although there is no definitive cause-and-effect relationship, the body of evidence from wildlife studies and human research suggests that there is a link between endocrine disruptors and reproductive health (McLachlan et al., 2006). More to the point, there appears to be general scientific agreement that adverse trends in reproductive health may, at least in part, be associated with increased exposure to environmental estrogens (Kavlock et al., 1996; Kozak et al., 2001; Kulin & Skakkebaek, 1995; Toppari et al., 1996). Adverse effects caused by environmental exposures are, in principle, preventable (Vallombrosa Consensus, 2005). This is

consistent with the upstream focus of health promotion because a key tenet of health promotion is prevention.

Contraception and the Environment.

The use of hormonal contraceptives could have reproductive effects far beyond the bedroom. Estrogen found in hormonal contraceptives such as birth control pills are essentially acting as a contraceptive in fish (Larsson et al., 1999). Estrogen has been detected in rivers, lakes, streams, and groundwater (Batt, 2005; Knopper, 2003). Birth control pills are among the most prescribed pharmaceuticals in the United States (Burgess, 2003) and are used by millions of women worldwide every day. Each day estrogen from the pill passes through females' bodies and is excreted. The estrogen is flushed down the toilet, where it usually enters a water treatment facility. Normal means of water treatment does not account for chemicals such as endocrine disruptors. But even if treated, these chemicals eventually find their way back into the aquatic environment, or the water system, where they can be found in our next glass of tap water (Knopper, 2003).

Oral contraceptives (OC's) either contain both synthetic estrogen and progestin (combination OC's), or contain progestin without the estrogen (progestin-only OC's) (Dickey, 2004). The active ingredient of combined oral contraceptives, ethinylestradiol, has been identified as a potential endocrine disrupter (Environment Canada, 1999). The emergency contraceptive pill and the contraceptive patch also contain ethinylestradiol (Black et al., 2004). The principal source of endocrine disruptors in the natural environment is municipal effluent (Environment Canada, 1999; Gist, 1998). Ethinylestradiol enters the environment primarily through raw and treated sewage but has also been found in surface water, coastal water, groundwater, and septic fields (Burgess, 2003; Kozak et al., 2001).

Ethinylestradiol has been found in virtually every stream and waterway tested in the United States (McLachlan et al., 2006). One consideration in the present study was the relative environmental impact of some newer hormonal contraceptives. The contraceptive patch and contraceptive ring could pose ecological risks after disposal. A used contraceptive patch (e.g., Ortho-Evra), if flushed down the toilet or sent to a landfill, can harm wildlife because it continues to release ethinylestradiol. Joakim Larsson, a Swedish scientist, estimated that even a few patches flushed down the toilet could have a negative impact on the environment (Raloff, 2002).[3] The patch's manufacturer agreed and issued a warning to Europeans, but no such recommendation exists in the United States.

A used contraceptive ring (e.g., NuvaRing) has similar environmental effects. Upon disposal, a contraceptive ring has 33 percent more estrogen than a month's worth of discarded patches, or six times more than a month's supply of birth control pills (Raloff, 2003).[4] The manufacturer includes instructions telling users to not flush the contraceptive ring, but this does not ensure adherence. Additionally, the device can be accidentally expelled, according to the manufacturer.

McLachlan et al. (2006) suggested that one of the take-home lessons for female reproductive health would be the responsible disposal of these potent hormones. But according to Raloff (2003), these contraceptive products can only be disposed of properly if the community incinerates their trash or if the pharmacy accepts used products. Larsson has taken a different approach by

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[3] The patch's manufacturer estimates each discarded patch contains 600 micrograms of ethinylestradiol. It was then calculated that a single patch flushed every three days would shed enough hormone to impair fish downstream from a particular Swedish sewage treatment plant

[4] A contraceptive ring contains approximately 2.4 milligrams of ethinylestradiol upon disposal. It was then estimated that this was enough to taint 24 million liters of water to a concentration that is biologically active in fish.

questioning the necessity of the contraceptive patch, suggesting birth control pills provide a more environmentally friendly alternative (Raloff, 2002).

Although it was the link between oral contraception and the environment that inspired the current study, the participants usually offered a connection between condoms and the environment. Therefore, information on condoms and how they relate to the environment may be pertinent.

Condoms are usually made of latex or polyurethane. Latex is an all-natural substance made from the sap of rubber trees, although latex condoms are not made of 100 percent latex (Go Ask Alice, 2002). From an environmental perspective, latex condoms are biodegradable in theory because of their composition. Polyurethane condoms (including the female condom) are made of plastic, so they do not readily biodegrade (Go Ask Alice, 2003).

Condoms that are flushed down the toilet would usually be recovered early in the water-recycling process and transported to a landfill. If not, they may remain with the wastewater and be discharged into the ocean or some other large body of water (Go Ask Alice, 2003). According to the British Environmental Agency, the British discard roughly 61 to 100 million condoms per year (Hightower & Hall, 2003). Many of these condoms end up in rivers, the ocean and on beaches. Condoms detract from the beauty of these areas, and The Ocean Conservancy indicates they can cover coral reefs and smother sea grasses and other bottom dwellers. Another problem is that animals may confuse trash for food and try to eat it. The Environmental Protection Agency says that plastic and other materials can clog animals' intestines, causing them to starve (Hightower & Hall, 2003).

Summary

There is a dearth of research on male sexual health. There is growing interest in issues related to male sexual health, but much of this research is focused on adolescents. Adult male populations have not been extensively

analyzed. In addition, the sexual decision-making process is understudied, especially as it relates to adult males. The current study contributed to the body of research by asking adult heterosexual males about their experiences with choosing to use contraception and the method chosen.

The most effective method that provides protection against pregnancy and disease is the male condom. However, some males may be reluctant to use condoms and females may be unable to negotiate their use as a result. It is this context that provided the foundation for this research. If a female decided she did not want to use the birth control pill (for whatever reason), what would be the reaction of her partner? Would they be reluctant? Would males accept using a condom?

This research was guided by various individual theories because no cohesive theory or model of contraceptive decision-making in males was found in the literature reviewed. Warren Miller developed a theoretical framework that outlined how motivation, desire, and intention lead to reproductive behaviour in males. Miller's framework was chosen because it acknowledged the influence of the partner in reproductive decisions - a central concept to the current study. Miller's framework also helped identify some factors that motivate males to use contraception and their perception of contraceptive responsibility. However, the framework seemed incomplete because it did not address the precursors to motivation, such as gender roles. Therefore, a Determinants of Health model was chosen to build upon Miller's theoretical framework. The Determinants of Health are a set of interrelated factors that include social and economic influences, the physical environment and individual behaviour. The Determinants of Health was chosen for the current study because it recognized that these complex interactions do not exist in isolation, and it acknowledged two factors that were key components in this research: gender and the environment. This is important because health promotion has not addressed the

connection between gender and the environment in the way that is proposed in this study.

The current study adopted a definition of decision-making that acknowledged the influence of both partners. This is important because decision-making is more than just those factors that influence the individual. Until now, research has tended to focus on the individual while ignoring the context of the decision. But these contraceptive decisions typically occur with one's partner, and it is this context that forms the basis of the current study.

The relationship context can have a major impact on contraceptive decision-making. The support of the male partner is one of the strongest influences on contraceptive use. Similarly, opposition by the partner is one of the most common reasons given by females for not initiating or continuing the use of contraception. One can influence contraceptive use by their role in the decision-making process, the level of communication, the degree of intimacy, and the length of relationship. It is important to keep in mind that the desire for pleasure can be an overriding factor in the use of contraception.

Successful communication can be a major influence on the contraceptive decision-making process. Increased communication between partners could lead to more effective and consistent contraceptive use, thus reducing the risk of unintended pregnancy and STIs. And when reproductive health issues are discussed and decisions are made collaboratively, those decisions are more likely to be implemented. Also, there is a clear connection in the literature on adolescent sexual behaviour between discussions about contraception and condom use. So there are benefits to more effective communication between partners. But there are some unanswered questions identified by researchers. Even when males discuss the use of contraception before sexual intercourse, few studies provide details about the nature of the discussion. For example, it is not known what type of discussion took place, who initiated the conversation, or whether contraception was used or would continue to be used.

Gender is a major determinant of sexual and reproductive health that also weaves together and underpins these other influences. It is important because gender can influence the ways in which males and females interact with each other. Gender differences exist in sexual knowledge, attitudes and behaviours. Two key strategies to reduce STIs involve the active participation of the male (by using condoms correctly and consistently, and by maintaining a monogamous relationship). In this way, males play an integral role in any effort to reduce STIs.

A link can be established between sexual health and environmental issues. The link of interest in the current study is the effect of an endocrine disruptor, ethinylestradiol, on the environment. Ethinylestradiol is a synthetic estrogen found in hormonal contraception (e.g., birth control pills) and has been detected in coastal waters, rivers, lakes, streams, and groundwater. Ethinylestradiol has been shown to have a deleterious effect on the reproductive potential of certain wildlife species. It could also have an indirect impact on humans and directly affect the fetus if a female becomes pregnant while taking the birth control pill. If people were aware of any effects of contraception on the environment, it would be important to know how this knowledge affected their decision-making process.

Chapter 3: Methodology

This chapter offers a discussion of the methodology that was used for this research. It highlights the research approach and methods chosen that guided the study. Following this is a description of the sample population, data collection and analysis, ethical considerations, and dissemination plan. With regard to ethical considerations, the Dalhousie University Health Sciences Human Research Ethics Board approved all study protocols.

Paradigm

The positivist paradigm is linked to what most of us would consider the traditional scientific approach. Principles of the positivist paradigm include a reality that exists independent of human observation, and that events have antecedent causes and therefore are not random (Polit, Beck, Loiselle & Profetto-McGrath, 2004). The traditional scientific approach calls for fixed procedures to collect information in a controlled and objective manner. This means that the values and biases of the researcher should not influence the research process. To further ensure objectivity, the researcher is to interact with the participants as little as possible so as to not influence the findings (Polit et al., 2004). In sexual health research, this paradigmatic approach might deny the subjective interpretation of participants' sexual and reproductive health, and ignore contextual information that could emerge during the research. The paradigmatic approach may also limit the ability to collect meaningful data with an objective researcher that may appear impersonal or uncaring.

In a naturalistic framework, reality is not a fixed entity; it exists within a certain context. Reality is a construction of the individuals experiencing it, and so many constructions are possible (Polit et al., 2004). The naturalistic researcher is likely to focus on the dynamic, holistic, and individual aspects of a particular phenomenon (Polit et al., 2004). As a result, naturalistic research accentuates the

understanding of human experience as it is lived, typically by collecting and analyzing narrative, subjective data (Polit et al., 2004). Finally, a naturalistic researcher tends to believe that knowledge is maximized when the distance between the researcher and participant is minimized (Polit et al., 2004).

The naturalistic paradigm provided a foundation for the development of this research. A naturalistic paradigm using qualitative research methods was chosen because it is best suited to discovering the influences on contraceptive use of adult heterosexual males.

Qualitative Methods

A qualitative approach was chosen to explore the phenomenon of contraceptive decision-making in adult heterosexual males. Black et al. (2004) advocate for an integrated approach to contraceptive use that recognizes the diverse factors that influence the decision-making process to ensure the sexual health needs of females and males are adequately met. Qualitative research methods that are open, flexible, and thorough are conducive to providing insight into these diverse factors.

Qualitative research deals with the issue of human complexity by attempting to understand the human experience as it is lived, focusing on both the individual and holistic aspects of the phenomenon (Polit et al., 2004). Creswell (1998) defined qualitative research as:

> [An] inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting (p. 15).

Creswell (1998) believed the nature of the research question, as well as the phenomenon to be studied, could lend themselves to the use of qualitative

methods. For example, a question that begins with a *how* or *what* is one reason to choose qualitative methods. Exploring how adult heterosexual males perceive their role in decisions about contraception (in conjunction with their female partner) would be a question ideally suited to qualitative research. Creswell (1998) also stated qualitative methods should be used if a phenomenon exists without theories available to explain particular behaviours (therefore the topic needs to be *explored*). No conceptual model or theory of male contraceptive decision-making was found in the literature reviewed, and this was identified as an area of future research (Noone, 2004).

One feature of qualitative research is a flexible approach to accommodate new findings that emerge during data collection (Polit et al., 2004). Data collection and analysis progresses concurrently. Collecting, analyzing, and incorporating new findings through a constant, inductive process can lead to the development of a theory or framework that helps explain the phenomenon under study (Polit et al., 2004).

Finally, qualitative methods can "emphasize the researcher's role as an *active learner* who can tell the story from the participants' view rather than as an 'expert' who passes judgment on participants" (Creswell, 1998, p. 18). Given the sensitive and personal nature of sexual health and contraceptive use, using methods that dissuade the researcher from judging participants would be wise.

A modified grounded theory approach was used to explore how adult heterosexual males perceived their role in decisions about contraception with their female partner. Grounded theory is when concepts are derived from the data to generate a theory that explains a phenomenon (Strauss & Corbin, 1998). Because little is known about the contraceptive decision-making process of adult heterosexual males in relation to their female partner, grounded theory represents an appropriate methodology to explore this phenomenon.

Qualitative research methods are invaluable when required to provide rich descriptions of complex phenomena and investigate unique or unexpected

events (Guba & Lincoln, 1994; Sofaer, 1999). Because sexual and reproductive health is complex with multiple dimensions, qualitative methods were appropriate for this research. Further to this, Hutchinson et al., (2002) maintain qualitative research is the perfect choice to reveal the psychosocial processes underlying the beliefs of males and females toward personal experiences such as sex and contraception.

Recruitment

Sample Size.

Patton (2002) states that sample size in qualitative inquiry is driven by the purpose of the question under study, what you want to know, what knowledge is credible, and limitations of time and resources. Rice and Ezzy (2002) remark that "[...] the number of participants is less important than the richness of the data" (p. 46-7). Proponents of grounded theory highly value recruitment until no new information is obtained and redundancy becomes evident (i.e. data saturation); otherwise the theory generated may suffer (Strauss & Corbin, 1998). However, it is the researcher that must determine how much breadth and depth of information is sufficient, considering time and money (Rice & Ezzy, 2002). Ultimately, when the researcher is satisfied that the information adequately reflects the concept under study, and determines additional sampling would be redundant, the sample is large enough (Rice & Ezzy, 2002).

Grounded theory typically uses a sample size of approximately 20 to 50 informants (Polit et al., 2004), but this is an ideal. Kvale (1996) suggested that the sample size in interview studies tends to be around 15±10. A sample of 10 individuals was chosen due to the expected financial and time limitations associated with thesis research. The sample size could be less if no new information emerged and sufficient depth of information was obtained. Six adult heterosexual males participated in this research, and data collection ended

after all avenues for recruitment were exhausted and no new participants appeared forthcoming.

Sample Selection.

A purposive sampling strategy was utilized because the researcher was looking for specific characteristics in the sample population. The aim of purposive sampling is to select participants who will provide a thorough understanding of the phenomenon (Rice & Ezzy, 2002). In this way, it is the phenomenon that is described, rather than the distribution of the phenomenon. The phenomenon of interest was contraceptive decision-making, and how factors such as partner support and the environment influence it.

Because the environmental influence on contraceptive decisions was one characteristic deemed important to this current study, interviewing environmentally aware males was expected to provide the most descriptive information regarding the research topic. Research suggests some males may be motivated to use contraception, in part, because of concern about the impact of overpopulation on the environment (Bustamante-Forest & Giarratano, 2004). One of the goals of this current study was to explore this concern about the environment and contraception generally, and specifically determine if the environmental effects of estrogen from oral contraception were a consideration. Therefore, it was imperative to include environmentally aware individuals in the sample, and purposive sampling was used to achieve this goal.

Partway through data collection, it was apparent that participants were having difficulty linking environmental issues with that of contraception. At this time, the sampling strategy was modified to try to recruit participants who might have a better understanding of the link between the environment and contraception. Two changes were made. First, it was decided to focus only on environmentally active males, rather than a mix with the general adult male population. Second, instead of having participants self-identify as

environmentally aware, they were asked a series of questions during the screening process to help determine their environmental background (Appendix G). These questions were intended to distinguish those males who may be aware (but not necessarily active) from those who have become more environmentally active as part of their daily living. These environmentally active males may be more likely to be interested in narrowly defined issues such as those linking the environment and contraception. A total of five positive responses (out of seven questions) was required for the participant to be considered environmentally active and therefore included in the current study. These questions were derived from a study that measured ecological behaviour (Kaiser, 1998).

This research attempted to maximize the diversity of the sample population through selective site sampling and screening criteria. The goal of the selective site sampling and screening criteria was to maximize the diversity of the sample population in terms of age and ethnicity, and possibly education and financial status. An ethnically diverse sample was desired to ensure that the personal experiences of participants with different backgrounds and characteristics were explored. This is important because the role of males in contraceptive decision-making may not be similar across cultural groups. Diversity was not obtained, however, and there was much homogeneity within the participants.

The sample was recruited from a diverse group of organizations, including local health care service providers (i.e. clinics) and environmental organizations. Posters (Appendix A) were the core feature of recruitment efforts. Posters were placed at the following locations: Planned Parenthood Metro Clinic, Dalhousie Psychology and Counselling Services, Dalhousie Women's Centre, Nova Scotia Public Interest Research Group, YMCA (South Park Street), Halifax Farmers Market, Halifax Grainery, and Ecology Action Centre. Recruitment efforts extended to presentations about the research to undergraduate classes at Dalhousie University and a community message broadcast on CKDU, the

Dalhousie radio station (Appendix E). Further recruitment involved sending information electronically via Listservs (e.g., Sustainable Maritimes, a moderated list for Maritimers concerned about environmental issues) and bulk emails (e.g., School for Resource and Environmental Studies at Dalhousie University; Appendix F). Snowball sampling supplemented recruitment by asking key informants to recommend potential volunteers. Contact information was available to key informants and on the posters so that interested volunteers could contact the researcher to participate. When potential volunteers contacted the researcher, they were screened to determine if they were eligible for the study.

Sample Population.

Participants were eligible for the study based on inclusion and exclusion criteria (Appendix B). Participants had to be adult males between the ages of 20 and 30 inclusive, in a heterosexual relationship of at least three weeks in duration (but unmarried), sexually active, not desiring pregnancy, and either they or their partner used a contraceptive device or technique at least once during the three weeks. These aspects will be discussed in turn.

The reasons for choosing males were twofold. First, there was a need to better understand the motivation of young adult males, particularly unmarried males, to use contraception (Sonenstein et al., 1997). Second, it was thought that, as a male researcher, interviewing males would facilitate the sharing of information more than interviewing females, especially when discussing personal and sensitive topics. However, when Hutchinson et al. (2002), interviewed young males about sex, relationships, and contraception, most participants suggested that gender, age, and race of the interviewer were irrelevant.

Limiting the sample of adult males to those between the ages of 20 and 30 was desirable for a couple of reasons, namely, the researcher sought the perspectives of young adult males, and guidelines could be gleaned from the

literature reviewed to help define this age criterion. The age criterion of this sample mirrored that of the study by Hutchinson et al. (2002), which interviewed young males aged 16 to 30. The authors observed that the limited sexual experience and emotional maturity of two participants, aged 16 and 21, presented challenges to the interview process. Because it was desirable that participants have experience in the contraceptive decision-making process, a minimum age of 20 was selected as a criterion for inclusion in this research. This age was in line with the above study, as well as a U.S. national survey on sexual behaviour among males aged 20 to 39 (Forste & Morgan, 1998). The males interviewed by Hutchinson et al. (2002) admitted a preference for interviewers that were the same age or slightly older than themselves. I adopted an upper age limit of 30 to be consistent with this preference, as I was 32 at the time interviews were conducted. A maximum age of 30 was also in line with the research by Hutchinson et al. (2002).

The duration of the relationship was determined with the central theme of the study in mind. Influences such as partner support were thought to be key components to understanding contraceptive decision-making. These influences may not have been readily apparent with males involved in a one-night stand. It was believed that these influences would be more evident in relationships that were relatively established, where there was more opportunity for the couple to experience contraceptive decisions and exchange contraceptive knowledge. The length of the relationship was chosen based, in part, on the duration used in current research. In research on the association between sexuality, intimacy, and relationship functioning among males and females, a committed relationship was defined as 12 months or more (McCabe, 1999). Miller and Pasta (2001) developed a model of contraceptive method choice decision-making following a pregnancy scare. The sample consisted of adult couples in a committed relationship for at least six months. Research by Miner et al., (2002) also restricted their respondents to those in a relationship of at least six months.

Dworkin and O'Sullivan (2005) interviewed couples in a relationship for at least eight weeks, whereas Seal and Palmer-Seal (1996) interviewed couples in a relationship for at least 30 days. Finally, research by Fortenberry et al (2002), indicated that after three weeks, frequency of condom use in new relationships decreased to that of the frequency in established relationships. In other words, it took three weeks for a relationship to become established in terms of how often condoms were used. Three weeks was therefore accepted as the minimum length of time for contraception to become established within a relationship.

