

Sex Motives in Adolescence: Age and Gender Differences and the Role of  
Perceived Mattering to Friends

by

Niomie Elaine Penner

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### **Abstract**

The current study examined the applicability of an existing multidimensional sex motive typology with a young adolescent population (ages 13 – 18). As part of a larger longitudinal study, 394 adolescent students (195 male, 199 female) completed a self-report measure of sexual motives that had been developed for use with a slightly older adolescent and young adult sample. Of these students, 139 (76 male, 63 female) also completed a self-report measure of perceived mattering. Of interest was whether motives to engage in social sexual behaviour varied as a function of gender and grade level in a young adolescent population and whether such motives were related to self-perceptions of mattering to peers.

Factor analyses completed separately for male/female and older/younger groups, indicated a less-differentiated, four-factor structure among sex motives reported by the younger adolescents (Grades 8 – 10) and by male students. Both the younger adolescent and male groups appear to differentiate less between peers and partners when engaging in social sexual behaviour to gain approval and avoid social censure.

Results further indicated that endorsement of self-affirmation, peer approval, and partner approval motives for sexual behavior was similar across grade levels, whereas endorsement of enhancement and intimacy motives was higher at higher grade levels. In addition, male students reported more sex for enhancement, self-affirmation, and peer approval motives than did female students. Peer approval motives varied significantly as a function of grade level for female students only. Results of regression analyses indicated that over and above gender and grade, the more students felt that they mattered to peers, the less likely they were to report having sex to gain peer and/or partner

approval. Results are discussed with reference to the theoretical and practical implications within the field of adolescent sexual health.

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## Introduction

Societal beliefs and opinions about sex and sexuality are woven, intricately, within the moral fabric of North American society, a society which has historically conceptualized sex in adolescence as negative and problematic, a problem to be controlled and optimally repressed. Influenced by this long-standing zeitgeist, research in the area of adolescent sexuality has focused almost exclusively on age of coitus, sexually transmitted infections (STIs), and pregnancy rates as measures of sexual “health” (e.g., Bruess & Greenberg, 2004; Hyde, DeLamater, & Byers, 2004; Maticka-Tyndale, 2001; McGee & Williams, 2000; Whitaker, Miller, & Clark, 2000). Reducing sexual “health” to negative indices of disease, pregnancy, or “promiscuity” neglects the myriad of underlying personal, interpersonal, and environmental correlates of a *positive* and *healthy* sexual life and inaccurately implies that adolescents who are *not* having sex, or who have *not* been impregnated or contracted an STD *are* in fact, sexually “healthy”.

Moving away from sexual health definitions which have historically discriminated according to marital status, sexual orientation, and age, a consultation team convened by the World Health Organization (WHO) formulated the following working definition of sexual health:

Sexual health is a state of physical emotional, mental, and social well being in relation to sexuality; *it is not merely the absence of disease, dysfunction or infirmity* [italics added]. 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 (“Sexual health,” 2004, p. 2).<sup>1</sup>

If adopted, such an internationally accepted definition serves as a monumental shift in global perceptions of sexual health during adolescence.

Consistent with World Health Organization initiatives, the Canadian Guidelines for Sexual Health Education defined sexual health as the absence of disease *as well as* the *positive integration of healthy sexuality* [italics added] (Health Canada, 2003). The Canadian Youth, Sexual Health, and HIV/AIDS Study (Boyce et al., 2003), the first cross-Canada study on adolescent sexual health since 1988, further emphasized the need for a comprehensive focus on students’ sexual health. Recognizing that behavioural patterns established in early romantic relationships may have lifelong implications, the study concludes that, “such a focus must go beyond an exploration of the knowledge, attitudes, and behaviour of youth, to an exploration of the contexts under which they engage in sexual activities and the belief systems that inform both positive and negative actions” (Boyce et al., 2003, p. 3). Moving away from deficit-based approaches toward a more holistic understanding of the development of healthy sexuality (Boyce et al., 2003), the current study investigated the developmental profile of social sex-motives, with reference to gender and grade, as well as possible relationships to sex motives in adolescence. Such information is critical to inform our understanding of sexual health among this population.

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<sup>1</sup> This is a working definition offered as a contribution to advancing understanding in the field of sexual health. It does not necessarily represent the official representation of the WHO

### ***Sexual Motivations***

Recognizing that sexual behaviour, risky or not, may serve a wide range of psychosocial functions in adolescence (Cohen, 1995), sex researchers have begun to move beyond investigating overt sex behaviours (e.g., age of coitus, condom use, number of partners), to focus on the *reasons* or *motives* behind sexual behaviour (e.g., Carroll, Volk, & Hyde, 1985; Cooper, Shapiro, & Powers, 1998; Davis, Shaver, & Vernon, 2004; Gebhardt, Kuyper, & Dusseldorp, 2006; Gebhardt, Kuyper, & Greunsvan, 2003; Hill & Preston, 1996; Impett & Peplau, 2003; Impett, Peplau, & Gable, 2005; Leigh, 1989; Levinson, Jaccard, & Beamer, 1995). To date, exploratory research (e.g., Carroll et al., 1985; Leigh, 1989; Levinson et al., 1995; Regan & Dreyer, 1999; Rosenthal, Burklow, Lewis, Succup, & Biro, 1997) has identified a wide range of sex motives including, but not exclusive to, the pursuit of physical/sexual pleasure, reproduction, promoting intimacy, pleasing one's partner or peers, preventing relationship conflict, and relieving tension, indicating that people can, and do, use sex strategically to meet different psychosocial needs. Moreover, there is evidence to suggest that sex motives may be somewhat stable over time (Cooper et al., 1998; Impett & Peplau, 2002; Rosenthal et al., 1997), emphasizing the need to establish positive sexual motives early on when social sexual behaviours are emerging.