Participants were sexually active, which was defined as having vaginal intercourse with their female partner. Although the definition of sex varies in the literature, a typical definition includes oral-genital, penile-vaginal, and penile-anal penetration. The definition of penile-vaginal penetration adopted for this research limited the range of sexual activities but was consistent with the focus of the current study. That is, the effect of estrogen from oral contraception on the environment was of interest, and the birth control pill is used to prevent pregnancy during vaginal intercourse. Oral-genital sex and penile-anal penetration would offer little insight with regard to the role of the natural environment in the pregnancy prevention decision-making process of adult heterosexual males. Finally, participants could not currently desire pregnancy, and either they or their partner had to have used a contraceptive device or technique at least once during the three weeks.

Data Collection.

In an effort to build trust with participants, the following strategies commonly used by qualitative researchers were incorporated into the research (Hutchinson et al., 2002): a private, comfortable interview area, time to discuss the research (including informed consent) prior to the interview, emphasizing confidentiality of the data, inviting participants to ask questions before and after the interview, assuring them they did not have to answer any questions and

reminding them they could end the interview at any time, and, at the end of the interview, asking participants about their level of comfort with the interviewer and the process.

Subject Participation.

Data collection was in the form of in-depth, semi-structured interviews conducted by the principal investigator. In-depth interviews were chosen because they are ideally suited to exploring a complex topic that involves issues such as sex, relationships, and contraception (Hutchinson et al., 2002). This method was also chosen to encourage discussion about a topic that is likely to be considered very personal and sensitive. The goal of a private, one-on-one interview is to establish a rapport with the participant that is respectful and understanding. This, in turn, could create a comforting atmosphere in which participants can speak easily. Interviews were conducted in a relaxed, conversational manner to facilitate this process. Open-ended questions were used to encourage discussion. Although all questions were personal in nature, initial questions were more general and less sensitive in an attempt to alleviate anxiety and build trust.

Interviews were approximately 90 minutes in duration and were audio taped (with permission of the participant). Concepts identified in the literature were used to help develop a semi-structured interview guide (Appendix D). A pilot interview was conducted to test the interview guide. How these concepts apply to the decision-making process of adult heterosexual males was explored. The interview guide consisted of questions relating to males' formative experiences with contraception as well as contraceptive use in their current heterosexual relationship. All participants were asked to explore possible links between the physical environment and contraception. To protect the identity of participants and third parties, any names or identifying characteristics were removed when audiotapes were transcribed.

All interviews were conducted at Dalhousie University. Dalhousie University was chosen because it provided a central location and offered a measure of privacy to the participant. The location was in an area where there were no interruptions and in a room that was booked in advance.

It was recognized that discussing sexual and reproductive health might inadvertently cause emotional discomfort or draw attention to issues regarding the participants' health. The researcher included a wallet-sized card with their compensation ($15) that listed relevant services the participants could access in Halifax.

After each interview, field notes were made to record thoughts and feelings related to the interview. These notes typically consisted of a self-evaluation of the interview where the researcher considered what went well, what did not go well, and potentially leading questions. This information was used at the beginning of the next interview in an effort to improve the quality of subsequent interviews. For example, after the second interview, it was clear that participants had difficulty making the link between contraception and the environment. As a result, a preamble illustrating this link and probes about the environment were included throughout the interview guide (Appendix D).

Data Analysis

In line with the grounded theory approach, data analysis was performed in conjunction with data collection (Strauss & Corbin, 1998). Data was stored and analyzed using a qualitative data management software program (ATLAS.ti, v4.2).

Interviews were analyzed using a variety of techniques such as coding, memo writing, and constant comparison. Coding followed the three stages of grounded theory, which consists of open, axial, and selective coding (Strauss & Corbin, 1990). In the first stage, open coding, the researcher compared events, actions, and feelings pertaining to the participant and categorized them using

labels (Rice & Ezzy, 2002; Strauss & Corbin, 1990). Responses that were similar in content were aggregated into major themes. The purpose of open coding was to reduce the data and develop initial categories and relationships between the categories, producing broad codes of general themes. The process of specifying these codes and connecting categories is the second stage, axial coding (Rice & Ezzy, 2002, Strauss & Corbin, 1990). The key feature of this stage is to reconceptualize the data in new ways by making connections between a category and its subcategories (Strauss & Corbin, 1990). Refining a category into subcategories is done by specifying the conditions that give rise to a particular category and by describing the common features in which the category occurs, the strategies used to handle the category, and the consequences of those strategies (Strauss & Corbin, 1990). The final stage of coding involved linking all categories to a central theme (Rice & Ezzy, 2002).

The remaining analysis comprised of memo writing and constant comparison. Memos were written when transcripts were read and during all phases of analyses. The purpose of memo writing was to highlight key relationships in the data, refine categories, and help ensure a close association between participants' responses and the subsequent analyses. Another technique used to analyze the data was the constant comparison of individuals, events, and categories (Rice & Ezzy, 2002). The purpose of this technique is to systematically search for similarities and differences in the data. This process of analyzing data is a characteristic common to both grounded theory and thematic analysis; the main difference between the two is grounded theory utilizes theoretical sampling (Rice & Ezzy, 2002).

Transparency was favoured throughout the data analysis process, which integrated the following strategies to help ensure the quality of the data. First, the participants were given an opportunity to meet with the interviewer at a later date to review the transcript and ensure the contents were an accurate reflection of their responses (i.e. member-checking). One participant agreed to this

opportunity. The researcher also returned to the data often to make certain the results were grounded in the responses of the participants. Results that countered common patterns and the assumptions of the researcher were also noted. Data analysis was conducted by the principal investigator and reviewed by an experienced researcher. Finally, a personal journal was kept to document potential influences on the data, such as the interviewer's assumptions, physical and emotional state, and interactions with participants. For example, it was through the process of reflecting and using a reflexive journaling process that I fully understood a quote by one participant. BJ was asked if he talked about contraception with his partner and he offered an experience with contraceptive failure and the miscarriage that resulted. BJ explained that he and his partner worked through that experience by talking about contraceptive use. This was not immediately evident to me and I later coded this as a form of emotional support.

Role of the Researcher

The researcher has a unique role in qualitative research because they are an integral part of obtaining responses from participants. Among other things, the researcher puts the participants at ease and facilitates the flow of communication. The researcher also interprets the information by coding the data, such as is described above. In these ways, the researcher can elicit rich, descriptive information from participants and ensure that this information is accurately represented in the results of the study.

One method available to researchers to help ensure that participant accounts are accurately represented is to self-disclose their beliefs, values, and biases (Creswell & Miller, 2000). It is important for the researcher to acknowledge and suspend their beliefs and subjectivity, and reflect on how the social, cultural, and historical aspects of their lives could influence their interpretation of the results (Creswell & Miller, 2000). With this in mind, I have

included a description of who I am and my personal experiences, as they relate to the current study. I have included information about myself in an effort to reveal the biases that have inevitably influenced the development of this thesis and the interpretation of the participants' responses. This subjectivity can be traced through what I chose to study, the questions I asked (or did not ask), what I valued, and how the data was interpreted. Describing the process of this research and influences on it may help readers reach their own conclusions.

I am an adult (currently 34) heterosexual male with an interest in environmental and health issues. The foundation for my desire to explore the links between human behaviour and the natural environment was the result of a position I held with a nonprofit environmental group in Alberta. This job helped me realize some things about myself: an unknown passion for environmental issues, my need to learn and desire to help others, and how my choices can create change and influence others. About this time, I had a girlfriend who did not want to use oral contraception due to a risk of breast cancer present in her family history. In addition, she told me she would not use oral contraception because of the negative ecological effects that estrogen can have in the natural environment. She told me that estrogen from the birth control pill was affecting fish populations in Europe. Although the impact of estrogen on the environment was a novel consideration for me, female friends shared stories about making lifestyle changes due to concerns about their personal health and the environment. For example, I am aware of women who switched from disposable tampons or pads to a reusable plastic cup (such as The Keeper[5]) when menstruating. The fact that my girlfriend considered environmental issues when making a decision about contraception turned out to be a key factor in forming my research question.

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[5] The Keeper is a rubber cup designed to fit inside the vagina and hold menstrual blood.

With the current study, I was interested in seeing if environmental issues, such as the estrogen from birth control pills, were a consideration for women when choosing contraception. Every day, women take the pill and the estrogen passes through their bodies, typically entering wastewater treatment facilities. In this way, estrogen enters the aquatic environment on what is essentially a continual basis. The estrogen found in combined oral contraceptives is an endocrine disruptor, one of a large group of chemicals that is being regarded as an emerging threat. There is general agreement in the literature that endocrine disruptors can have a negative ecological effect and potential consequences to human reproductive health. Now, I thought, if a female wished to avoid oral contraception, then this raised an interesting dilemma. Would their male partner be supportive of this rationale, and the outcome, of avoiding oral contraception? Would the male wear a condom, for example, as an alternative form of pregnancy prevention? Although the decision to avoid the birth control pill in this instance was due to the environment, there are other reasons females may want to stop using oral contraception, such as personal health.

After starting this Masters degree, I met my current partner. During the course of our relationship, we experienced an unintended pregnancy. My experience with an unintended pregnancy has held both personal challenges and revelations. For example, we both attributed the pregnancy to miscommunication and agreed there was no blame, but until then, I had not seriously considered the role of non-verbal communication as it related to behavioural forms of contraception. I also want to emphasize that my experiences as a father have been overwhelmingly positive. I love my daughter very much, hold her close, and have often said that she is a true source of happiness for me.

In an effort to disclose my beliefs and biases, I *do* consider the impact of hormonal chemicals on the environment to be an important issue. I believe that estrogen from hormonal contraception is having an effect on the environment,

and it is an issue that people should be aware of. I think contraceptive choices should be matched as closely as possible to what people desire in their contraception. I also think the closer the match, the more likely that contraception will be used correctly and consistently. Providing a general comparison between contraceptives and their environmental effects could raise the link between contraception and the environment. For example, oral contraception would be a more environmentally friendly choice than the contraceptive patch because the patch would continue to release estrogen into the environment after disposal.

Having said this, I must emphasize that I am *not* comfortable with advocating messages that dissuade the use of hormonal contraception such as the birth control pill. This is because estrogen is unique among the endocrine disrupters. Oral contraception is one of the most effective means of pregnancy prevention and is probably the most prevalent. To suggest using any form of contraception other than hormonal would likely increase the chance of an unintended pregnancy. When I consider the personal and environmental implications of an unintended pregnancy, I do not think advocating against the use of oral contraception is worth the risk, especially when there are many other anthropogenic sources of endocrine disrupters whose use could be reduced. Related to this last point, there are many endocrine disrupters being released into the environment (Appendix I includes examples of endocrine disruptors). My belief that they are having an effect has caused me to change my behaviour. Namely, I have tried to reduce my reliance on plastic, thus my exposure to certain endocrine-disrupting chemicals (e.g., Bisphenol A). I have stopped drinking from plastic water bottles and no longer use plastic Nalgene water bottles (I now use a stainless steel bottle). I have also reduced how often I use plastic containers to store food (I usually use ceramic bowls or glass mason jars). Finally, in consultation with my partner, we decided to use a drinking cup for our child that is made of plastic free from Bisphenol A.

Ethical Considerations

Informed Consent.

Before each interview, participants were given a consent form to read (Appendix C). The researcher also reviewed key aspects of the consent form with the participant. The consent form gave a more detailed description of the study, including the purpose of the study, what will be asked, potential risks and discomfort, and confidentiality and anonymity. The consent form also explained that participation is voluntary, and this was reiterated verbally. Finally, consent was an ongoing process throughout the interview, with the participant able to withdraw at any time without repercussion.

Anonymity and Confidentiality.

Anonymity of the participants could not be assured due to the involvement of the researcher in all phases of the research process. For this reason, the researcher could link participants with the information provided.

However, measures were implemented to protect the confidentiality of both participants and the data. The researcher transcribed four of the interviews, and an independent transcriber transcribed the remaining two interviews. The independent transcriber signed a statement of confidentiality to protect the identity of the participants (Appendix H). To further protect the participants, any names or identifying information were removed during the transcription process. The identity of third parties was similarly protected. The name of the participants, names of friends or family members, or any other identifying information will not be published in any reports or publications connected with the current study. To further ensure the confidentiality of the participant, the interviewer will not approach or acknowledge the participant if they were to meet in a public place without the participant doing so first.

Although the identity of participants and third parties will remain confidential, the outcomes of this research will be submitted for partial completion of a Master of Arts degree, and so will be available to the public. Permission to publish direct quotations from the interview was sought as part of the process of consent. These quotations will not include any names or identifying information.

There are some situations in which the identity of the participant, or third parties, cannot be protected. The researcher must report to the appropriate authorities any disclosed or suspected incident of abuse, incest, sexual contact between a minor and an authority figure, or the intent to harm oneself or others. Limits to confidentiality were clearly explained in the consent form and again verbally to each participant. There were no such disclosed or suspected incidents found in this study.

Original data, such as audiotapes of the interviews and consent forms, as well as transcripts and other material related to the current study will be securely stored in a locked cabinet with restricted access. Storage will be on Dalhousie University property for five years, at which time the data will be destroyed.

Dissemination

Dissemination of the results of the current study may enhance interventions designed to improve sexual health by addressing barriers to male involvement in the contraceptive decision-making process. Engaging males in this process and making communication more effective within the dyad could help inform sexual health strategies.

Dissemination of research findings will include academic publications and conference presentations. Most importantly, the findings will utilize existing services and be distributed to local health service providers and environmental organizations in the form of informational brochures.

Summary

To ensure the sexual health needs of females and males are adequately met, Black et al. (2004) advocate for an integrated approach to contraceptive care that recognizes the diverse factors that influence the decision-making process. In line with this, a naturalistic research approach was adopted to guide the research. A naturalistic approach assumes multiple realities that are subjectively constructed by individuals, encourages interaction between the researcher and the participant, incorporates a flexible design, and solicits narrative information grounded in the personal experiences of the participants. The qualitative methods used accommodate the complex issue of how the contraceptive decision-making process influences sexual health. Six adult heterosexual males were interviewed, and the data was analyzed using modified grounded theory. A thorough description of the study was explained to the participants, emphasizing their right to withdraw at anytime. Finally, the dissemination plan includes distributing the findings to existing local services such as the Nova Scotia Public Interest Research Group and the Planned Parenthood Clinic in Halifax.

Chapter 4: Findings

The beginning of this chapter is intended to introduce the reader to the males who participated in the study. A table outlining the demographic characteristics of the participants has been included (Table 1). Following the table is a brief description of the participants based upon their responses during the interview. This description is intended to give the reader a sense of the general characteristics of the participants. Finally, I offered a detailed presentation of the main themes that emerged from the interview data. The participants' responses were used to formulate the themes, and other research studies were used to help develop these themes further.

The goal of the current study was to better understand the perceptions of contraceptive decisions in adult heterosexual males. The contraceptive method used seemed to depend on the circumstances. Therefore, the core theme that best described male contraceptive decision-making was "it's all context." The circumstances that seemed to influence the contraception used were individual characteristics and partner influences. Therefore, the two key themes that fed this core theme were "personal factors" and "relationship dynamics." Personal factors that were relevant to male contraceptive decision-making were contraceptive and environmental attitudes, past contraceptive experiences, contraceptive concerns, and the male's information sources. Relationship dynamics that were important to male contraceptive decision-making were the type of relationship, contraceptive responsibility, and communication. All of the variables in these themes interact to lead to a decision of contraceptive use or contraceptive choice. In line with this, participant responses that could be categorized under more than one theme highlighted the interconnectedness of these factors on decision-making. Each of these themes and their components will be presented in turn. All quotations are verbatim, except where minor editing was done to improve clarity.

Participant Profile

The table below offers a brief overview of the demographic characteristics of the participants. Participants provided this information primarily by completing the Demographic Questionnaire (Appendix G); please refer to this appendix for a more detailed description of questions asked. Participants had the option of not answering questions and some information is not available.

Table 1: Demographic Characteristics of Participants

Name	Age	Ethnicity	Education	Employment	SES	Religion
JARED	N/A	N/A	N/A	N/A	N/A	N/A
BJ	30	Caucasian	N/A	N/A	N/A	N/A
JIM	23	Caucasian	Completed University	F/T	$30,000-$44,999	No Religion
HC	20	Caucasian	Some University	P/T	<$15,000	Protestant
CALVIN	24	Caucasian	Completed University	Unemployed	<$15,000	No Religion
AB	27	Caucasian	Completed University	F/T	<$15,000	No Religion

Table Key: N/A = not available; F/T = full time; P/T = part time; SES = socio-economic status

Jared.

Jared indicated that contraception was "extremely important" to him. In his current relationship, he and his partner used one of two contraceptive methods: condoms or a spermicide (i.e., vaginal contraceptive film). Jared thought the vaginal contraceptive film was "pretty cool" and expressed a dislike of oral contraception. He was "pretty happy" with the two methods they used.

Jared and his partner discussed their sexual histories early in the relationship, and he described their communication as being upfront. Jared suggested that he and his partner had similar contraceptive goals (i.e., not wanting kids; comfortable with each other's past), so it was understood that

contraception was to be used or they would not have intercourse. However, he later indicated that contraceptive use was not overtly discussed and was mostly an implied thing. Jared's partner usually initiated communication, either directly or indirectly through non-verbal communication.

Both Jared and his partner influenced contraceptive decisions. For example, Jared encouraged women not to use the birth control pill, and it was Jared's partner who wanted to use vaginal contraceptive film rather than condoms. Jared indicated that he usually used condoms even if his partner chose to use oral contraception.

In terms of relationship dynamics, Jared expressed concern about the side effects of the pill on previous partners. He also talked about becoming a couple with his current partner by getting to know each other and being comfortable with each other's sexual past.

In terms of contraceptive responsibility, Jared willingly used condoms. Jared's partner did not use oral contraception, and he seemed pleased with that choice when he indicated he did not have to worry about her taking it. However, one notable feature of Jared's current relationship was how his partner decided how far the sexual episode went.

BJ.

BJ did not like condoms because they reduced sensitivity and diminished the sexual experience. He preferred oral contraception because it did not take away from the sensation and was more reliable than barrier methods. BJ started using condoms with his current partner, but they later switched to the pill, which is what they use now.

BJ suggested that he and his partner did not discuss contraception openly, and he did not discuss contraception with previous partners for fear of missing the opportunity to have sex. When contraception was discussed, BJ's partner initiated it, usually through non-verbal communication.

BJ's first partner was influential in the decision to use contraception by bringing and initiating the use of a male condom. They used condoms for the duration of their 12-month relationship because she was not using oral contraception and insisted on condoms. BJ initiated condom use when first having sex with his current partner because he did not know her sexual history. He suggested that the switch to the pill was a function of the progression of the relationship; they were going to be spending more time together and be more intimate.

In this way, intimacy was named as a factor in switching from condoms to oral contraception. BJ also described his belief that condoms were fine for casual relationships but methods such as the pill should be used in steady relationships.

BJ expressed his belief that guys should take a more active role in using condoms. However, BJ did not think he had an active role in contraception because his partner was using the pill. BJ did not show much interest in contraception. For example, he indicated female contraceptive methods were not his business, and responsibility for them rested with his partner. Contraception only became his business when they failed, such as when his partner became pregnant unintentionally while taking the pill. When asked how his role would change if his partner did not want to use the pill, BJ started by saying condoms would be the way to go, but ended by suggesting that his partner may have to go on another form of contraception. When asked if he would be upset if his partner was to stop taking the pill, BJ admitted to potentially being annoyed. Finally, BJ was not open to the idea of paying for oral contraception.

Jim.

Jim "never really disliked" using condoms, and expressed that he derived some emotional comfort from using a condom. Whether or not his partner used contraception was fine with him, and he considered it a bonus if she did. Jim is currently a dual contraceptive user (i.e., oral contraception and condoms).

Jim indicated he did not mind talking about contraception, but he did not think that his partner felt the same way. When Jim realized he was about to have sex with his current partner for the first time, he risked "killing the mood" by saying he was getting a condom. This initiated a conversation, and he felt better about discussing contraception before intercourse. When contraception was discussed, typically it was Jim who initiated the conversation.

Jim talked about how the decision to use oral contraception was ultimately up to the female, which seemed to stem from the belief that his partner should be free to use whatever contraception she felt comfortable with. Regardless of whether his partner was using oral contraception, Jim tended to use condoms. Jim felt that his current partner did not want him to use a condom when they first had intercourse and that made him want to use one even more. In this way, Jim's partner gave him more resolve to use a condom, but she was also influential by being comfortable with his decision to use a condom.

Jim also talked about intimacy and trust as they related to the progression of the relationship. He emphasized understanding someone's past (as opposed to simply being told about it) and how this only happened if you spent a lot of time with them to be able to judge firsthand. Then Jim showed how intimacy and trust in a relationship could be linked to someone's sexual background, and how this may influence contraception.

Jim described his role in contraception as making sure he has condoms (buying and bringing them) and using them. He was not comfortable paying for oral contraception in his current relationship, but did not reject the idea. When asked how his role would change if his partner did not want to use oral contraception, Jim suggested he would not have a problem with it because his role would not change (i.e., he would still use a condom).

HC.

HC disliked condoms because they take away from the intimacy, and he disliked the process of putting one on. He preferred the pill because "it's not present at the time," and it is a low-hassle, highly effective method that is known to work. Although condoms were used initially, oral contraception is now the only method used in his current relationship.

HC felt that sexual openness and being willing to discuss contraception was an important part of relationships. HC was in a close relationship in which contraception could be discussed.

Like Jim, HC also described how the decision to use oral contraception was ultimately up to the female. When asked how he made the decision to use contraception, HC described his partner's decision or actions. His partner started taking the pill before they were sexually active (without his knowledge), so HC did not think he was part of the initial decision-making process. HC did think decisions were made mutually, such as when they decided to use condoms while his partner was taking penicillin.

HC indicated how a feeling of greater intimacy coincided with a transition from condoms to oral contraception. He also suggested that for a guy to feel completely comfortable using the pill as the only form of birth control, he has to have complete trust that his partner is taking it effectively.

Because HC was not involved in the initial decision to use oral contraception, he explained how his role in contraception was to be supportive of using the pill. When asked, HC indicated he would consider sharing the cost of oral contraception. He also suggested that he would provide contraception if his partner wanted to stop using the pill and they decided to use a male-oriented method.

Calvin.

Calvin gave both positive and negative views towards condoms. He liked the peace of mind offered by having a physical barrier but did not like the interruption in the sexual process. Calvin shared his partner's concern about the long-term health effects of taking the pill. Currently, Calvin and his partner are dual contraceptive users (i.e., oral contraception and condoms).

Calvin and his partner have discussed contraception openly. As examples, he cites his partner's concerns about long-term effects of the pill and when she's missed too many pills. However, it is his partner who initiated conversation in these examples.

Calvin is also of the view that the decision to use oral contraception is up to the female. He suggested that they use condoms because his partner was "never totally confident with the pill," but at the same time, using a condom was his choice.

When discussing contraceptive roles, Calvin indicated his role was to use a condom and added that he buys condoms and his partner pays for the pills. Calvin suggested he would help pay for oral contraception if he was picking it up from the pharmacy or if it was no longer covered by his partner's medical insurance. When asked how his role would change if his partner did not want to use oral contraception, Calvin suggested he would be fine with it because he would continue to use a condom.

AB.

AB expressed his dislike of condoms, but also disliked the pill because of how it "wrecks" his partner. He relies solely on oral contraception in his current relationship.

AB suggested he was more open to talking about contraception in his current relationship than he had been in previous relationships. However, he did not talk about contraception with his current partner the first time they had

intercourse. When they did talk about contraception, AB indicated that both partners initiated discussion at different times.

When AB was asked how he made the decision to use contraception, he described his partner's reasons. He later revealed the reason they did not use a condom the first time they had intercourse was because of his partner's desire to establish intimacy. AB suggested every decision they made about contraception was a joint one.

AB showed concern about the impact of the pill on his partner. He explained how some males may have more concern for their partner when in a long-term relationship rather than a casual relationship, and how this influences contraception.

AB described his role as supportive in the relationship. He has paid for his partner's oral contraception when he picked them up for her. He indicated he would like to take more responsibility for contraception but described feeling helpless because they were using the birth control pill. Finally, AB was unhappy and ambivalent about the prospect of using a condom if his partner was to stop using oral contraception.

Personal Factors

This section will present a variety of factors that influence contraceptive decision-making related to the participants' personal characteristics. These factors consist of the participants' attitudes toward contraceptive methods, attitudes about the environment as it relates to contraception, past contraceptive experiences, contraceptive concerns, and their information sources.

Contraceptive Attitudes.

The participants interviewed suggested that pregnancy and STI prevention were the main reasons for using contraception. However, pregnancy

prevention was the prevailing concern in their current relationships. BJ demonstrated this point in the following quote:

> *And umm, diseases and other considerations, it's secondary to contraception, in my mind anyway (BJ).*

All but one of the participants were using oral contraception, either alone or with condoms. Participants expressed satisfaction with both condoms and oral contraception. For example, Calvin liked condoms because of the peace of mind offered by having a physical barrier present. In contrast, an advantage to using oral contraception was the greater sensation offered because there was no physical barrier, as expressed by BJ. Those participants who preferred to use condoms were using them in their current relationship. Jim and Calvin were using condoms in conjunction with oral contraception, whereas Jared used either a condom or a spermicide. Those participants who preferred oral contraception or expressed a dislike of condoms all relied exclusively on oral contraception in their current relationship (BJ, HC, AB).

Complaints about condoms included decreased sensitivity during intercourse, less intimacy, an interruption in the sexual process, and the possibility of slippage or breakage. One participant likened skin-to-skin contact as being natural, which was a reason for not using condoms, or at least using the thinnest brand possible. Another participant had a condom break but did not mention this as a complaint and continued to choose condoms over oral contraception.

Participants also indicated a dislike of oral contraception because of the effects on their partner due to its chemical nature. Jared was probably the most vocal about his dislike of oral contraception, as expressed in the following quote:

[...] it messes them up so much in terms of like, giving them migraine headaches and stuff like that, but I'm not a huge fan of the birth control pill because it just seems [to] cause other relationship problems (Jared).

Environmental Attitudes.

When asked to consider how contraception and the environment could be related, a variety of issues were identified. Participants usually mentioned condom disposal in the aquatic or terrestrial environment (e.g., seeing condoms floating in Halifax Harbour or laying on a beach). Participants also made the link between pregnancy prevention and overpopulation, implying that contraception could reduce environmental impact in that way. These two main ideas (i.e., condom disposal and overpopulation) can be found in the following quote.

Well, there's the immediate effect of a condom, you don't want to leave it lying around in nature - like flushing it. It doesn't biodegrade, right, it's made out of rubber. You don't want to flush in down the toilet 'cause it'll just end up in the harbour. I dunno, there's that effect, but then there's the fact that it prevents reproduction and stuff. It's like if the population of China or even Africa had more condoms and more contraception then there'd be less people, right? (Jared)

Participants were not aware that chemicals from oral contraception could have an effect on the environment. Some participants were concerned about the effects of the pill on their partner's health (see quote from Jared, above) and some males noted the effect of chemicals other than estrogen in the environment (Calvin, below, and AB, bottom):

I think Halifax, [Halifax Regional Municipality] has a commercial where they show water running or something and they're asking you to not pour as much coffee down the drain, that sort of thing, because caffeine can get into the water streams [...] (Calvin).

[...] that's kind of the reason that I don't like that she's on the pill because it's putting all those chemicals in her body and I actually... well we're both fearful, even chemicals in the water and stuff, that we can taste and we don't know really what's happening to her body [...] (AB).

None of the participants indicated that the environmental implications of contraception were a major consideration when considering contraception, either compared to other environmental issues or to the desire to prevent pregnancy or STIs. AB did indicate that chemical pollution was a factor, *"but the necessity to prevent pregnancy was more important than putting chemicals into the environment"*.

Although three participants agreed that there should be more awareness about the environmental implications of contraception, this opinion was not unanimous. One participant who felt the issue should be brought to the public's attention also cautioned that having people avoid oral contraception because of the estrogen in the environment was not socially responsible, as shown in the following quote.

> *[...] going into high schools and telling people don't take the pill because it ruins the environment, I think the importance of having a planned society, a planned population, not having people in high school - having them avoiding contraception because of that issue is not socially responsible (HC).*

Past Contraceptive Experiences.

Previous experience seemed to influence the participant's contraceptive behaviour and decision-making. Family was an important element for one participant. Jared did not feel inhibited about the prospect of talking about sex with his mother and felt that made him more aware and smarter about contraception. The influence of peers was an important element for many participants, as was maturity. Jim talked about maturity in terms of gathering information until he decided what to do about contraception at first intercourse. HC described what maturity meant to him as he explained how his involvement in contraceptive decisions was different now (see quote, below). Finally, AB realized he had a role in contraceptive decision-making (see quote, bottom).

Along this line, experiencing contraceptive failure provided the impetus for two of the participants to think about their contraceptive behaviour.

> *In a situation, like in a previous relationship it's like, y'know it's the woman's responsibility to be in charge of contraception. She's the one that's gonna get pregnant if you screw up. But it seems like the actual gender roles are based around that whole topic. For in, my current relationship again, mutual decision-making where it felt like it's both of our responsibility and it's a partnership instead of taking on the roles that are more stereotypical: you do this, you do that. Like, you cook, you clean. Instead we cook together, clean together (HC).*

> *I think certainly for me, maturity is a big thing, that's part of the reason... I grew up and I realized that I'm part of this and I have just as much of a role in it as women [...] (AB).*

Contraceptive Concerns.

There were many health and social considerations associated with the decision to use contraception. Avoiding STIs and pregnancy prevention were benefits of using contraception (the latter being the dominant focus of all participants). Another benefit mentioned by participants was the peace of mind or comfort gained from using condoms. Conversely, pregnancy and contracting an STI were risks of not using contraception. Social considerations included barriers to discussing contraception such as the discomfort of asking, and "killing the mood." If the contraceptive being used was a condom, a benefit of not using contraception was more pleasure.

A glimpse of the participants' attitudes toward risk of pregnancy or STIs could be gleaned from how they described sexual intimacy or contraceptive use. The participants often (but not always) characterized their sexual intimacy or contraceptive use as being safe or unsafe.

Safe behaviour was evident when one participant indicated that they used condoms (with the pill) at the beginning of a relationship, just to "be safe." The concept of being safe was illustrated with references to both pregnancy

prevention and STIs, though the latter was usually ambiguously referred to as not knowing their partner's sexual background (e.g., *"So, I felt even safer using one in that case. Since, as I said, I didn't know about her sexual history"*). Another example was Jim and his partner, who were both virgins the first time he had sex. Jim was only concerned about pregnancy prevention but described their decision to use a condom in addition to the pill in the following quote.

> *Just the fact that statistics on things like birth control how safe they are, there's the chance it might not work. And of course, being young, I wasn't looking for a child or anything like that, so it was the safety aspect (Jim)*

Indicators of unsafe behaviour were when Jim did not use a condom one time when intoxicated; AB agreed to not use a condom despite not knowing his partner's STI status or if she was using contraception; and Jared suggested a situation when he did not have condoms and proceeded to have intercourse without knowing if his partner had been tested for STIs (even though it was a concern).

The female could use the concept of being safe to cue participants' contraceptive behaviour. BJ described how a past partner asked if he had a condom. In this situation, the concept of being unsafe could be related to pregnancy prevention, STIs, or the female's desire for her partner to use a condom and asking about it discreetly.

> *I've been in other relationships where things would be getting a little hot and heavy and then the female would say very quickly and very quietly, like whisper in your ear, might as well be a sweet nothing, but it's a 'Do you have anything? We should use something? It's not safe' (BJ)*

Sources of Information.

Participants were asked where they received most of their contraceptive information. They listed friends, school (typically high school), and media as the

most common sources of contraceptive information. When the participants noted the sex of their friends, it was usually other males, not females. Forms of media included internet, television, and magazines. Two participants suggested they could get information from their partner. It is worth noting that Jared's dislike of the birth control pill came from discussions and experiences with previous girlfriends.

Two participants suggested that they were not currently looking for contraceptive information, either because they were happy with their method or because they only focused on condoms (and therefore did not expect new information). Two other participants suggested that they would (or did) seek information about the health effects of contraception out of concern for their partner.

Relationship Dynamics

This section will talk about those factors that are dyadic in nature and influence contraception. The first to be presented is how the type of relationship and its progression influences contraception. Part of this discussion will account for trust and intimacy, and when the males expressed concern for their partner's well-being. The next topic offered will be contraceptive responsibility. The major focus here will be the role of males in contraceptive use and contraceptive decision-making. Finally, I will show how contraception was discussed in the relationship.

Type of Relationship.

The type of relationship (i.e., casual or long-term) in which participants were involved seemed to be a major influence on contraceptive use and contraceptive choice. Participants often mentioned that they were in long-term or committed relationships. Some participants were also clear in their belief that condoms were used for casual relationships (or early in a long-term

relationship). Apparently this was due, in part, to the temporary nature of casual relationships. These participants also indicated that a switch to oral contraception was expected as the relationship progressed to being more long-term. These beliefs were stated in a variety of ways:

> *If your relationship is more of a casual dating thing, then condoms are fine, but if you're gonna take it to the next level and you're gonna be spending more time together and you're gonna be a little bit more intimate, and you know it when you are, then that's when other methods should come in that are a little more permanent, like the pill (BJ).*

> *[...] But, condoms, especially at the beginning of a relationship when it's still, uncomfortable, like not sure if the pill is working [...] (HC).*

Some males gave no indication of an expected switch from condoms to oral contraception; therefore, the belief was not ubiquitous among participants.

Intimacy and Trust.

Feelings of intimacy and trust were closely tied to the progression of the relationship and were a major influence in contraceptive decisions on their own. What follows are two excerpts from one participant that show how intimacy affected contraceptive use as his and his partner's relationship progressed. These excerpts indicate how a feeling of greater intimacy coincided with a transition whereby they stopped using condoms and relied on oral contraception.

> *LP: Can you tell me a little more about that, the anxiety?*
> *HC: Just the fear of getting pregnant and being in that situation.*
> *LP: Would that be part of the reason why you use condoms? [HC: Exactly]. And as the relationship goes on, you stop using condoms, is that correct? [HC: Correct]. So how does that play into the fear and anxiety?*
> *HC: I guess you become more comfortable with each other. Know that you're honest, and know that she is on the pill and all that. It's just one of those things where you become more intimate and more trusting. I don't even know if there's a logical explanation for it.*

LP: Can you give me an example of where intimacy affects your contraception use in the relationship?
HC: [...] Like we were saying earlier, the birth control methods that don't impede on the intimacy. And there's like a very direct reason for using the pill is for that reason. It's a type of birth control that doesn't have any effect on the intimacy at the time.

The previous excerpt described how a greater level of intimacy preceded the transition from condoms to oral contraception. In the following quote, however, it was the desire to establish intimacy early in the relationship that preceded the decision to not use a condom (and, as a result, no contraception).

[...] the first time that we engaged in intercourse we didn't use a condom... I asked her and she said no. We talked about it afterwards and I asked her why. Just because of the intimacy, she wanted to not use a condom [...] (AB).

Jim also talked about intimacy and trust as they related to the progression of the relationship. He emphasized understanding someone's past (as opposed to simply being told about it) and how this only happened if you spent a lot of time with them to be able to judge firsthand. After separate lines of questioning, Jim also showed how intimacy and trust in a relationship can be linked to someone's sexual background, and how this may influence contraception.

Even though I may know the sexual background, a lot of the time a lot gets lost there because a lot of people aren't gonna say this and that to you. I mean, they say what makes you feel better. So it all comes back to that comfort level. So, for the most part, I do use [condoms] (Jim).

LP: And how would intimacy and trust influence the relationship, in particular with contraceptive use?
Jim: Well, I mean, trust is big. If you trust your partner and you trust that the information that they've given you about their background and about themselves is accurate, it's definitely a lot easier for you to make an assessment and decide what you're gonna do as far as birth control.

Concern for Partner.

Finally, some participants expressed concern about the physical or emotional well-being of their female partner. This concern was usually a result of the effects of taking oral contraception. The following quote conveys Jared's concern about the emotional and hormonal effects of oral contraception.

> *I would never ask someone to use that stuff, just 'cause birth control pills kinda scare me and what they do to people's bodies and their hormones and mental state [...] (Jared).*

AB showed how some males may have more concern for their partner when in a long-term relationship rather than a casual relationship, and how this influences contraception.

> *It's different because I feel like I have in stake in it because this is the woman that I'm going to be with for the rest of my life so there's more... I have more invested in the whole relationship and the whole use of condoms than I ever did before (AB).*

Contraceptive Responsibility

Participants were asked questions about their role and responsibility in contraception. This section will begin by illustrating what responsibility meant to some of the participants. It will then demonstrate how participants perceived their role in contraceptive use. Included in this is a discussion of whether participants would help offset the financial cost of oral contraception, stereotypical male behaviour, and the notion that participants were willing to engage in safer sex. Then there will be examples of how participants described their role in contraceptive decision-making. Part of this discussion will include how the female partner influenced decisions around contraception, focusing on female ambivalence toward condoms.

What Does Responsibility Mean?

Over the course of the interviews, it became apparent that responsibility held different meanings for different participants. For Jared, being responsible was linked to using a condom and not leaving your partner if there was an unintended pregnancy. Jared had an experience in which a condom broke and they chose to use emergency contraception. When asked how the situation was dealt with, Jared suggested it was handled responsibly by discussing what their options were. So, in this situation, for Jared, being responsible meant having a discussion about options. Similarly, another participant suggested responsible sexual behaviour would be to have this discussion *before* becoming sexually active with your partner.

The responsibility of taking oral contraception properly, or adherence, was relevant to BJ. When asked what he felt was important about contraception, BJ suggested adherence was an issue and that because it was oral contraception, it was his partner's responsibility (see quote, below). The issue of adherence was raised again when BJ volunteered a personal experience regarding an unintended pregnancy. BJ placed responsibility for the pregnancy on his partner because condoms were not being used at that time and she missed a pill.

> *Given the fact that it's oral contraception I guess that kindof rests with her in terms of responsibility but assuming that'd she'd be, y'know, taking that properly [...] (BJ)*

BJ also described how he had assessed responsibility in a previous partner. In his view, someone with whom he was familiar was deemed more responsible than someone who was less well known.

> *LP: How can you tell if somebody's responsible?*
> *BJ: Well, the job I'm talking about is the Navy. And we get paid to be responsible. From a security standpoint and from, I guess, a general overall ethos standpoint. Like certain people fit in with military better than others and typically, and this is*

by no means 100 percent, but typically someone who works for the Armed Forces, the Navy in particular, they have a little stronger sense of responsibility than others do, and y'know, call it a bit of a leap of faith but I'm more comfortable taking a leap of faith with someone that I work with and had worked with at that time and who does the same kind of work that I do, as opposed to some chick I met in a bar somewhere. Y'know, just yeah, call it a leap of faith.

Male Role in Contraceptive Use.

In the current study, three participants used condoms (two in combination with oral contraception). The other three participants relied solely on oral contraception. When asked to describe their role in contraceptive use, all participants mentioned tasks such as getting condoms, having them and using them. Those participants who were not using condoms either mentioned giving emotional support or having no active role in contraception.

Participants talked about their role in getting condoms and the contexts that made it easier or more difficult to obtain them. For example, having condoms available at an AIDS awareness table in his local school was less daunting for one participant than going to the drugstore (first quote). Jim and Calvin described their roles in the last two quotes.

I was more comfortable at tables for AIDS awareness and stuff like that and taking them because the environment they provide is more acceptable [...] (Jared)

[...] as far as myself, my role is, I use condoms. I purchase them, I bring 'em, y'know, I make sure I have one (Jim).

[...] I've always used a condom so I guess I've always known my role and the way it sort of works is that I buy the condoms, she pays for her pills [...] (Calvin)

Most participants in the current study indicated that having condoms was a part of their role in contraception. However, two scenarios were described in which condoms were not handy. The first passage shows that BJ had condoms

but did not bring them because he expected his partner to have some. In the second passage, Jim went to get a condom even though one was not handy.

> *LP: [...] who bought the condoms?*
> *BJ: Ah, she carried them. I had some, I just didn't have access to them at that particular time, but I knew she had some in her purse.*

> *LP: [...] what was your entry point for the conversation? Can you recall that?*
> *Jim: My entry point to the conversation I guess was, when I actually went to get it. I wasn't really expecting that to happen. And I mean, I didn't have one in my pocket, so I had to leave the room to go get one, so that was sort of the entry point to the conversation, 'Well I'll be right back. I have to go grab a condom.' So that was sort of the entry point to the conversation.*

The participants typically shared in the cost of contraception by buying condoms, if they were being used. One participant shared in the cost of emergency contraception and linked a feeling of being responsible with the desire to help pay for it. Participants were also asked if there were situations in which they would share the cost of oral contraception. AB paid for his partner's oral contraception when he picked them up for her. Calvin suggested he would help pay for oral contraception if he was picking it up or if it was no longer covered by his partner's medical insurance. HC suggested he would consider sharing the cost of purchasing oral contraception if his partner had to pay for it (she was currently receiving it through her father's medical plan).

Other participants were more reluctant to help offset the costs of contraception. Jim did not reject the idea but was not comfortable paying for oral contraception in his current relationship. BJ did not seem to be open to the idea, as demonstrated by this quote:

> *LP: Is there a situation where you'd share costs at all?*
> *BJ: Ah yeah, if she was short on a five dollar bill, yeah I'd probably front that*
> *LP: Okay. Would you pay for the birth control pill?*
> *BJ: If she were short on five dollars or so, I might front her that.*

The participants who relied solely on oral contraception either suggested they had no active role in contraception or described it as supportive. BJ did not seem to think he played an active role in this situation (first quote). HC explained how his role was supportive after the decision to use contraception was initially made (second quote). AB also indicated he was supportive, and his response can be seen in the paragraph below about emotional support.

> *Well, given the method that we use, I don't have a really active role in that other than, I guess, a lingering trust that she's taking care of things. Ahh, if that weren't the case, and she were to say, and she probably would say this, I haven't taken the pill lately, or I'm not on anything right now, then my role is to have the backup method, which is a condom (BJ)*

> *I guess it's kind of different because she was on the pill before it was a contraceptive, so it was never something where I had to be a part of that decision-making because it happened, now it's something like being supportive that she's doing it and being supportive of it, but it's not like a situation where it's our pill (HC).*

On a few occasions, participants described their role in contraception in terms of encouraging contraceptive use, providing reminders, or talking over problems related to use (i.e., emotional support). When BJ was asked if he talked about contraception with his partner, he related an instance of contraceptive failure. His partner became pregnant while using oral contraception and experienced a miscarriage. BJ explained that they had to work through that experience, which is what he is referring to in the first quote (below). The point here is that talking about what happened is one example of emotional support. In the second quote, AB offers a descriptive example of his role with his current partner.

LP: Do you talk about contraception much in your current relationship?
BJ: [...] So, we had to work through that and deal with that more on an emotional level. But once she was ready to carry on with our physical relationship, I think we just kinda talked about what happened [...].

I play a supportive role. I'm a passive participant in the use of contraception. I definitely initiated conversation and I have recently because she's been having trouble with the current contraception pill [...], but she also brings it up too, so I'm involved, I'm here to listen or she bounces ideas off me and I respond with how I feel about them (AB).

When participants were asked about their role in contraception, they often described scenarios rich with details of how sexual events commonly progressed. These narratives contained behaviours that tend to be assigned to males and are considered stereotypical male behaviour in sexual health. These classic behaviours included situations when males appeared uninterested in sexual health, males did not initiate a discussion about safer sex when an opportunity appeared to exist, sex seemed to be an end goal to be achieved, and females decided how far it went and were responsible for contraception or refusal.

An example of this last point was when Jared described how contraception was discussed. Jared indicated he was comfortable with the progression of the sexual episode and did not start a discussion about contraception. A discussion occurred when his partner resisted his advances.

LP: [...] how has [contraception] been broached?
Jared: [...] it just naturally progresses from making out and stuff like that and, if either one of [us is] like – I'm really not uncomfortable with it, but if the partner is like 'I really don't want to go this far' then it is kindof discussed after that. It's just sort of like 'okay, is there something wrong' or, ya.

BJ demonstrated a constellation of stereotypical male beliefs about sexual relationships. The first quote indicates that sex was an end goal to be achieved. The second quote shows a general disinterest in sexual health (i.e., contraception). In this quote, BJ is responding to a question about how much he

talks about contraception in his current relationship. He shares an experience in which his partner became pregnant unintentionally. BJ indicates female contraceptive methods were not a concern until they failed, and that is when contraception became his business.

> *LP: Why do you feel like that by talking about [contraception] that you might miss out on an opportunity?*
> *BJ: [...] And by me saying that, y'know like, furk, well let's be honest here, I'd like to have sex. Umm, sometimes more often than not.*

> *But once she was ready to carry on with that, umm, to carry on with our physical relationship I think we just kinda talked about what happened the first time and ahh just, I guess birth control failure on her part. 'Cause I don't recall condoms having been a part of the equation at that point and I think maybe she missed a day with the pill. Or whatever her system is, it's none of my business, but it became my business really quickly (BJ).*

Males Receptive to Safer Sex.

Most of the males in this study were willing to use condoms, especially if their partner wanted to use them (indeed, three participants were already using condoms; two of them with partners who were also using the birth control pill). Although the participants who relied solely on oral contraception all *suggested* they would use condoms if their partner wanted to stop taking the birth control pill, two indicated they *might* not use condoms; both of these participants were unhappy about the prospect of their partner discontinuing oral contraception. What follows are three responses from two participants who were asked how their role would change if their partner stopped taking oral contraception.

> *Hmm, well, condoms would be the way to go, wouldn't they? [...] We might talk about other methods. Like if she stopped using oral [contraception], that might mean she's got to go on the diaphragm or something. Or IUD's, so those are other forms. But umm, we'd be having a discussion (BJ).*

Don't think I'd be upset. Ahh, I'd be kinda surprised. Umm, okay maybe I would be a little upset but when you say the word upset I'm thinking like you're distraught. It's like 'Oh Jesus Christ, what the hell are you doing!?' It wouldn't be that kind of degree of upset but just be a little bit annoyed, like I didn't expect this, and maybe you're not in the intercourse mind frame at that point (BJ).

Be upset... would I be mad at my partner? I would be... not upset but I'd be unhappy [...] We would use a condom. Perhaps there would be times when we wouldn't use a condom... my role would be to wear a condom... but I would probably be the one who would go purchase the condoms as opposed to her (AB).

It can be seen from the quotations above that AB was unhappy and ambivalent about the prospect of using a condom. BJ started by saying condoms would be the way to go, but ended by suggesting that his partner may have to go on another form of contraception. When asked if he would be upset if his partner was to stop taking oral contraception, BJ admitted to potentially being annoyed.

Other participants did not seem as unhappy about the thought of their partner no longer taking oral contraception. Jared's partner did not use oral contraception, and he seemed pleased with that choice when he indicated he did not have to worry about her taking it. HC suggested that he would provide contraception if the alternative they discussed was male-oriented. Jim and Calvin both used dual prevention and expressed similar thoughts (Jim is quoted below).

Well as far as – well, I wouldn't have a problem with it. Mainly because my role wouldn't change too much. I mean, I'd still use condoms, and therefore what I'm doing wouldn't really be impacted too much. [...] I mean, as I said, I don't think my role would really change too much. The only difference might be there probably wouldn't be a time that I would choose not to wear a condom in that case, if she wasn't on the pill. Because I mean there's no safety net so to speak, after that. So that might be the only way that it would change (Jim).

Finally, there were a couple of situations in which condoms were used because the female was not on anything (i.e., the birth control pill). In both cases, these participants did not like condoms but both used them, indicating their willingness to engage in safer sex.

Contraceptive Decision-Making

We can better understand who is responsible for contraception by looking at how decisions about contraception are made. Here, I will focus on how the participants perceived certain decisions around contraception, including their perceptions of their partner's influence. First, I will present how decisions were made about contraception generally. Then I will show how participants perceived their partner's influence on contraceptive decisions.

Below are some responses describing how decisions about contraception were made. The first two quotes show how the decision was made to use condoms with BJ's first sexual partner (first quote) and the first time he had sex with his current partner (second quote). In the third quote, Jared described waiting for the female to make the first move in broaching a topic or initiating contraceptive use. In the last quote, AB decided to not use a condom when his partner indicated she did not want to.

> *LP: How was the decision made to use condoms?*
> *BJ: Oh well, we were starting to get a little bit more serious and a little heavier and she just kindof reached over in her purse and pulled out a condom. And ah, y'know, she started to unwrap it and, she took it from there.*

> *LP: So you used condoms at first though [BJ: Yup], and how did that come up?*
> *BJ: Well, same idea. I just had some at bedside, and when things were starting to go our way – or my way – [I] just reached over and said, 'I'm not ready to be a daddy right now' and I don't totally know her sexual history, so for prevention and care purposes, this time I initiated. I just said okay I'll put the condom on [...]*

LP: Do you check in with your partner?
Jared: I'm sort of a passive participant, and a lot of these relationships, I kinda wait for them to make a move too, like, so it's a bit of seeing how far they're going [...]

LP: Why did you decide to use condoms? Who brought up that conversation?
AB: She did... actually, no... the first time that we engaged in intercourse we didn't use a condom... I asked her and she said no.

There were only two examples when a participant clearly suggested that they initiated contraceptive use (one can be found in the quote by BJ, above). More often, participants recounted situations in which decisions about contraception were shared, or they held similar contraceptive goals. Jared pointed out that he and his current partner both did not want children (and were comfortable with each other's sexual past), and so contraception for the purpose of pregnancy prevention was used. Jim indicated that he was perfectly willing to use a condom, which coincided with his partner's desire for dual prevention. HC explained how decision-making was a joint process in his current relationship. Finally, when describing his first contraceptive experience, AB suggested that both he and his partner wanted to use a condom for contraception. Two participants (HC and AB) demonstrate this concept of joint decision-making in their responses below.

LP: So, do you talk about contraception with your partner now?
HC: Like when we decided to use condoms for the period in case there was going to be a side effect of the penicillin, it was a decision that we discussed and made mutually. And then again, going off them as a result of the same <inaudible>.

AB: [...] there was no way I was going to engage in intercourse without using a condom.
LP: Can you tell me a bit about why that would be?
AB: [...] the person I engage with in intercourse, she felt the same way – that there's absolutely no way that this will happen if we don't use a condom [...]

A few participants influenced decisions around contraception by using condoms irrespective of what their partner did (which also showed these participants were receptive to engaging in safer sex). Jared indicated that he usually used condoms even if his partner chose to use oral contraception. Calvin and his partner agreed to use dual prevention (i.e., oral contraception and condom), and he indicated using a condom was his choice. Jim described a situation in which he used a condom while his partner was taking oral contraception. Jim felt that his current partner did not want him to use a condom when they first had intercourse (see quote, below), and that made him want to use one even more (quote not included).

> *LP: How would you describe your role in your current relationship concerning contraceptive use, versus your partner's role?*
> *Jim: [...] I mean, basically I've made the decision that I'm gonna wear them despite her feelings, and birth control is her decision. That's something she's always done from when she started having sex. So that would be her role.*

Finally, there were instances when the participant was asked how he made the decision to use contraception, and he described his partner's decision or actions.

> *LP: How did you decide upon using the pill solely?*
> *HC: Well, she was actually on the pill before we started going out, for different reasons. It was to help control <inaudible> during menstrual cycles. At least that was one of the things I was aware of before we even talked about being sexually active.*

Influence of the Female Partner.

Most of the participants suggested that the decision to use contraception was generally up to the female and indicated that their partner influenced the decision-making process in some way. This influence took various forms, as can be seen below.

Jared was influenced when his partner supported his decision to not have intercourse without a condom, by his partner's negative experiences with oral contraception, and when his partner suggested an alternative form of contraception. A couple of participants indicated that they used condoms, at least in part, because they were given no choice. BJ's first partner was influential in the decision to use contraception by bringing and initiating the use of a male condom. The first quote indicates that they used condoms for the duration of their 12-month relationship because she was not on anything and insisted on condoms. The second quote indicates a similar situation in Jim's first sexual relationship.

> *[...] she insisted on condoms, which was fine, she wasn't on anything (BJ).*

> *The fact that she said do it or else just sealed the deal, I guess. But I mean, as I said, it was something I was gonna do anyway [...] (Jim).*

Female Ambivalence Toward Condoms.

There were a few situations described by participants in which their female partner did not want them to use a condom. The three quotations below all show this concept, but each situation is different. In the first, the female wanted to switch from a condom to a form of contraception that she was comfortable with, and Jared obliged. In the second quote, Jim felt his partner did not want him to use a condom, but she was okay with the fact that he did use one. In the last quote, AB expected to use a condom, but his partner did not want him to. As a result, AB unknowingly engaged in unprotected intercourse.

> *LP: [H]as there been a situation at all in your sexual history where your partner has said, 'I don't want you using a condom'?*
> *Jared: Umm, no not directly like, 'I don't want to use a condom. I don't want to use any birth control.' But it's like 'I don't wanna use a condom. I wanna use a [vaginal contraceptive film].' That has come up. But that's the only time it's ever*

come up. Like, 'let's try it a different way, have like a <unintelligible> that I'm really comfortable with, let's do that instead'.

She explained some of her sexual history to me, and I expressed that I prefer to wear a condom. She actually preferred I didn't. But she was also comfortable with the fact that I wanted to, so that's where we stand with that (Jim).

[...] the first time that we engaged in intercourse we didn't use a condom... I asked her, and she said no. We talked about it afterwards, and I asked her why. Just because of the intimacy, she wanted to not use a condom [...] (AB).

Communication

All of the participants suggested they engaged in little or no communication about contraception. Conversation tended to be limited to a few choice words to determine if someone had condoms or if the female was on the pill. Quotations illustrating the frequency and depth of communication can be found below.

There wasn't any kind of consultation beforehand. It was just, okay, here we go (BJ).

AB: She wasn't on the pill at that time.
LP: Yeah, she wasn't, but did you know at the time, in the moment?
AB: No, I didn't know whether or not she was on the pill or not. We hadn't discussed it... again like with that person who just took out a condom... I just did that... just assumed that that's what was going to happen.

There wasn't a whole lot of discussion about that particular point. It was more me, as I said, killing the mood, going to leave the room and I was like 'I'm gonna get a condom' and it was kinda like 'You don't have to.' And I said 'I prefer to' and she said 'Okay.' So there wasn't really a lengthy conversation about that particular point (Jim).

The timing of the conversations was most often described as during foreplay, therefore just before intercourse, as illustrated by the quote below. The quote also shows two other related concepts: how contraception was not

explicitly discussed, and how little was said. Also note that Jared did not appear to consider this communication a conversation.

> *We never actually talked about oh, let's use a condom but it is like y'know, instantly let's use – do you have a condom? Yes I do, let's have sex, type thing. Or like, where do you keep your condoms? I think it's always been an implied thing, I guess. It's never – wasn't overtly discussed as, about contraception in one way, I guess (Jared).*

Participants often indicated that communication was open and upfront in their current relationship. All but one of the participants suggested they were quite comfortable talking about contraception with their partner.

Despite this, it was clear that communication could also be ambiguous. There were issues that were implicitly understood or not discussed, and forms of non-verbal communication. Examples of each of these features are given below.

Jared described an implicit understanding with his partner in which they agreed to not have intercourse if there was no contraception available because they both did not want to have kids. But then he indicated kids were not explicitly discussed (first quote). AB also alluded to unspoken choices about contraception (second quote). In the third quote, BJ was asked if he talked about contraception much in his current relationship, and he suggested their conversations were not explicit.

> *Jared: And then, we had enough in common in terms of those wants of, like, not wanting kids and all that, but we basically, if there's no contraceptive available it's just understood, it's like okay, we're just not gonna do anything 'cause we both know we don't want those consequences.*
> *LP: And when did the kid discussion come up?*
> *Jared: It wasn't really a discussion about a kid. It was just a discussion about, I dunno, in terms of contraceptive, y'know, I dunno, it's never directly about that, but it is in a way, y'know, like?*
> *LP: Right. Contraception and children would be -*
> *Jared: Yeah, they go hand-in-hand basically, yeah.*

[...] for the majority of our relationship, it's been assumed that she's on the pill and that's it, and that's what we're doing (AB).

But y'know we don't have open, frank discussions on the topic, 'cause frankly there's other stuff to do. Like, have sex (BJ).

Along the line of what was implicitly understood, some participants mentioned what they did *not* talk about. Most notable was BJ, who did not seem to talk about contraceptive preferences with his partner. In the first quote, BJ was prompted to discuss the transition from condoms to oral contraception in his relationship. He was unsure whether or not his partner disliked using condoms and indicated that the issue was not discussed. Later in the interview, BJ thought his partner preferred intercourse without a condom because she never indicated otherwise (second quote). Finally, in a separate line of questioning, BJ suggested his partner told him that pills were fine, an apparent contradiction to his initial statement that the issue was not discussed (last quote).

LP: So then you moved on to the birth control pill in this relationship. And I'm curious now to know how that came about?
BJ: Well, it's just the progression of the relationship. As I've indicated, we were just gonna be spending more time together and there'd be a little more intimacy and she, umm, maybe she didn't like the condoms that much anyway, herself. Or maybe she'd been on the pill before in other relationships, I dunno, that's not the sort of thing we talk about.

I'm pretty sure she likes it that way [...] and, she's certainly never said 'I think a condom's better' y'know. It's never come anywhere near that [...] (BJ).

Pills are fine, and she's used them before in past relationships she's been in, she's told me and, yeah, she's not unfamiliar with it (BJ).

Not all communication was verbal during sexual encounters. Non-verbal communication (i.e., touch) was used by two of the participants. The quote below demonstrates how non-verbal communication can be used as an

indication of permissiveness. Jared was asked how the subject of contraception was typically broached in his relationships and offered this elaboration:

> *Well, just sort of test the waters, too, like if there's touching going on and stuff like that too, and then, from there, if the touching progresses, then it basically will actually come up like, 'Do you have a condom or anything?', or if the touching though is sort of like, this is as far as it should go, then that's when we just kind of stop and then have a bit of a discussion (Jared).*

Participants were less likely to initiate communication about contraception than their partner. Three of the participants (Jared, Jim, and AB) described situations where they either initiated communication alone or mutually with their partner. When these participants initiated communication about contraceptive use, it was usually at the moment of intercourse. Jim initiated with his current partner when he realized he was going to have sex for the first time by saying *"Well, I'll be right back. I have to go grab a condom."* The first time AB had sex with his current partner, he asked her about using condoms and she did not want to because of the intimacy. Despite these accounts, all of the participants identified situations in which their partner initiated communication. If the female did not raise the issue directly, she may have raised it indirectly through non-verbal communication. For example, it can be seen in the quote by Jared (above) that non-verbal communication can act as a catalyst for verbal communication.

The reasons for talking about contraception were varied and included the following: creating comfort and intimacy, fear of getting pregnant, to fulfill the goal of achieving intercourse, problems associated with oral contraception, and when the female resisted the progression of the sexual episode. One participant offered an interesting perspective whereby they used their virginity as a lever to broach a discussion about contraception.

Summary

In summary, this chapter presented findings that indicated how personal factors and relationship dynamics could influence contraceptive decision-making from a group of adult heterosexual males. With regard to the relationship dynamics, the topics discussed included communication, contraceptive responsibility, and the type of relationship. With regard to personal factors, the topics discussed included sources of information, contraceptive concerns, past contraceptive experiences, and attitudes toward contraception and the environment.

There was little or no communication about contraception. When present, communication was frequently limited to a few choice words, usually during foreplay, and usually initiated by the female. Although participants often described their conversations as open and upfront, there were notable instances of ambiguity. In these situations, it might not have been clear to both partners what contraception was being used (if any), their contraceptive preferences, or the implications of not using contraception or of contraceptive failure.

When participants were asked how they made decisions about contraception, there were instances when they described their partner's decision or actions. Only twice did a participant suggest that they initiated contraceptive use. A few participants were influential by using condoms irrespective of what their partner did. Although decisions about contraception were sometimes described as shared, most participants suggested that the decision to use contraception was generally up to the female, and indicated that their partner influenced the decision-making process in some way. On occasion, this was when their partner did not want them to use a condom.

The participants tended to see their role as being supportive regarding contraception in the relationship. They frequently mentioned activities such as getting condoms and using them. Most participants were agreeable with helping

to pay for oral contraception, but two were reluctant. On a few occasions, participants mentioned ways they could be supportive emotionally.

The participants in this study appeared willing to use condoms. Three participants were already using condoms and the other three suggested they would if their partner wanted them to. The evidence supporting their willingness to use condoms was conflicting. On the one hand, when asked about their role if their partner wanted to stop taking oral contraception, two of these participants indicated they may not use condoms, and both were unhappy about the prospect of their partner discontinuing oral contraception. On the other hand, there were a couple of situations when condoms were used because the female was not on anything (i.e., the birth control pill). In both cases, these participants did not like condoms but both used them, indicating their willingness to engage in safer sex.

Some participants described roles that could be considered stereotypical male behaviour with regard to sexual health. Examples of these behaviours were when participants appeared uninterested in sexual health, sex seemed to be an end goal to be achieved, and the female decided how far the sexual episode went.

Another influence on contraception was whether the relationship was deemed to be casual or long-term. Some participants were clear in their belief that condoms were used for casual relationships, or early in a long-term relationship. Feelings of intimacy and trust were tied to the perception of the relationship and were influences in contraceptive decisions on their own. Finally, some participants expressed concern about the physical or emotional well-being of their female partner. This concern was usually a result of the effects of taking oral contraception, and could influence participants' decisions around contraception.

Some personal factors that influenced contraceptive decision-making in participants were identified. Previous experience was one factor that seemed to

influence the participants' contraceptive behaviour and decision-making. Other factors included health considerations, such as avoiding STIs and pregnancy (the latter being the dominant focus of all participants). There were personal barriers to discussing contraception, such as the discomfort of asking and "killing the mood". Participants mentioned the peace of mind gained from using condoms, but also the pleasure gained from not using them. Finally, none of the participants indicated that the environmental implications of contraception were a major factor when considering contraception.

Chapter 5: Discussion

The last chapter illustrated how contraceptive decision-making in adult heterosexual males can be influenced by many personal and relationship factors. This chapter will elaborate on those main findings that emerged from the participant interviews. These findings will be linked to issues found in the sexual health literature, such as contraceptive decision-making, partner support, intimacy and trust, and communication (see Chapter 2). This chapter will also show how gender dynamics underpin all of these factors to influence how decisions about contraception are made from the perspective of adult heterosexual males. Because gender dynamics were particularly influential, this discussion will concentrate on gender and how it relates to the findings and the sexual health literature. Recommendations for health promotion policy, practice, and research will then be discussed. Finally, this chapter will end with my thoughts on this study and some suggestions for future research.

The purpose of the current study was to explore how decisions about contraception were made from the perspective of adult males in heterosexual relationships. The current study was uncommon compared to most sexual health research in two ways: its qualitative approach and its focus on adult heterosexual males. Qualitative research is ideally suited to obtaining rich descriptions of situations, such as the context surrounding the decision to use contraception. Relatively little is known about adult heterosexual males' perspective of contraceptive decision-making. The participants in this study were able to give their perspective on various aspects of the topic. Some of these perspectives can be found in Chapter 4. Many of the participants' perspectives were grouped into a few key themes.

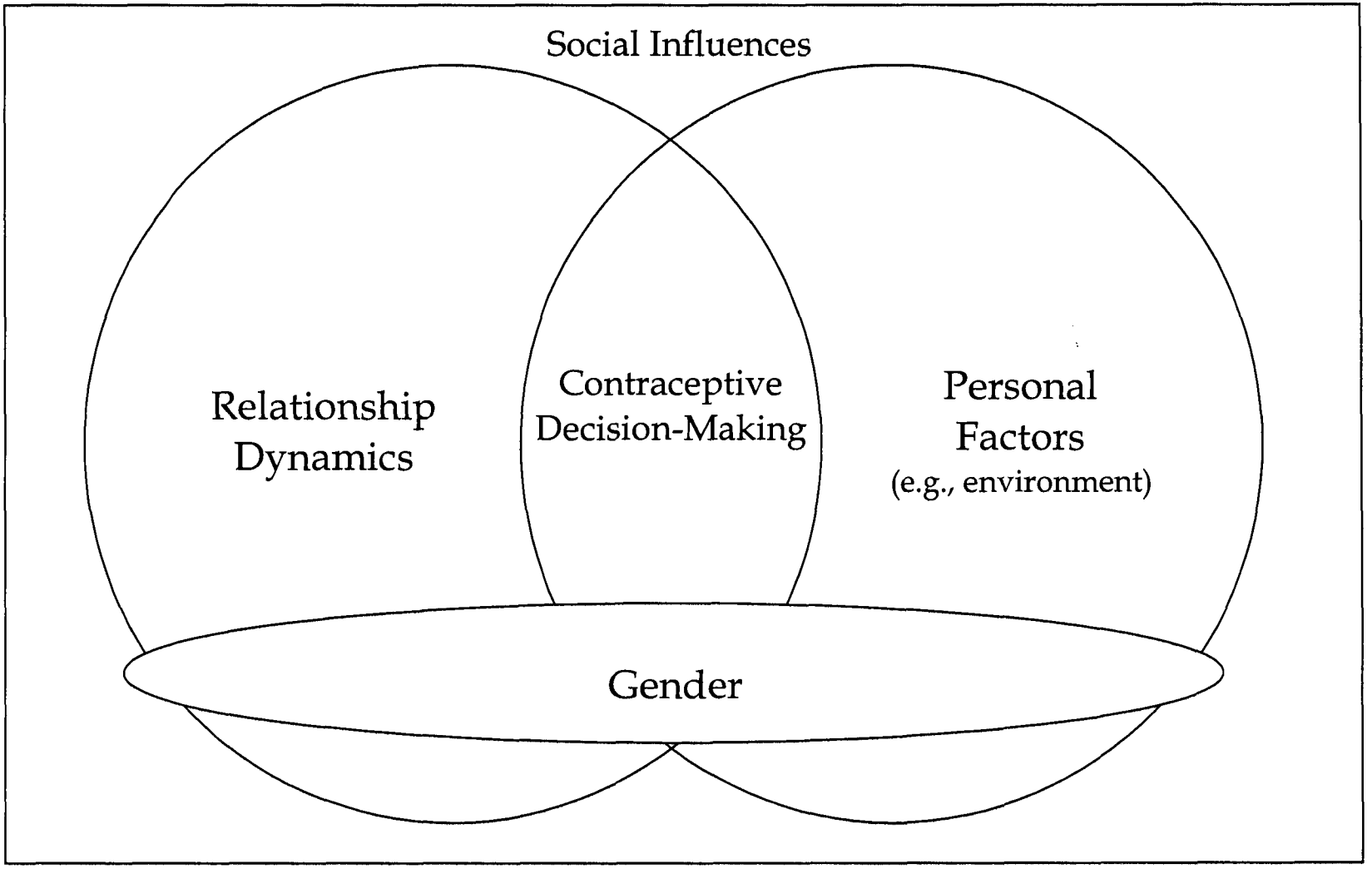
The core theme that best described contraceptive decision-making in the adult heterosexual males in the current study was "it's all context." The two main ancillary themes were "personal factors" and "relationship dynamics."

Based on these findings, Figure 1 presents a model of contraceptive decision-making in adult heterosexual males, showing how personal factors and relationship dynamics interact. Personal factors that were relevant to participants' contraceptive decision-making were the properties of specific contraceptive methods, contraceptive and environmental attitudes, past contraceptive experiences (including family and peer influences), and contraceptive concerns. Relationship dynamics that influenced participants' contraceptive decision-making were the type of relationship (e.g., new or established, primary or casual partner), whether the female partner was currently using contraception, frequency of intercourse, contraceptive responsibility, and communication. The decision to use contraception (and the type of contraception used) was made through a combination of personal factors and relationship dynamics. Furthermore, gender dynamics underpinned most of these factors. Because of the undeniable influence of gender, this chapter will discuss the key themes as they relate to gender dynamics.

Personal Factors

Participants often cited prevention against pregnancy and STIs as the main reasons for using contraception. The majority of participants in the current study indicated that the prevention of STIs was not as much of a concern as pregnancy prevention. The explanations given were similar: participants were in what they described as long-term, committed relationships and/or were comfortable with the sexual history of their partner. When STIs were a concern, it was usually when sexual histories were not discussed, at the beginning of a long-term relationship or a casual relationship. These explanations will be discussed further in the section on relationship dynamics.

Figure 1: Model of Contraceptive Decision-Making in Adult Males



The sentiment that male sexual partners are typically concerned more about pregnancy than STIs is not surprising. Evidence for this can be found in the literature (Seal & Palmer-Seal, 1996). In the current study, all participants were in relationships at least three weeks in duration, and most were in a relationship for three years or more. Therefore, participants may have already assessed their partner's STI status and so were only concerned with pregnancy prevention. In this way, pregnancy prevention may have been the predominant concern because most of the participants were in long-term relationships.

If the participants' primary reason for using contraception was pregnancy prevention, then was the method used consistent with their stated reason? All but one of the participants was using oral contraception, either alone or with condoms. With typical use, combined oral contraceptives are 92 to 97 percent effective against pregnancy, condoms are 86 percent effective, and spermicides are 74 percent effective (Black et al., 2004). In this way, the contraceptive method used by each couple was consistent with the participants' stated reason for wanting contraception (i.e., pregnancy prevention).

However, the factors that influence the use of contraception may be different from the factors that influence the choice of a particular method (Lamvu et al., 2006). The participants in this study discussed the fact that they were using contraception primarily for pregnancy prevention, but the particular methods they used could be for other reasons. And it was clear that pregnancy prevention was not the only factor influencing decisions about contraception.

Oral contraception was used in all but one of the relationships, and three of the participants used condoms. In terms of the factors that influenced the decision to use or not use condoms, participants indicated one factor was whether or not their partner was using the birth control pill. Another was the context of the relationship and whether or not it was perceived as casual or long-term. Both of these reasons will be discussed more in the section on relationship dynamics. Participants commented on the peace of mind gained from using

condoms, but also found the pleasure gained from not using them to be appealing. For example, a couple participants reflected on the unnatural feeling as a barrier to condom use. In the end, some participants were dissatisfied with condoms and did not use them; others did not mind using condoms and expressed some benefits in doing so.

The participants' attitude toward oral contraception also influenced their decisions regarding the particular contraceptive method that they used. Advantages to using oral contraception included its reliability and effectiveness. The other main advantage was that oral contraception did not interfere with pleasure or intimacy, often described in juxtaposition to a condom.

The participants' attitudes about contraception (chiefly, condoms and oral contraception) seemed to closely follow concerns about safety (in terms of STI prevention) and pleasure. These attitudes have implications for risk of STIs and pregnancy. Once concerns about STIs are alleviated, usually by unreliable means, then this could lead to the discontinuation of condom use (Seal & Palmer-Seal, 1996). If no barrier method is used, then there is a risk of STI transmission. As mentioned in Chapter 2, females are at greater risk of STI transmission as well as the consequences of pregnancy.

Taken together, the participants seemed to be using the contraceptive method that was consistent with their attitudes toward that method. Those participants in the current study who preferred to use condoms were using them in their current relationship. Those participants who preferred oral contraception or expressed a dislike of condoms all relied exclusively on oral contraception. However, there were a couple of exceptions that will be described below.

One exceptional situation was when AB was using a contraceptive method that was not entirely consistent with his attitudes. AB expressed a dislike for both condoms and oral contraception, but oral contraception was the method of choice in their relationship. Here, the need to prevent pregnancy was

greater than the side effects of the birth control pill. This is an example of prioritizing concerns regarding contraception. Prioritizing concerns in this way has also been described in the literature as choosing the least bad alternative. In this situation, a contraceptive method is chosen not because it is liked, but rather because it is better than the other methods that are disliked (Brown & Eisenberg, 1995; Walsh, 1997).

Another exception was when Jared did not seem to be using a method that was most effective against pregnancy, his primary reason for contraception. Jared was using a condom or spermicide for contraception. Jared's concern about the health impacts on his partner of using oral contraception was a greater priority than the better protection of the pill relative to condoms. This would be another example of prioritizing concerns.

The environmental effect of hormonal contraception was new to all of the participants, with the possible exception of one. Consistent with this knowledge, environmental issues were not a factor in contraceptive use or contraceptive choice for any of the participants. The participants all self-identified as environmentally aware, so if the environmental effect was considered, presumably it would have been more likely to be detected in this group. Participants offered their perspective on the link between contraception and the environment, even though environmental issues were not a factor in their contraceptive decisions. Some participants spoke about the relationship between pregnancy prevention and overpopulation, suggesting that contraception could reduce environmental impact by limiting population growth. This finding supports the only evidence found in the literature reviewed that males may think about overpopulation when considering contraception (Bustamante-Forest & Giarratano, 2004).

It should now be clear that understanding individual priorities when selecting a contraceptive method is as important as knowing basic facts about contraceptive effectiveness (Lamvu et al., 2006). Some of the contraceptive

attitudes expressed by participants that focus on performance and satisfaction at the expense of condom use (e.g., natural skin-on-skin contact is better; oral contraception did not interfere with pleasure) have implications for the risk of transmitting STIs (Bowleg, 2004). A discussion about the importance of condom use as part of safer sexual decisions in health promotion will be offered later in this chapter. Next is a discussion of how the participants' contraceptive decision-making was influenced by relationship dynamics such as the type of relationship, contraceptive responsibility, and communication.

Relationship Dynamics

Many factors related to the social environment influence sexual health beliefs and behaviours. One of the most prominent features among the findings was the interaction between relationship dynamics and gender dynamics. Whereas relationship dynamics affected decisions about contraception, gender dynamics influenced the relationship. Gender dynamics can influence the ways in which males and females interact with each other (Rao Gupta, 2000), such as through differences in sexual knowledge, attitude, and behaviour (Lock et al., 1998). These differences can manifest themselves in various ways. Some of those evident in the current study were differences in the consequences of using contraception (e.g., side effects from oral contraception) or not using contraception (e.g., male participants seemed more concerned about pregnancy prevention than STI prevention), and how the participants' female partners tended to be responsible for the sexual health of the dyad, how far sexual activity went, contraceptive use or refusal, and initiating communication about contraception (Christianson et al., 2003; Gahagan et al., 2007; Grady et al., 1999; Lear, 1995; Lock et al., 1998; Ndong & Finger, 1998; Pulerwitz & Dworkin, 2006; Watt, 2001). However, there was also evidence that some participants attempted to minimize gender-based assumptions about contraceptive responsibility. For example, some males in this study were involved in contraceptive decisions,

showed concern for their partner about the health impacts of oral contraception, and were willing to share the cost of oral contraception.

These sexual health beliefs and behaviours are important because they demonstrate expectations about masculinity and femininity and how gender is negotiated in relationships. There is social pressure to adhere to stereotypical beliefs and behaviours, resulting in dominant norms of masculinity. This is how hegemonic masculinity can be evident in sexual relationships. Recall that hegemonic masculinity is the idealized form of being male at a given place and time (Connell & Messerschmidt, 2005; Courtenay, 2000). Hegemonic masculinity is the socially dominant construction of gender that shapes males' relationships with females and other males (Courtenay, 2000); it is, in essence, a social determinant of sexual health. When participants expected their female partner to be responsible for contraceptive use or refusal, they were subscribing to a dominant norm of masculinity in that males typically leave this to their female partner.

One of the needs identified in the literature was to better understand the motivation to use contraception in adult heterosexual young males (Sonenstein et al., 1997). The participants' motivation toward contraceptive use and choice was affected by their relationship with their partner. The participants in the current study were more likely to use condoms with casual partners or in the early stages of a relationship. This finding is consistent with other sexual health research (Fisher & Boroditsky, 2000; Flood, 2003; Harvey et al., 2006; Ku, et al., 1994; Landry & Camelo, 1994; Marston et al., 2004; Seal & Palmer-Seal, 1996). As the relationship progressed, contraceptive use tended to move away from condoms toward oral contraception, which was also consistent with the literature (Chambers & Rew, 2003; Civic, 1999; Fisher & Boroditsky, 2000; Ku et al., 1994; Landry & Camelo, 1994; Seal & Palmer-Seal, 1996; Wulff & Lalos, 2004). Participants suggested the reason for switching to oral contraception was because the pill was more effective in preventing pregnancy. Secondary reasons

for switching to oral contraception was that it did not interrupt the sexual process, and it was more intimate and pleasurable than condoms. This switch also seemed to reflect a change in the perception of the relationship to one that was more committed.

Half of the participants were not using condoms at the time of the current study. These participants were in what they considered to be trusting, long-term relationships, and they were not concerned about STIs, so condoms were not necessary. This finding - a decrease in condom use and the rationale given - is common in the sexual health literature (e.g., Bowleg, 2004; Chambers & Rew, 2003; Civic, 2000; Civic, 1999; Fisher & Boroditsky, 2000; Harvey et al., 2006; Landry & Camelo, 1994; Pulerwitz & Dworkin, 2006; Seal & Palmer-Seal, 1996). There are many possible reasons for the typically low condom use found in long-term relationships. According to Marston et al. (2004), the longer a male knows his partner, the more likely he is to report pregnancy prevention as a reason for contraceptive use and the less likely he is to report STI prevention as the reason. Simply put, there is little or no concern about STIs. The use of hormonal contraception (e.g., the birth control pill) can weaken the resolve to use condoms (Cates & Steiner, 2002; Sangi-Haghpeykar et al., 2001). There is an inverse association between condom use and other methods such as hormonal contraception (Christianson et al., 2003; Civic, 1999; Fisher & Boroditsky, 2000; Gebhardt et al., 2003; Ku et al., 1994; Ott et al., 2002; Seal & Palmer-Seal, 1996). These conclusions can be observed in the current study by the decrease in condom use after the introduction of oral contraception, and when some condom users suggested that if their partner was taking the birth control pill and they did not have condoms, then it was still okay to have intercourse. Contrary to the literature cited above is research showing that a decrease in condom use is not always associated with the use of hormonal contraceptive methods or the duration of the relationship in itself (Sayegh et al., 2006). Sayegh et al. (2006) found that specific characteristics of the relationship, such as coital frequency,

influence condom use. It is important to be mindful that although the current study demonstrated lower condom use in long-term relationships, an equal amount of counterexamples were present.

Intimacy, trust and comfort seemed to have an important, but variable, role in the relationship and its influence on contraceptive decisions. For Jim, trust was the belief that the information his partner had given him was accurate. This description was reminiscent of how Lock et al., (1998) defined trust as "the process of developing confidence that the sexual partner is truthful about his or her sexual history" (p. 280). Remembering to take the pill, or adherence, was often cited by BJ, and it appeared that in this case trust equated to adherence. To use another familiar example, HC was asked how the switch from condoms to oral contraception related to feelings of intimacy. His response showed that as the relationship progressed, condoms were used less because there was more comfort, intimacy, and trust. Contrast this situation to when AB's partner did not want him to use a condom the first time they had sex in an effort to increase intimacy.

These situations show how trust can lead one or both members of the couple to believe it is safe to stop using condoms. This belief is often based on unreliable means, such as communication about sexual histories, rather than routine STI testing (Civic, 2000). Seal, as cited in Seal and Ehrhardt (2004), suggest open sexual communication may deter the use of condoms because the individuals do not perceive themselves to be at risk of STIs. Further, females may not use condoms as a symbol of intimacy and trust, or because of their perceived threat to establishing a loving relationship (Free et al., 2005; Lock et al., 1998; Rosenthal et al., 1998). The examples involving HC and AB showed how intimacy and trust had a variable effect on contraceptive decisions and reflect these concepts from the sexual health literature. Intimacy and trust precipitated a switch from condoms to oral contraception in HC's relationship, whereas the

desire to create intimacy precipitated the decision to not use a condom in AB's relationship.

Jim was one of three participants who expressed that they derived some emotional comfort from using a condom. Examples of emotional comfort included the peace of mind offered by the physical barrier a condom provides, especially when their partner's sexual history is not known, and not having to worry about oral contraception not working. Although these aspects may be beneficial in motivating condom use, the former point merits further discussion. The peace of mind that comes from using a condom without knowing their partner's sexual history can be linked to trust and intimacy in the relationship. The level of intimacy may not be such that each partner is comfortable discussing their sexual history, and that is why feelings of comfort are included here.

For example, when Jim was asked why he usually used a condom even if his partner was using oral contraception, he described not worrying and feeling comfortable in situations where he did not know his partner's sexual history. Knowing his partner's sexual history would require disclosure of information (i.e., intimacy), and a belief that that information is accurate (i.e., trust). Jim suggested that he did not know his partner's sexual history, but indicated elsewhere in the interview that she did tell him. Jim believed that people will just tell you what they think you want to hear, and he did not feel he truly understood his partner's sexual history.

It was not uncommon for participants to have intercourse without knowing their partner's sexual history. Three other participants relayed stories in support of this trend. When one participant was asked if he discussed sexual histories or STI testing before intercourse, he suggested that it would be discussed before unprotected intercourse, but not before intercourse because condoms could be used. This trend of being comfortable talking about sexual issues after sexual intimacy has been established with their partner (rather than before first intercourse) can be found in the literature (Landry & Camelo, 1994).

Clearly, using a condom is one way for some participants to ease the discomfort associated with not knowing their partner's sexual history.

The notion that using a condom provides emotional comfort or peace of mind is supported in the sexual health literature. Landry and Camelo (1994) held focus groups with young males and found many respondents expressed emotional satisfaction from using condoms. Landry and Camelo did not elaborate on possible explanations for their finding. In the current study, we can see that one of the reasons participants were more comfortable using a condom was because they did not know their partner's sexual history.

The idea that males can use a condom to ease the discomfort of not knowing their partner's sexual history could lead to an interesting gender dynamic. A female cannot just put on a condom if she does not know her partner's sexual history (Amaro, 1995; Amaro, Raj & Reed, 2001; Buysse & Van Oost, 1997; Campbell, 1995). Whereas males can rely on condoms to protect themselves from STIs, females must trust their partner (e.g., that they are free of STIs and have been monogamous) to protect themselves from STIs (Civic, 2000).

The perception that condoms are less intimate and are used in casual or temporary relationships is a systemic characterization that many ascribe to (Amaro, Raj & Reed, 2001). Adhering to this characterization could create a discrepancy between the meaning attached to the use of condoms and the reality of the relationship. In other words, if condoms are associated with casual relationships, and the relationship is something more than casual, then how does one rationalize the use of condoms? Or if condoms are associated with decreased intimacy, and one wants more intimacy in the relationship, then condoms would seem to be inconsistent with the desire to increase intimacy.

This discrepancy may seem inconsequential, but the implications could be vital to the sexual health of the couple. If condom-less sex is viewed as the only way to increase intimacy, then the couple might be at greater risk of pregnancy or STIs. If condoms are associated with casual relationships, some people may

believe that using a condom signifies that their relationship is temporary. Condoms may not be used so it is easier to believe that the relationship is committed.

Coupled with the perception that condoms are used in casual relationships is how permanent or temporary oral contraception is viewed. Some people may believe that oral contraception is a more permanent option than condoms, as one participant clearly suggested. To cast oral contraception as being more permanent than condoms perpetuates the notion that condoms are temporary and used mostly for casual relationships.

One could point out that condoms are a viable option used in committed relationships with mutually satisfying levels of intimacy. In this study, Calvin and his partner used condoms (with oral contraception) for approximately six years. This would be an example of a more balanced involvement in contraception by both partners. Both females and males may feel more comfortable knowing that condoms are a permanent option for couples in long-term, committed relationships, thus making the condom a more palatable choice than before.

Intimacy, be it emotional or sexual, was a factor in contraceptive use in the current study. Support for this finding can be found in the sexual health literature (Civic, 2000; Flood, 2003; Free et al., 2005; Gebhardt et al., 2003; Michels et al., 2005; Rosenthal et al., 1998; Seal & Palmer-Seal, 1996). Whether males enter sexual relationships for emotional or sexual intimacy could affect sexual health messages regarding contraceptive use. For example, condom use may be undesirable to males who pursue sex primarily for sexual pleasure (Seal & Ehrhardt, 2004), so messages that eroticize safer sex may be more successful (Scott-Sheldon et al., 2006). In contrast, condom use may be undesirable to males who pursue a sexual relationship primarily for emotional intimacy for reasons of love, trust, and commitment (Seal & Ehrhardt, 2004), thus requiring a different sexual health promotion message.

Another factor that influenced male contraceptive decision-making was whether their partner was currently using contraception or not. As explained already, condoms might not be used if the female was using oral contraception. But there were times when participants used a condom because their partner was not using oral contraception, or the effectiveness of the pill was reduced. Obviously, using a condom in this situation offers greater pregnancy and STI prevention and is not an issue. But if the only reason condoms were used is *because* the female partner was not taking the pill, then there could be an inherent expectation from the male that his partner should be on the pill. An expectation that the female partner should be taking oral contraception, even if unstated, could pressure the female to use the pill, and could perpetuate stereotypically gendered contraceptive roles.

The current study showed that some males thought about the health impact of the birth control pill when considering contraceptive choices. Three participants expressed concern about their partner's well-being due to the effects of taking oral contraception. This finding is significant for a couple of interrelated reasons. First, though research suggests that females may consider health side effects of the birth control pill when choosing contraception (Free et al., 2005; Noone, 2004; Noone, 2002; Walsh, 1997), there was little evidence in the literature reviewed that this was a consideration for males. Second, some research was found to suggest that concern about their partner could be an indicator of contraceptive use in males (Forste & Morgan, 1998; Landry & Camelo, 1994; Landry & Ward, 1997). This finding indicates that there is some level of interest in contraception among certain males that could translate into more involvement and consideration of other forms of contraception. In this way, some participants may have been reducing gender-based expectations about contraception. Increasing awareness of, and fostering concern in males for, their partner's contraceptive needs may increase effective contraceptive use and

is another reason to include males in health promotion intervention efforts (Forste & Morgan, 1998).

When describing their role, most participants mentioned being responsible for condoms in some capacity (e.g., buying, having, or using them). The only variant to this role was providing support to one's partner (e.g., initiating a discussion, finding information). Some participants shared in the cost of contraception by buying condoms, if they were being used. Sharing the cost of contraception was found in the literature as one way that males could provide contraceptive support (Cabral et al., 2001; Landry & Camelo, 1994). In the current study, participants were asked if they would consider sharing the cost of oral contraception, with mixed results. Although some participants were supportive of this idea, a couple males were less than enthusiastic. Of those participants who relied solely on oral contraception, their involvement in contraceptive issues was minimal.

It could be argued that when participants stopped using condoms, their responsibility for sexual health was lessened. By not using a condom, participants were not responsible for any planning prior to sexual activity. Furthermore, they were not responsible for any STI or HIV prevention (except, presumably, by remaining monogamous), or pregnancy prevention if they were not involved in the use of oral contraception. In the current study, one participant seemed to suggest that his partner was responsible for an unintended pregnancy because condoms were not being used at the time, and she missed a pill. This statement could be interpreted as meaning the participant was exempt from responsibility precisely because condoms were not being used. Other forms of support, such as talking about contraception or finding information, were uncommon. Even when present, participants suggested that this support stopped or was less frequent once a contraceptive method was used consistently. Finally, by not using condoms, participants no longer contributed financially to

contraception (by most accounts, participants only financial contribution to contraception was by buying condoms).

Access to health services is a determinant of health that can influence contraceptive use (CFSH, 2007; Free et al., 2005; PHAC, 2004). Access to contraception includes costs associated with the method and the ability to obtain it. Barriers to access, such as financial costs and feeling uncomfortable, were found in the participants' narratives. Furthermore, negotiating who will pay has been identified in the literature as a barrier to accessing contraception (Brown & Eisenberg, 1995), which was also found in these findings. Some participants mentioned that their female partners paid for oral contraception, but that they would help share the cost if it was not covered by health insurance. Health insurance plans can alleviate the cost barrier in accessing oral contraception but may also contribute to a reliance on oral contraception by subsidizing the cost of prescriptions (CFSH, 2007). These issues need to be addressed and will be discussed further in the next section.

As mentioned in Chapter 4, gender-based stereotypical male behaviour includes situations in which males appeared uninterested in sexual health and females decide how far sexual activity went and were responsible for contraception or refusal. A few participants made statements that indicated a lack of knowledge about contraception or a lack of surety about their partner's contraceptive experiences and preferences. Ignorance could reflect a lack of interest in contraception, thus passively contributing to contraception decision-making. If true, this lack of interest may influence the female's contraceptive choices (Davies & Rains, 1995; Ndong & Finger, 1998).

There were situations in which participants seemed comfortable with the progression of sexual episodes, to the point where the female limited activity, initiated discussion, or initiated contraceptive use. In this way, the participants seemed to have different limits, or set points, toward sexual behaviour and communication, than their partner. By having a higher set point for comfort, the

onus of responsibility was on the participant's female partner to establish limits (the implications of this gender difference in sexual communication will be discussed later in this chapter). For example, some participants suggested that they knew when it was time to get a condom. But participants also related situations when they were given reminders to use condoms by their partner. This would seem to give credence to the notion that their partner was not as comfortable as the participant in these situations, and the female felt it necessary to say something. By the participant's accounts, this demonstrates one way in which their female partner was responsible for contraception by having to prompt for condom use. Females are often responsible for raising issues of sexual and reproductive health, such as condom use (Christianson et al., 2003; Pulerwitz & Dworkin, 2006). One counterexample was when Jim initiated contraceptive use by getting a condom when it was apparent he and his partner were about to have intercourse.

Responsible sexual behaviour, as defined by the Pan American Health Organization ([PAHO], 2000), is characterized by autonomy, mutuality, honesty, and protection, among other traits. In the counterexample described above, Jim demonstrated autonomy, and an internal locus of control, when he risked "killing the mood" by getting a condom. BJ exhibited an external locus of control, whereby he did not provide condoms because he judged, by unreliable means, that his partner had some. This type of behaviour demonstrated a reliance, or trust, that is contrary to responsible sexual behaviour, characterized by autonomy (as defined by PAHO, 2000).

Most of the participants in the current study were willing to use condoms, especially if their partner wanted to use them. This finding could have an impact on gender-based assumptions about contraception, as explained in a study by Pulerwitz and Dworkin (2006). The authors suggested that some males were open to safer sex negotiation with their partners so they could establish more egalitarian relationships and greater emotional commitment. Because many

males were willing to negotiate condom use and supported it if their partner expressed clear interest, Pulerwitz and Dworkin (2006) concluded that these males did not define condomless sex or power over sexual decision making as an important expression of their masculinity. Most respondents equated a male's willingness to use condoms with his respect, care, or love for his partner. In addition, successful condom negotiation was thought to be related to the quality of the relationship or quality of the individual (Pulerwitz & Dworkin, 2006).

There were only two instances that clearly showed the participant making the decision to initiate contraceptive use. However, there were a number of times when participants appeared to engage in avoidance behaviour such as procrastinating, rationalizing, or passing responsibility of the decision on to their partner. Examples of avoidance behaviour were, when faced with a contraceptive decision, participants either complacently continued with a course of action or readily took a new course of action without appearing to consider alternatives. This was evident when AB did not use a condom the first time he had intercourse with his partner. AB asked his partner if she wanted him to use a condom, and she did not (he later mentioned he assumed they would use a condom). So, although AB intended to use a condom and had the opportunity, he changed his mind when his partner did not want to, without question and apparently without considering possible alternatives. It is worth noting that, in this case, it was the female partner that presented the course of action.

Instances like these are important because they show how the male partner can influence decisions around contraceptive use and communication by their role in the process. In the situation described above, the male followed the lead of the female. Thus, his role in decision-making was reactive, or nonexistent, and may or may not lead to healthy outcomes. These findings demonstrate how gender dynamics influence the relationship, most prominently showing how females tend to be responsible for contraceptive use. These examples highlight the real-life moments in which we can try to reduce the

passive acceptance of traditional gender roles between females and males. These lived experiences are what people can relate to, and they provide the discussion points that health promoters can use to emphasize awareness and alternatives to promote responsible sexual health behaviour.

Some of the results of the current study offer a unique contribution to the sexual health literature. Three participants relayed instances in which their partner did not want them to use a condom. These findings counter contemporary views of how gender influences contraceptive decision-making. The prevailing view is that the male is often resistant to condoms, thus the main reason for a lack of or inconsistent condom use (Amaro, 1995; Pulerwitz & Dworking, 2006; Seal & Ehrhardt, 2004). These findings are unique because they show that the decision to not use condoms is not always a male-dominated decision (Severy & Newcomer, 2005). The finding that there are situations when the female may not want to use a condom is supported by recent research (Pulerwitz & Dworkin, 2006; Bowleg, 2004; Bowleg, Lucas & Tschann, 2004).

For example, Bowleg (2004) reported accounts of females suggesting to their male partner to not use a condom, and one complied. Bowleg (2004) suggested this was a glimpse of a male experience that has rarely been documented in the literature. The author suggested that males sometimes lack the power to demand condom use, and more research and theory is needed to understand the role of power in relationship. Although males may lack the power to influence contraceptive use or method use *at times*, there is an abundance of research suggesting males often have relatively more power than females when making decisions about sexual health (Amaro, 1995; Pulerwitz & Dworkin, 2006; Pulerwitz et al., 2002; Seal & Ehrhardt, 2004). However, it does seem more research is needed about males' decision-making in these particular situations, in part because of the divergent responses of the participants in the current study.

These interviews suggested that communication about contraception was not something that occurred in a timely manner or was rich with information. For this reason, it would be misleading to suggest contraceptive use was negotiated, because negotiation implies a substantial discussion, including available options and preferences, consummated by mutual agreement on a method (Woodsong & Koo, 1999). In this sense, negotiation of contraception was not present in the current study. The fact that contraceptive communication most often occurred in the context of the sexual episode (rather than discussed sometime before) was significant. The timing of the communication would likely influence the decision to use contraception. It has been established that sexual arousal is a factor in contraceptive use or nonuse (Civic, 2000; Flood, 2003; Free et al., 2005; Rosenthal et al., 1998; Seal & Palmer-Seal, 1996). Free et al., (2005) described in their findings how sexual pleasure, spontaneity, and intimacy were sometimes prioritized over condom use during sexual arousal. Therefore, it is plausible to think that the safest decision might not be made when (or if) discussed at the moment of intercourse. Furthermore, sexual activities that are unplanned or spontaneous may create a sense of time pressure on contraceptive decisions (Civic, 2000).

Gender influences were also found in the communication of sexual health issues. Participants often described situations in which it was their female partner who initiated sexual health communication. Support for this finding can be found in the sexual health literature (Christianson et al., 2003; Gahagan et al., 2007; Lock et al., 1998; Watt, 2001). So, although males in the current study seemed willing to use condoms, they also seemed to expect their female partners to promote condom use, resulting in a gender difference between who initiated communication and who was responsible for condom use (Christianson et al., 2003).

Most participants also described communication with their partner as being open or comfortable. The reason for this comfort may be explained, in

part, because of the age of the participants and the length of their relationship. All of the participants were between 20 and 30, so they may have had time to develop self-comfort with discussing an issue such as contraception through personal experiences. There was also time to develop comfort with their current partner, as most of the relationships were at least three years in length. The participants' comfort with talking about contraception may also be explained by other reasons such as not initiating conversation, mentioned above.

Although participants usually described communication as being open or comfortable, there were many situations in which there was little or no discussion. This lack of discussion could be linked to various factors, including feeling uncomfortable or awkward about discussing contraception, and having no apparent plan. How the partner reacted (or was expected to react) was another prominent factor that affected discussion. Some participants felt that their partner was uncomfortable discussing contraception; believed that talking about contraception would disrupt sexual progress, and therefore kill the mood; or felt that contraception was a taboo topic. In any case, not inquiring about contraception was considered by Davies and Rains (1995) to be an indicator of the failure of males to share responsibility for contraception. Males who did not share responsibility for contraception (particularly by not asking about it) contributed to females' feelings that they were solely responsible for both contraception and its consequences (Davies & Rains, 1995). These findings contribute to the existing literature by providing a rationale for why some adult heterosexual males did not initiate discussions about sexual health and contraception.

In addition to little or no discussion being present, when there was communication it was sometimes ambiguous. There were issues that were implicitly understood or not discussed, and forms of non-verbal communication. Recall that Jared described an implicit understanding with his partner in which they agreed to not have intercourse if there was no contraception available

because they both did not want to have kids. But later he suggested kids were not discussed, and his response indicated that a discussion about contraception was tantamount to not wanting kids. It is not clear what would happen if there were an unintended pregnancy. Would adoption or abortion be an option? Ambiguity such as this could lead to different understandings between the couple. The implication is that the consequences of contraception have not been discussed.

Relationship dynamics, such as the length of the relationship, can also affect communication. HC was presented a scenario in which a male put on a condom rather than discussing it with his partner. His response indicated that the type of communication that is acceptable might be different based on the length of the relationship. HC acknowledged that it might be acceptable for a guy to simply put on a condom without discussing contraception with his partner in a casual relationship. But in a long-term relationship, HC believed that it was a negative situation if you felt that it was better to act rather than discuss contraception.

Non-verbal communication (such as in the scenario presented above) can lead to ambiguity and multiple interpretations. When non-verbal communication was found in the participants' narratives, it usually occurred early in the relationship. There is research to suggest that this finding is true. Coleman and Ingham (1999) showed that strategies based on non-verbal communication were perceived to be more appropriate in casual relationships rather than steady relationships. And, as Coleman and Ingham (1999) point out, males may be more compelled to take control of a situation and use condoms without discussion, probably because of the traditional gender script that encourages males to be initiators.

The results of the current study demonstrated the influence of personal factors and relationship dynamics on contraceptive decision-making. Similarly, Michels et al., (2005) showed how adolescents placed primary importance on

relationship and personal characteristics. Free et al., (2005) found that both situations and experience could create what they termed "fluid" contraceptive use. The results of this research reflect both concepts. Situational factors such as casual versus long-term relationships and switching contraception, as well as personal experiences, could have similarly created fluid contraceptive use with the males who participated in this study. Pulerwitz and Dworkin (2006) also found that safer sex strategies tended to change over time and in different circumstances for the couple (e.g., emotional closeness, pregnancy desires), rather than be determined unilaterally. Their research supports the results from the current study, especially the core theme of contraceptive decision-making being context-specific. The current study, and others in the sexual health literature, also describes how decisions about contraception were frequently made while trying to maintain consistency between many, often competing, factors, such as an individual's attitudes and their behaviour.

In summary, participants' reasons for using contraception and attitudes toward specific contraceptive methods (and pregnancy and STIs in general) were personal factors that influenced their decisions. Additionally, there were many contextual factors that influenced contraceptive decision-making. Factors specific to the relationship included the length of the relationship, intimacy, trust and comfort, and concern about the impact of oral contraception on their partner. Who assumed responsibility for sexual health issues such as talking about and using contraception was another way participants influenced contraceptive decisions. Gender dynamics were an important consideration because of the potential influence on all aspects of the contraceptive decision-making process. For example, some participants were willing to use condoms whereas others were reluctant (although even this was context-specific). Some participants seemed to believe that condoms are a temporary form of contraception associated with casual encounters and expected that oral contraception would be used as the relationship progressed. The willingness to use condoms and

expectation that oral contraception would be used both demonstrate gender-based assumptions about contraception that could impact behaviour as well as STIs and unintended pregnancy.

Recommendations for Health Promotion Theory, Research, and Practice

To review, the focus of this research was centered on the inconsistent and ineffective use of contraception and the role of health promotion in addressing the issue. A lack of knowledge about the contraceptive options available or how to use contraception effectively could be one cause contributing to the issue. But it is clear that having knowledge is not sufficient to developing healthy sexual behaviour (Brown & Eisenberg, 1995; Lamvu et al., 2006; Landry & Camelo, 1994; Langille et al., 1998; PHAC, 2003). Another reason is that contextual influences and relationship factors have not been given sufficient attention in sexual health messages aimed at reducing risk outcomes (Seal & Ehrhardt, 2004). The factors that could influence the extent to which safer sexual health messages are adopted include, for example, perceived gender roles, sexual and emotional intimacy, and communication (Amaro, 1995; Marston et al., 2004; Seal & Ehrhardt, 2004). It has been suggested that intervention efforts be directed toward males to emphasize their role in safer sexual decision-making (i.e., to use a condom or not) (Amaro, 1995; Bustamante-Forest & Giarratano, 2004; Campbell, 1995; Edwards, 1994; Harvey et al., 2006; Seal & Ehrhardt, 2004).

Males can play a central role in improving sexual and reproductive health outcomes (Greene, 2006; Herndon, 1998; RHO 2004). Programs that provide males with appropriate information, skills and services can help them address their own needs and improve their sexual health. Furthermore, if these programs are attuned to social inequities and gender dynamics, then the information and skills gained can help males be more respectful, communicative, and supportive in their sexual relationships (Greene, 2006). Reasons males may want to take a more active role in sexual health issues include the desire for more

information, or concern about the health of their partner due to the impact of using oral contraception (as attested by the current study). These programs can help improve the sexual health outcomes of males and their female partner.

The following discussion offers thoughts on how to emphasize the male role in safer sexual decision-making while acknowledging the contextual and relational factors involved in this process. While calling attention to the male role in safer sexual decision-making, the discussion will be grounded in both the role of health promotion and the participants' narratives, of which the latter highlighted the concept of responsibility. The Determinants of Health model will mediate this discussion, and recommendations will be informed by the sexual health literature.

As indicated in the health promotion literature, health promotion improves health by creating supportive environments, developing personal skills, reorienting health services, strengthening community action, and building healthy public policy (WHO, 1986). These improvements in health can be achieved by focusing health promotion efforts at various levels in society, such as individuals, families, communities, and sectors or systems (PHAC, 1996). The following discussion attempts to look at improving health from a micro (i.e., individual) and macro (i.e., structural) perspective.

Following the principle of harm reduction in health promotion, HIV prevention messages could be more effective if they were designed to reduce the risk associated with the main sexual behaviours that characterized heterosexual males' relationships, rather than trying to change these behaviours outright (Seal & Ehrhardt, 2004). Examples include building on the trend toward increased condom use with new partners by prolonging the time that partners consistently use condoms before having unprotected sex, rather than trying to promote sexual abstinence. Similarly, HIV prevention messages could use more selective strategies by encouraging consistent condom use with nonprimary partners,

rather than trying to promote consistent condom use with all partners (Ku et al., 1994; Seal & Ehrhardt, 2004).

Cates and Steiner (2002) concur with this last strategy, warning that promoting condom use at every sexual encounter may be perceived as so unrealistic or unacceptable that couples do not consistently adhere to this suggestion. The authors also called for a more targeted approach, such as the consistent use of condoms outside of a stable relationship or at the beginning of a new relationship. However, Cates and Steiner (2002) caution that the use of condoms with only those partners deemed to be at high risk of STIs may stigmatize the method (as discussed elsewhere in this chapter). Stigmatizing condom use in this way could raise issues of trust, which in turn could make condoms an unacceptable choice and undermine perceptions of condom effectiveness in pregnancy prevention (Cates & Steiner, 2002).

When asked how issues of contraception could be better tailored toward males, participants usually suggested the use of scare-tactics and appealing to males' sense of responsibility. Generally, it was suggested that males need to be more responsible for sexual health, and that the connection between males' responsibility and their actions be linked to the possibility of the female getting pregnant. Sexual openness, talking to their partner, and stressing the commitment required to be a father were other elements of responsibility mentioned. Participants also expressed concern about the health impacts on their partner of taking oral contraception. There is a precedent for engaging males in this way, as family planning messages have appealed to males' sense of responsibility and have targeted males in their role as fathers (Campbell, 1995; Edwards, 1994).

For the males in this study, the notion of responsibility was usually directed at the individual level, as opposed to family, community or society in general. Participants usually suggested males could be more responsible by talking to one's partner and being more sexually open. Therefore, the focus of

the message was usually on the development of personal skills. The focus on personal skills may have been because participants were directing their message to individual males. However, the development of personal skills is one of many possible strategies, which include building healthy public policy, creating supportive environments, strengthening community action, and reorienting health services.

To maximize the effect of safer sexual health messages directed at males, a diverse selection of strategies are offered. Family was an influence for one participant, so the role of parents and siblings could positively influence sexual health. Participants identified friends as a source of sexual health information, and this is one way that peers can influence sexual health (Langer et al., 1993; Marston et al., 2004; Severy & Newcomer, 2005). For example, research on adolescents found that boys tend to be influenced more by peers (rather than parents or self-directed) when making decisions in relation to AIDS-related knowledge, attitudes, beliefs, behaviours and skills (Langer et al., 1993). Peer-directed decisions were associated with greater risk of these sexual health outcomes (Langer et al., 1993). Marston et al., (2004) found that though knowledge of HIV/AIDS had no effect on condom use, communication with friends had a strong effect. The authors concluded that programs designed to increase condom use needed to account for the role of communication, especially in social networks (Marston et al., 2004). Peer health education programs could be one strategy to improve communication in social networks and sexual health outcomes (Campbell, 1995).

Peer sexual health education programs and fostering couple communication are two strategies that can be employed by men to increase women's sexual health (RHO, 2004). Another is examining gender roles and focusing on responsibility as a central feature of what it means to be a man (RHO, 2004). Many participants suggested that they received the bulk of their

sexual health education in public school, so this might be a reasonable place to incorporate these strategies.

Some of the participants suggested they were in relationships that featured joint decision-making. One participant discussed the importance of trying to eliminate gender roles in his relationship. However, gendered sexual health behaviours typical of males were also evident in the data. Examples of this included the presence of avoidance behaviour (e.g., procrastinating, rationalizing, or passing responsibility of the decision on to their partner); when participants' female partner limited sexual activity, initiated discussion, or initiated contraceptive use; when participants employed non-verbal communication strategies early in a relationship; and the attitude that condoms are temporary and typically used in casual relationships (or the beginning of a long-term relationship). The recurring presence of these gendered behaviours suggest more work is needed to reduce gender inequality.

Evidence for effectively reducing inequality between genders can be found in the literature. To start, sexual health promotion policies and education programs need to account for the relational and contraceptive needs of a given time (Sayegh et al., 2006; Seal & Ehrhardt, 2004). Furthermore, to maximize their impact, sexual health promotion efforts need to incorporate components such as gender issues, dating, and parenting (Amaro, 1995; Doyal, 2001; Greene, 2006; Manning et al., 2000; Seal & Ehrhardt, 2004;). Specifically incorporating the dyadic context of the relationship to include a discussion of emotions (e.g., feelings of embarrassment, concerns about reputation) and situational factors (e.g., little time to develop effective couple communication) could facilitate more effective and exciting learning than information-based approaches (Manning et al., 2000).

Relational dynamics such as ineffective communication offer an opportunity to highlight the role of gender influences. Increasing communication between couples is important because communication about

contraception and contraceptive use are strongly linked (Catania et al., 1992). However few interventions focus on training males to negotiate safer sex with their female partner (Williams, Gardos, Ortiz-Torres, Tross & Ehrhardt, 2001). Sexual health promotion policies and education programs could promote safer sex communication in several ways. One would be to build upon traditional gender roles (such as males being sexual initiators) by encouraging males to proactively initiate communication about sexual desire, sexual satisfaction, and safer sex (Campbell, 1995; Seal & Ehrhardt, 2004). Seal and Ehrhardt (2004) suggest that HIV prevention messages that focus on eroticism could be used to introduce a discussion about how relationship dynamics can influence the female partner's sexual satisfaction. In this way, a discussion about sexual satisfaction could incorporate topics such as emotional intimacy, open communication and disclosure, and monogamy (Seal & Ehrhardt, 2004). Further to the point on dominant discourses of masculinity, as long as males limit discussion of sexual health issues to sexual intimacy, eroticism and pleasure, then other elements of sexual wellness will not be realized. Encouraging males to use issues such as sexual satisfaction as a lever to broach topics such as emotional intimacy could facilitate communication about sexual wellness.

It is important to be aware that building upon traditional gender roles does not lead to exacerbating gender inequality (Rao Gupta, 2000). The potential for exacerbating gender inequality is real when information from males' narratives is used to inform safer sexual health messages. Hyde, Howlett, Drennan and Brady, (2005) explain how the dominant discourse of masculinity can work against males by impeding the development of a positive sexual identity (one not dependent on sexual capacity or prowess). In their research, male sex education needs were largely centered on enhancing sexual performance, thus reinforcing penetrative sex as a dominant masculinity. The authors eloquently illustrate how some male self-defined needs are not in the

interest of social justice and gender equality. Therefore, as health promoters, there is an injustice in enabling such needs to be met (Hyde et al., 2005).

Oral contraception was used in most of the participants' relationships, and some participants expressed concern about the health impacts on their partner of using the birth control pill. For these reasons, and because females must see a health care provider to obtain oral contraception, a suggestion for clinicians is included. Clinicians could ask females about who they receive support from regarding contraception and promote communication within those support networks (Harper et al., 2004). The authors also suggest clinicians could ask teenagers to invite their male partner to contraceptive counselling (Harper et al., 2004). Adult females could be included in these recommendations; however, there are some concerns. Simply having females invite their male partner to see a health professional is not ideal because it still puts the responsibility of contraception on the female. Not all partners may be willing, so it could put the female in an awkward or dangerous position if the partner is not already known to be supportive or if issues of economic or social dependency are a concern. Finally, this strategy would not address casual relationships or situations in which economic, social, or other issues are underlying influences in sexual health decision-making.

As mentioned earlier, access to health services is a determinant of health that can influence contraceptive use (CFSH, 2007; Free et al., 2005; PHAC, 2004). Free et al., (2005) described how a respondent in their research reported that she and her partner stopped using condoms when she was a teenager because they were too expensive. One of the participants in the current study suggested that getting condoms at an AIDS awareness table, for example, was less daunting than obtaining them from a drugstore. Some participants were reluctant to share the cost of oral contraception, if required. These are examples of barriers to obtaining and paying for contraception. Health care providers need to ensure

that contraception can be supplied at low cost and in a comfortable environment, for both males and females.

With regard to the environmental impact of hormonal contraception, one prominent researcher on endocrine disruptors suggested using condoms instead of birth control pills (Colburn, as cited in Knopper, 2003). This suggestion is important because of its implications for sexual health promotion. Oral contraception is one of the most effective means of pregnancy prevention, and using condoms instead would likely increase the chance of an unintended pregnancy. This is evident when the effectiveness of the birth control pill is compared to condoms. As they are typically used, combined oral contraception is 92 to 97 percent effective at preventing pregnancy (Black et al., 2004). The male condom is 86 percent effective with typical use (Black et al., 2004). If we take the lower figure of 92 percent for oral contraception, then the difference in effectiveness is 6 percent. That means if 100 females were to switch from the pill to condoms for one year, there would be six more unintended pregnancies. The National Population Health Survey in 1996/1997 showed that an estimated 1.3 million Canadian females aged 15 to 49 used oral contraception (Wilkins, Johansen, Beaudet & Neutel, 2000). If even a small fraction of these female oral contraceptive users switched to using condoms, the number of unintended pregnancies would be substantial. Simply suggesting condoms instead of oral contraception seems to minimize the emotional, social, and financial effects as a result of the increase in unintended pregnancies.

Study Limitations

Methodology.

Qualitative research, data collection and analysis are ideal for exploring unique experiences. The goal of the current study was to explore the perceptions and experiences adult heterosexual males had with contraceptive decisions.

Relationship dynamics were the main focus, and so males who were in a relationship with a primary partner of at least three weeks in duration were sought. However, this characteristic common to all participants could also have been a limitation of the study. Because participants had to be involved in a relationship with a primary partner to be included, it is conceivable that the males who participated were more relationally oriented, monogamous, and nontraditionally masculine than non-participants (Bowleg, 2004).

Recruitment.

There are a few factors related to the recruitment of participants that may have influenced the findings in this study. It was surprising that only six participants came forward after approximately three months of recruitment. There were a variety of factors that may have compounded the difficulty with recruitment. The low sample size may be attributed to the passiveness of recruitment efforts (e.g., posters). Stereotypically, males do not talk about sexual health issues such as contraception, so males may not have been receptive to the nature of the topic. Not knowing people who were in a position to encourage males to participate in this research probably contributed to the problem. The inclusion criteria may have also restricted the sample size (e.g., seeking an age demographic of 20 to 30). Further, an age demographic of 20 to 30 could have skewed the sample toward university students (a few of the participants were attending university). If true, the time of year that this research was conducted may have been an influence. November to January is a busy time of year for university students with final exams and papers, and they may leave the city for the holidays.

The demographic characteristics of the participants may have had an impact on the findings in this study. For example, the limited age range may have affected the participants' responses. Including males older than 30 may have yielded further information because they may have had additional

experience with making contraceptive *decisions*; they would likely have had more time to consider and discuss their contraceptive experiences, thus have more developed thoughts on the issue. There was also much similarity between participants with regard to ethnicity, education, and socioeconomic status. This similarity may have contributed to the relatively homogenous experiences within the sample and limited the findings. As a result, the lack of diversity among these determinants of health must be considered a limiting factor in this study and an area for future research.

How the sample was selected may have also influenced the results of this study. A purposive sampling strategy was used in conjunction with snowball sampling. However, snowball sampling and the volunteer nature of the process may have led to a homogenous sample and similarities in participants' responses.

Data Collection and Analysis.

With regard to data collection and analysis, there were many factors that could have affected the results of the current study. One issue that is unavoidable in sexual health research is that participants described their sexual experiences retrospectively. These descriptions may have been a reconstruction of the actual events, thought processes, and emotions (Michels et al., 2005), therefore affecting the participants' responses. For example, decision-making may not have been as simple or straightforward as it appeared in participants' accounts. Accurately recalling details, especially from early events, may have also affected responses. Another issue is that this may have been the first time participants thought about or described how contraceptive decisions were made, possibly affecting the accuracy of the findings.

Participants' responses reflected a voluntary decision to share their experiences. The information participants decided to share could have been affected in a variety of ways. Participants may have responded in a way they

believed would please the interviewer. Also, participants probably would have been discouraged from sharing experiences that would have been reported, such as physical abuse (as explained at the beginning of each interview).

There were other, more specific, issue linked to data collection and analysis that could have impacted the current study. To ensure certain basic issues were consistently addressed, some background questions could have been incorporated into the demographic questionnaire. Questions about sexual partners external to the current relationship, contraceptive use with primary and other partners, perceived interest in condom use by the participant and their partner, and whether condoms were used at first intercourse with their partner would have allowed for the establishment of more consistent information and eased the analysis and discussion.

It is also worth noting that being a new researcher to qualitative methods may have influenced data collection. In qualitative research, the researcher is the fundamental method of obtaining data from respondents. In this way, the researcher is the instrument through which data is collected. The researcher facilitates the flow of communication, sets respondents at ease, and identifies cues to probe for more information (Poggenpoel, 2003). It is the researcher that creates an environment that encourages respondents to share their experiences in depth (Poggenpoel, 2003). As a new researcher, I may not have inquired at the depth necessary to interpret participants' experiences clearly. I may have been more successful if I reflected more and guided the participants' responses into those areas most relevant to this study. For example, when I asked participants how they made decisions about contraception and they explained how their partner made the decision, I could have been more aware and actively directed the conversation back to the participant. Further, reflecting responses back to the participant more would have given them an opportunity to clarify or elaborate upon their response. Also, scheduling a second interview after an initial analysis of the data would have allowed an opportunity to follow up on specific

responses. Having said this, participants themselves were often positive about the interview process.

There was also the matter of how intimacy was discussed within each of the interviews. I used the word intimacy to encompass many dimensions of the meaning: emotional, intellectual, and social intimacy, in addition to sexual intimacy. If the participants in the current study understood the term this way, then they were showing uncharacteristic gender behaviour by sharing emotional aspects of their relationship. More likely (and this is what it seemed to be to me), the participants interviewed were equating the word intimacy along a single dimension - sexual pleasure - and using the word as a euphemism.

Future Research

There is a dearth of understanding about many aspects of sexual health in adult heterosexual males. This includes a better understanding of sexual health communication, decision-making, and behaviour (Seal & Ehrhardt, 2004). Broadly speaking, exploring the discourses available to males to make meaning out of their relationships and sexual choices would be worthwhile (Tolman et al., 2003). It would also be helpful to understand how gendered constructions of male sexual health enable and undermine their health (Tolman et al., 2003). Pulerwitz and Dworkin (2006) call for more research involving males who practiced joint decision-making so that the issue can be better understood and promoted more successfully in prevention programs. The transition from condom use to nonuse is another area that requires greater understanding, and was a feature of males' experiences in the current study (Seal & Ehrhardt, 2004).

Other areas where there are gaps in understanding adult heterosexual males' sexual behaviour were informed by the results of the current study. Some participants gave examples of contraceptive failure and unintended pregnancy. There was little information found in the sexual health literature reviewed about male experiences with contraceptive failure or unintended pregnancy. This

would be an area worth exploring further, especially with regard to male expectations about when they agree to use contraception, and their emotional experiences when something goes wrong. It would be insightful to know whether males believe that agreeing to use contraception is the same as agreeing to not have a child. There was evidence of this in the literature, where males expected females to back up contraceptive failure (usually the pill) with abortion (Davies & Rains, 1995). However, this information was based on reports from the female partner. Interviewing males who experienced contraceptive failure could further develop knowledge in this area.

Similarly, two of the participants' partners used emergency contraception. Consequently, it might be valuable to explore male experiences with emergency contraception more. For example, in the event of an unintended pregnancy, how was the decision to use (or not use) emergency contraception made? Severy and Newcomer (2005) posed some questions around access to emergency contraception. The authors suggested asking males if they would like emergency contraception to be available in male clinics in advance of sexual intercourse. Severy and Newcomer (2005) ask

> Will this increase their availability to women, or decrease men's willingness to use condoms - especially if ECs [emergency contraceptives] are seen as a post-coital method that replaces condoms and interferes less with male pleasure? However, does it matter if ECs are used post-coitally - especially by adolescents and women who have infrequent sex - given the fact that there are no long-term effects? (p. 60).

Yet another area of future research could be to explore contraceptive decision-making with males whose partner does not take oral contraception. This could help inform how decisions about contraception are made (and its successful use) when oral contraception is not used. In another aspect of the current study, it was unclear what meaning partner support had for participants compared to how it was described in the literature. Some conclusions can be

derived from the results: when asked about roles and responsibilities, some participants named emotional support and buying condoms (a form of financial support). But do males regard the act of putting on a condom as being supportive, as suggested in the literature (e.g., Cabral et al., 2001)?

Two final recommendations are tied to my experience with the current study and what I would do differently in the future. First, I think interviewing both partners in the relationship would augment the richness and validity of the data. I would recommend recruiting females who are currently in a heterosexual relationship and asking them to invite their male partners to be interviewed as well. Asking females to invite their partners would help ensure they were comfortable with having them participate. Second, I think it would be more effective to interview environmentally active females to adequately explore how much the environment influences contraceptive decisions. The environmental effect of hormonal contraception was a new consideration to most males in the current study, and one that had not influenced contraceptive decisions. This topic area is very specific, and may not be relevant to the lives of most males. However, the environmental effect of hormonal contraception may be more relevant to females, and females tend to be more involved with both contraceptive and environmental issues.

Summary

Contraceptive decision-making in the adult heterosexual males who participated in this study was found to be context-specific. Contraceptive decision-making was primarily influenced by personal factors and relationship dynamics. Personal factors that influenced participants' decisions included their reasons for using contraception and attitudes toward specific contraceptive methods (e.g., natural skin-on-skin contact is better; oral contraception did not interfere with pleasure). Relationship dynamics that influenced contraceptive decisions included elements such as whether the relationship was new or

established, whether the relationship was with a primary or casual partner, whether the female partner was currently using contraception, and gender dynamics within the relationship. Additional influences were access to contraception and communication. Flowing from these elements were descriptions of how some participants were reluctant to share the cost of oral contraception, concern about the health impact on the female partner of using oral contraception, and that some female partners did not want to use condoms.

To specifically address the issues posed in the title of the current study (i.e., the environment and partner support as determinants of contraceptive use and contraceptive choice), the participants did not consider the environment when making a decision about contraceptive use or methods. Partner support consisted of how participants influenced contraceptive decisions by their role in decision-making, communication, intimacy, and the length and type of relationship. Decisions about contraception tended to be made in the moment, therefore in an emotionally laden context, and were subject to sexual arousal. When unplanned or spontaneous, making a decision in the moment may induce a sense of time pressure. In terms of communication, participants often suggested they were open to discussion, but the female partner usually initiated it. How participants perceived the relationship (i.e., casual or long-term) affected condom use. Participants described using condoms more frequently in casual relationships or in the beginning of a long-term relationship. The length of the relationship influenced contraceptive use, most notably in the transition from condom use to nonuse as the relationship progressed. Intimacy influenced contraceptive use, typically through the introduction of oral contraception. Intimacy also seemed to be a factor when participants used condoms to feel more comfortable because they did not know their partner's sexual history.

There were some rather unique findings that emerged from this study. In some instances, it was the female partner who refused condom use. This is unique because it is typically assumed that the male does not want to use

condoms. Another was that some males thought about the health impact of the birth control pill when considering contraceptive choices. Fostering concern about their partner's well-being due to the effects of taking oral contraception may increase effective contraceptive use and is another reason to include males in intervention efforts.

Contextual influences and relationship factors, such as those described above, have not received sufficient attention in prevention messages aimed at improving sexual health outcomes. Emphasizing the male role in safer sexual decision-making while acknowledging the contextual and relational factors involved in this process is one strategy that could be incorporated into a multi-faceted approach to improving sexual health outcomes. Highlighting the role of adult heterosexual males in this way could be accomplished by building on current trends and traditional gender roles. In this way, male gender roles could be redefined to promote sexual health communication and condom use, so it is understood that such behaviour is what it means to be male, rather than the stereotypical risky behaviours that are currently accepted and associated with traditional masculinity ideology (Seal & Ehrhardt, 2004). However, as health promoters, it is important to be mindful that the goal is to reduce social injustice and inequality, and not exacerbate them.

Conclusion

The current study focused on adult heterosexual male perceptions of decisions regarding contraception. There is a dearth of information about contraceptive decision-making in adult heterosexual males. This study has contributed to the literature on male sexual health by proposing a model of contraceptive decision-making characterized by the experiences of these six participants. Contraceptive decision-making for these participants was context-specific. Therefore, this model is comprised of one core theme – "it's all context." The primary influences on contraceptive decision-making were grouped into

personal factors and relationship dynamics. These influences were included in the model as major themes.

The current study was a culmination of the narratives of six males who voluntarily described their sexual health experiences. As is the nature of qualitative research, these results are based on the lived experiences of a relatively small group of individuals. Due to the small sample size and distinct characteristics of these participants, the results cannot be generalized to the broader male population. However, there was commonality in some key areas, and in this way the findings do contribute to our understanding of contraceptive decision-making.

With the findings from the current study and a review of the literature, some specific questions about contraceptive decision-making can be answered. Despite having access to condoms and appearing knowledgeable about their benefits, some individuals do not use condoms consistently. One of the goals of the current study was to explore this gap between knowledge and behaviour in adult heterosexual males.

Participants used contraception for the prevention of both pregnancy and STIs. Participants may have chosen to not use a condom because pregnancy prevention was more of a concern than the prevention of STIs. Participants explained that they were in trusting, long-term relationships and/or were comfortable with the sexual history of their partner. If STIs were a concern, then participants may have chosen to use a condom. STIs tended to be a concern if the relationship was perceived to be casual, at the beginning of a long-term relationship, or when sexual histories were not discussed.

Generally, as the relationship progressed, contraceptive use shifted from condoms to oral contraception. The decrease in condom use may be explained, in part, by the introduction of oral contraception. Participants may have used condoms because their partner was not taking oral contraception, but these situations seemed temporary. One or both partners may believe it is safe to stop

using condoms because of feelings of intimacy (emotional and sexual), trust, or comfort. Although these feelings are not a reliable indicator of STI status (compared to STI testing, for example), they can be a common influence on condom use.

Ambiguities about the expectation and communication of sex influenced condom use. Some participants were reluctant to discuss contraception in advance, so they may have been unprepared. In this way, participants seemed to assume their female partner would be responsible for contraception. In addition, the participants seemed to assume their partners would be responsible for how far sexual activity went, contraceptive use or refusal, and initiating communication about contraception.

It is clear from these findings that the context of the relationship and gender dynamics can influence condom use. In addition to this study, there is much research that suggests condoms are not always used for reasons other than ignorance and barriers to access. Therefore, HIV prevention programs that only provide information and condoms will have limited effectiveness. For HIV prevention programs to be more effective, they need to address social influences such as gender dynamics and the relationship context.

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Appendix B: Protocol for Potential Male Participants

[This protocol was used with potential participants who called the researcher to be involved in the study]

Thank you for your interest in my study on contraception and the environment. I want to be clear that taking part in this study is voluntary and you may withdraw at any time, including this phone conversation. If you understand this and want to continue, I will describe the study in more detail.

<If agreed upon>

The purpose of this study is to explore the role of males in contraception decisions with their female partner. I am also interested in knowing if you see any connections between contraceptives and the physical environment. This information may help service providers understand how men involve themselves in their heterosexual relationships. This, in turn, may inform future strategies that encourage men to become more involved and supportive of women's contraceptive choices. Discussions will be in the form of a private interview with the researcher. The interview will be like a conversation about your involvement in contraceptive issues with your partner.

First, I have to make sure you are eligible to take part in this study. To do this, I will make a series of statements listing the criteria that need to be met to participate. Please listen carefully to each statement, and after I am done, you may then indicate whether or not you meet the criteria to be included in the study. If you are not eligible to be included, you do not need to state why this is so.

<If agreed upon>

We are looking for people who meet the following criteria for the study:

- Age 20 to 30, inclusive
- Currently in a heterosexual relationship at least three weeks in duration
- Sexually active. This is defined as having vaginal intercourse with your female partner
- Not desiring pregnancy
- Either you or your partner must be using contraception (defined as a process or technique for preventing pregnancy by means of a medication, device, or method)
- Not married

If all of these apply to you, then you may be eligible to participate in the study. Do all of these apply to you?

<If volunteer does not meet inclusion criteria>

I'm sorry, but I will not be able to include you in this study because we are looking for a different target population. But I would like to thank you for your time and interest.

<If volunteer does meet inclusion criteria>

Based on what you've told me, you fit into the target population of this study. To ensure this study is as inclusive as possible, I have a brief series of questions I would like to ask you (see Appendix G: Demographic Questionnaire). If you do not want to answer these questions, you can either let me know or we can end the conversation. Would you like to continue?

<If agree upon>

Ask the participant the questions found in Appendix G: Demographic Questionnaire.

<If the participant's answers resemble those of participants I have already interviewed>

Unfortunately, I have already interviewed people with characteristics similar to you. But I would like to thank you for your time and interest in my study.

<If the participant's answers indicate that their characteristics are still sought-after>

Based on what you've told me, you are someone I would like to interview for this study. Are you still interested in being interviewed?

<If the question is answered affirmatively>

A mutually agreed upon date, time, and location will be chosen

<If the question is answered negatively>

The conversation will conclude.

Consent Information Sheet

Introduction

You are invited to take part in a research study being conducted by Larry Phillips, a graduate student at Dalhousie University. Your participation in this study is voluntary, and you may withdraw from the study at any time. The study is described below. This description is intended to inform potential participants about the nature of the study, your role in it, as well as any risks, inconvenience or discomfort you may experience. Participating in the study might not benefit you, but we might learn things that will benefit others. You should discuss any questions you have about this study with the person who explains it to you. If you choose to participate in this study, you will be given a copy of the consent form for your records.

Purpose of the Study

The broad purpose of this study is to gather information from men about sexual and reproductive health. Specifically, you will be asked for information about your use of contraceptives (that is, a medication, device, or method of preventing pregnancy) in the context of a heterosexual relationship. In addition, you will be asked to explore possible links between the physical environment and contraception. Other topics of conversation may include the following: formative experiences with contraception; where information is obtained; who is responsible for using contraception; communication, intimacy, and expectations in a relationship.

Study Design

The study will take the form of an interview. It will be like a conversation about your involvement in contraceptive issues with your partner. The interview will be done individually, in private and, with your permission, audio taped. It will be necessary to transcribe the interview at a later date; however, no identifying information such as your name or other names or places mentioned during the interview will be used.

Who Can Participate in the Study?

You may participate in the study if you are a male between the age of 20 and 30. You must currently be in a heterosexual relationship of at least three weeks and be sexually active (defined as having vaginal intercourse with your female partner). You or your partner must have used a contraceptive device or technique during that time.

Who Will Be Conducting the Research?

The principal investigator will be Larry Phillips, who will conduct all interviews as well as do all data analysis. Larry Phillips is a graduate student from Dalhousie University's School of Health and Human Performance, and the outcomes of this study will be submitted for partial completion of a Master of Arts degree.

What You Will Be Asked to Do?

You will be asked to participate in an interview that is approximately 90 minutes in duration. In this interview you will be asked a series of questions relating to your experiences with contraception in the context of a heterosexual relationship with your partner. Additionally, you will be asked to explore possible links between the natural environment (nature) and contraception. If you so choose, you will be given an opportunity to meet with the interviewer at a later date to review your transcript and ensure the contents are an accurate reflection of your responses.

Possible Risks and Discomforts

Participants may be uncomfortable discussing issues related to sexual and reproductive health. Before the interview takes place, the process will be explained in more detail, and expectations will be made explicit. This will be done to mitigate feelings of discomfort and alleviate anxiety. The participants will be made to feel as comfortable as possible. Initial conversations about sexual health will be at a general level until the participant becomes acquainted with the interview process. However, if you are asked questions that you are not willing to discuss, or do not feel comfortable with, you may choose to not answer the question or to quit at any time. Your participation is voluntary, and you may stop the interview at any time. If at any time you decide to withdraw from the study, the interview audiotape and transcript will be returned to you or destroyed at your request. The interviewer will keep your participation confidential.

Possible Benefits

No individual benefits from this study are expected.

Compensation

Participants will be compensated for their time and possible expenses (e.g., parking, transportation costs) with a one-time payment of 15 dollars.

Appendix D: Interview Guide

Preamble: This research is about partner support and the physical environment as determinants of contraceptive use and contraceptive choice. This means that I'll be asking questions about your role as a male in how decisions are made around contraception with your female partner. I'll also be exploring links between these decisions and the physical environment. To be clearer, I'll give a couple examples. Whereas not desiring pregnancy is one reason to choose contraception, another may be concern about the ecological effects of overpopulation. This indicates how the physical environment may be linked to decisions about contraceptive *use*. Another example may illustrate a link between contraceptive *choice* and the physical environment. Women may choose to not use birth control pills because of the negative effect of estrogen on the environment. Estrogen is the hormone in the birth control pill that makes it work. Basically, women excrete estrogen from the pill and, in Halifax, it essentially enters the Harbour untreated. This could be turning boy fish into girl fish. So women, along with their male partner, may choose an alternative form of contraception, in part because of the physical environment.

Do you have any questions?

Theme: Introduction

1. Would you please tell me what you think is important about the types of contraceptive methods you use?

Theme: Formative experiences with contraception

2. Can you tell me about your experiences when you first used contraception?

PROBES

- At what age did you first use contraception? Was this your first intercourse?
- What types of contraception did you use?
- How did you learn about contraception?
- What were your first experiences of using contraception like? Did you like/dislike it?
- How did you and your partner decide on the type of contraceptive method? Was the physical environment a factor in this decision?

Theme: Contraceptive information

3. Where do you get most of your information about contraception now?

PROBES

- Do you talk about contraception with other people? How? With who?
- What do you talk about? What kind of conversations do you have?
- How does the subject come up?
- Why does the subject come up?
- Has the subject come up as a result of issues related to the physical environment?

Theme: Current contraceptive use

4. Would you please tell me about the last time you used contraception?

PROBES

- How did you decide to use contraception with your female partner?
- When do you talk to your partner about using contraceptives? Just before sex? Quite some time before sex? Not at all?
- What do you say or do when communicating about contraception?

5. What forms of contraceptive are you and/or your partner currently using?

PROBES

- Birth control pill, condom, both, rhythm method, none?
- Is this your preferred method?
- Can you describe the context or situation in which you use this method?
- Was the physical environment a factor in this decision?

6. How are your contraceptive experiences with your current partner different from previous partners?

PROBES

- Do you use condoms more or less often now than in the past? Why?
- Do you believe the length of your current relationship influences your contraceptive use?
- Does the level of intimacy in your current relationship influence your current contraceptive use?
- Does the level of trust in your current relationship influence your current contraceptive use?

Theme: Roles & responsibility for contraceptive use

7. How would you describe your role, versus your partner's role, in using contraception?

PROBES

- Do you initiate conversation about contraception with your partner?
- Would you describe for me a situation in which responsibility for contraceptive use has been unclear?

8. How do you think your role in using contraception would change if your partner wanted to avoid oral contraception?
PROBES
- Would you use a condom?
- Would you use a condom but be upset?
- Would you not have sex with your partner?
- Would you try to persuade your partner to have sex without a condom?

Theme: Physical environment and contraception
9. What is the physical environment to you?
PROBES
- The birds, trees, and breeze?
- Are humans included in nature?

10. Do you see any connection between the physical environment and contraception?
PROBES
- Estrogen from contraceptives contaminating the environment?
- Condoms flushed into water system affecting wildlife?

11. Do you believe issues related to the physical environment are relevant to contraception? If so, can you provide an example?

Theme: Future contraceptive use
12. What would change your contraceptive use or choice?
PROBES
- People? Situations? Time of Life? Emotions?
- How could issues of contraception be better tailored toward males?

Theme: Conclusion
13. Is there anything you would like to add about the connection between contraceptives, the environment, and the role of males?

14. Are there any other issues you would like to talk about?
PROBES
- Can you make suggestions about questions I should be asking males that I didn't ask you?
- How comfortable are you talking about these issues with an interviewer?

15. Do you have any questions for me?

Appendix G: Demographic Questionnaire

Participant Pseudonym: _____ Date: _____

What is your **age**: _____

What **ethnic affiliation** do you most closely identify to:

- ☐ Caucasian
- ☐ African Canadian
- ☐ Aboriginal
- ☐ Asian
- ☐ Other (specify):

  _____

What is the highest level of **education** attained:

- ☐ Less than high school
- ☐ Completed high school
- ☐ Some college/university education
- ☐ Completed a degree at college/university
- ☐ Have further post-secondary education (e.g., Masters, Ph.D.)

What is your **employment/occupational status**:

- ☐ Unemployed
- ☐ Casual or Seasonal Employment
- ☐ Part-Time Employment
- ☐ Full-Time Employment

What is your current occupation(s)?

_____

What is your **socio-economic status**:

- ☐ 0$ - $14,999
- ☐ $15,000 - $29,999
- ☐ $30,000 - $44,999
- ☐ $45,000 - $59,999
- ☐ ≥ $60,000

What **religious affiliation** do you most closely identify to:

- ☐ Roman Catholic
- ☐ Protestant
- ☐ No Religion
- ☐ Other (specify)

  _____

The following questions will help determine your **environmental background**:

1. I use energy efficient bulbs	YES	NO
2. In the winter, I leave the windows open for long periods of time to let in fresh air	YES	NO
3. I drive my car in or into the city	YES	NO
4. I bring either my own bag or reuse old shopping bags	YES	NO
5. I collect and recycle used paper	YES	NO
6. I talk with friends about problems related to the environment	YES	NO
7. I am involved with an environmental organization (eg. employee, member, volunteer, financial contributor)	YES	NO

Items #2 and #3 are negatively formulated. "No" responses to negatively formulated items will be recoded as "yes" responses, and vice versa. After recoding, a total of 5/7 "yes" responses will be required to be considered environmentally active, and therefore included in this study.

Appendix H: Transcriber Statement of Confidentiality

Project Title: Partner Support and the Natural Environment as Determinants of Contraceptive Use and Contraceptive Method

I _____, consent to maintain the confidentiality of all participants involved in the research study titled "Partner Support and the Physical Environment as Determinants of Contraceptive Use and Contraceptive Method". No information contained on the audiotapes used in this research will be discussed with anyone other than the principal investigator, Larry Phillips. In addition, any names or identifying information will be removed during the transcription process. The identity of third parties will similarly be protected. Transcripts and audiotapes will be returned to the principal investigator upon completion.

Signature of Transcriber: _____ Date: _____

Principal Investigator: _____ Date: _____

Appendix I: Definition of Key Terms

Bisphenol A - a chemical compound that forms the basis of polycarbonate plastics and epoxy resins. It is common, used in plastic food containers, water bottles, baby bottles, CD cases, eye glass lenses, the lining of food cans, and as a dental sealant (Vallombrosa Consensus, 2005). In animal studies, Bisphenol A has been linked to low sperm counts, altered growth and behavioural changes (Fahrenthold, 2006).

Contraception - Mosby's medical dictionary (1994) defines contraception as "a process or technique for preventing pregnancy by means of a medication, device or method that blocks or alters one or more processes of reproduction in such a way that sexual union can occur without impregnation" (p. 388).

Contraceptive Failure - when pregnancy occurred with the (correct or incorrect) use of contraception (Noone, 2002).

Contraceptive Patch - a patch placed on the skin (buttocks, upper outer arm, lower abdomen or upper torso, but not the breast) that delivers a daily dose of estrogen and progestin into the bloodstream. Therefore, the contraceptive patch is a form of combined hormonal contraception. One patch is applied weekly for three consecutive weeks, followed by one patch-free week (Black et al., 2004; Severy & Newcomer, 2005).

Contraceptive Ring - a flexible, semi-transparent ring inserted into the vagina that delivers a constant dose of estrogen and progestin into the vagina (not the bloodstream). Therefore, the contraceptive ring is a form of combined hormonal contraception. One ring is used for three weeks, followed by one ring-free week (Black et al., 2004; Severy & Newcomer, 2005).

Decision-making - for the purposes of this study, decision-making was defined as two partners acting in a dynamic fashion and influencing the acceptability and use of a contraceptive method (Severy & Newcomer, 2005).

Determinants of Health - a broad range of personal, social, economic, and environmental factors that influence the health of individuals and populations. These factors include education, employment and working conditions, physical environments, biology and genetics, personal health practices and coping skills, healthy child development, health and social services, social environments, gender, culture, income and social status, and social support networks (Health Canada, 2003).

Dioxins - are a class of hundreds of related chemicals that can be persistent and highly toxic. Dioxins are a by-product of various processes such as the burning of household trash or fuels such as wood, coal and oil, industrial combustion and incineration, chlorine bleaching of pulp or paper, and some types of chemical manufacturing (Vallombrosa Consensus, 2005).

Efficacy - when used correctly and consistently, efficacy indicates how well a particular form of contraception functions (Severy & Newcomer, 2005).

Emergency Contraception - the most common form of emergency contraception available in Canada are pills named Plan B™. Plan B™ contains only the hormone progestin; there is no estrogen in Plan B™. Depending upon the stage of the menstrual cycle when emergency contraceptive pills are taken, they work in one of three ways. Emergency contraceptive pills will delay ovulation if an egg has not yet been released, they can prevent fertilization, or they can prevent a fertilized egg from attaching to the uterus wall. Emergency contraceptive pills

will not work if one is already pregnant (Canadian Federation of Sexual Health, n.d.).

Endocrine Disruptor - Kavlock et al. (1996) described an endocrine disruptor as "an exogenous agent that interferes with the production, release, transport, metabolism, binding, action or elimination of natural hormones in the body responsible for the maintenance of homeostasis and the regulation of developmental processes" (p. 716). In other words, endocrine disruptors are environmental compounds that interfere with the function of hormones naturally found in the body. Endocrine disruptors include chemicals found in pesticides, plasticizers, flame retardants, industrial byproducts, pharmaceuticals, and plant-derived compounds (Vallombrosa Consensus, 2005).

Environmental Health - the World Health Organization developed a draft definition of environmental health that stated it is "those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social, and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling, and preventing those factors in the environment that can potentially affect adversely the health of present and future generations" (Environmental Health Policy Committee, 1998, Recommendations section, ¶ 2)

Estradiol - is the most potent of the estrogens. Produced in the ovaries, estrogen is responsible for many biological functions, such as breast development and the formation of the uterine lining during the first half of the menstrual cycle (Vallombrosa Consensus, 2005).

Gender - refers not only to the biological sex of an individual, but also to the "array of socially constructed roles and relationships, personality traits, attitudes,

behaviours, values, relative power and influence that society ascribes to two sexes based on a differential basis. Gender is relational - gender roles and characteristics do not exist in isolation, but are defined in relation to one another [...]" (Health Canada, 2000, p. 14).

Health Promotion - "the process of enabling people to increase control over, and to improve, their health "(WHO, 1986, p. 1).

Intimacy - the behaviours that romantic partners engage in that bring them closer together. These behaviours include self-disclosure, positive emotion, and feeling understood by one's partner. Communication (of which self-disclosure would be one aspect of) could be one of the most important elements of an intimate relationship (Hendrick, 2006).

Partner Support - the definition used in this thesis was based on various studies found in the sexual health literature. One was a study of reproductive and contraceptive attitudes as predictors of condom use in women (Cabral et al., 2001). In this study, Cabral et al. defined support along three categories: instrumental (e.g., paying, obtaining, carrying, or keeping contraceptive products available); emotional (e.g., encouraging use, providing reminders, or talking over problems related to use); or actual participation in contraceptive use (e.g., putting on condoms). In another study, it was found that one's partner could influence contraceptive use by their role in decision-making, the level of communication, couple negotiation, degree of intimacy, and the length of relationship (Sable & Libbus, 1998).

Phthalates - chemicals used to increase flexibility in rigid plastics such as PVC, and to enhance penetration and hold scent or color in personal care products. Phthalates are found in numerous and diverse consumer products, including,

e.g., wallpaper, electronic devices, vinyl flooring, flexible vinyl toys, plastic shower curtains, cosmetics and fragrances, shampoos and lotions, pharmaceutical and herbal pill coatings, and hospital equipment such as IV bags and tubing (Vallombrosa Consensus, 2005). Research suggests phthalates affect the normal functions of male brains and sex organs, and have been liked to developmental changes in baby boys (Fahrenthold, 2006; Swan et al., 2005).

Physical Environment - the physical environment as a determinant of health includes the built environment and the natural environment. The built environment includes housing, indoor air quality, and community design and transportation systems (PHAC, 2004). The natural environment is good quality air, water, food, and freedom from exposure to harmful toxins (PHAC, 2004). For the purposes of this thesis, the focus will be on water pollution and water quality issues and the impact of estrogen on ecological systems and human health.

Responsible Sexual Behaviour - please refer to 'sexual responsibility' below.

Sexual Health - "a state of physical, emotional, mental and social well-being related to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled" (WHO, 2002).

Sexual Responsibility - at the individual level, sexual responsibility includes "understanding and awareness of one's sexuality and sexual development; respect for oneself and one's partner; avoidance of physical or emotional harm to

either oneself or one's partner; ensuring that pregnancy occurs only when welcomed; and recognition and tolerance of the diversity of sexual values within any community" (Surgeon General, 2001, no pagination). Furthermore, the Pan American Health Organization (PAHO) and World Health Organization (WHO) describe responsible sexual behaviour as "characterized by autonomy, honesty, respectfulness, consent, protection, pursuit of pleasure, and wellness. The person exhibiting responsible sexual behavior does not intend to cause harm, and refrains from exploitation, harassment, manipulation, and discrimination" (PAHO, 2000, p. 27).

Trust - is a complex aspect of sexual risk behaviour, with extremely important implications to the development of the relationship (Hendrick, 2006). Lock et al. (1998) defined the concept of building trust as "the process of developing confidence that the sexual partner is truthful about his or her sexual history" (p. 280).

Vaginal Contraceptive Film - a very thin, semi-transparent, soluble film that contains a spermicide (usually nonoxynol-9). The vaginal contraceptive film is inserted into the vagina 15 minutes before intercourse, allowing time for the film to dissolve and release the spermicide (Go Ask Alice, 1999). Because vaginal contraceptive film is a spermicide, it is only somewhat effective for pregnancy prevention; when used correctly and consistently, there are an estimated 6 pregnancies for every 100 women in the first 12 months of use, or 26 pregnancies for every 100 women in the first 12 months as commonly used (Black et al., 2004).