Given the wide array of psychosocial motives identified within the literature, recent attempts to provide a consistent and unified theoretical framework for understanding sexual motives (Cooper et al., 1998; Hill & Preston, 1996) have been forthcoming. Rooted in a functionalist perspective of behaviour (Snyder & Cantor, 1995), Cooper and colleagues (1998) hypothesized that whether people use different sexual

behaviours to attain the same goal or the same sexual behaviours to attain different goals, the key to truly *understanding* is contained within the particular motivation behind such behaviour.

Cooper and colleagues (1998), the first to apply prominent motivational dimensions to sexual behaviour, hypothesized that two primary motivational ‘dimensions’ underlie sexual behaviour in young adults. “Approach-Avoidance”, the first and most fundamental dimension, distinguishes between sexual behaviours that are primarily motivated by the pursuit of positive experiences (Approach) and those that are motivated by the evasion of negative experiences (Avoidance). The second hypothesized motivational dimension, entitled “Individual-Social”, distinguishes between behaviours that are motivated by a self-focused concern (Individual) and those that are motivated by an interpersonal or other-focused concern (Social). Cooper and colleagues argued that together these motivational dimensions combine to form a four- factor matrix (i.e., appetitive self-focused motives, appetitive social motives, aversive self-focused motives, and aversive social motives), under which discrete sex motives could be adequately categorized.

As a first step toward validating their hypothesized framework, Cooper and colleagues (1998) asked undergraduate students (17-21 years) to list the most important reasons for having sex on a recent occasion of intercourse. Through subsequent factor-analytic work in three samples, including a college student and community sample, they developed their Sex Motives Scale which rests on a six-factor model of sexual motives including intimacy, enhancement, partner approval, peer approval, coping, and self-

affirmation. Each of the motives were categorized along the two hypothesized dimensions (approach-avoidance and individual-social).

*Theoretical underpinnings of sexual motivations.* Theoretically, Cooper and colleagues (1998) stipulated that both the “Approach-Avoidance” and “Individual-Social” motivational dimensions are thought to originate as a deeper desire to manage one’s emotions. While the Approach-Avoidance dimension depicts an underlying motivational feeling state, the Individual-Social dimension depicts the means through which one manages these feelings, either directly, through manipulation of one’s own feeling state (Individual) or indirectly, by obtaining value through relationship (Social) (Cooper et al., 2006). Arguably, the “Approach-Avoidance” dimension may then, in fact, underlie the “Individual-Social” dimension.

Founded on a history of both physiological and psychological theory, the Approach-Avoidance dimension has been widely accepted within motivational theory. As has been outlined by Cooper and colleagues (1998), Gray (1972, 1981) contended that two neurologically independent motivational systems underlie all human behaviour. The behavioural approach system (BAS) controls positive emotion and regulates the movement towards goals (appetitive) whereas the behavioural inhibition system (BIS) controls negative emotion and regulates the motivation to escape from negative experiences (avoidance/aversive). As outlined by Cooper (2000), Gray hypothesized that these two systems are independent (i.e., BIS sensitivity has no effect on BAS sensitivity) and that an individual’s BIS/BAS sensitivity is stable and trait like. People high in BAS sensitivity are especially responsive to reward cues; that is, their behaviour is controlled by positive affect and they are more likely to engage in behaviour to attain positive

experiences (e.g., reward seeking behaviour). In contrast, people high in BIS sensitivity are especially responsive to punishment cues. Behaviour of highly BIS sensitive people is controlled by negative affect and is more likely focused on avoiding negative experiences (e.g., punishment) or alleviating a negative mood.

Baumeister and Scher (1988) argued that aversively motivated behaviours (i.e., behaviour with roots in the BIS) are more likely to be risk prone and “self-destructive”, suggesting that behaviours motivated by a need to control negative affect are more likely to lead to problematic outcomes. Supporting this line of thinking, research has shown that people who drink to cope with negative emotions (avoidance motives) experience more alcohol-related problems even though they do not necessarily drink more (Cooper, Frone, Russell, & Mauder, 1995). Similarly, eating as a coping strategy is thought to contribute to the development of eating disorders (Ganley, 1989; Heatherton & Baumeister, 1991). Within the domain of sexual behaviour, avoidance motives have been used to understand problematic outcomes with regard to risky sexual behaviour (Cooper et al., 1998; Gebhardt et al., 2006; Gebhardt et al., 2003), sexual compliance (see Impett & Peplau, 2003 for review), as well as interpersonal well-being and relationship quality (Impett et al., 2005). The following review emphasizes the differential correlates and consequences of sexual behaviours as a function of the underlying affect (i.e., positive or negative) they serve.

***Correlates and consequences of approach motives.*** Cooper and colleagues’ (1998) higher-order factor model of sexual motives among young adults includes two approach motives, Enhancement (Individual) and Intimacy (Social). Whereas *Intimacy* refers to the extent to which one has sex to feel connected to one’s partner, to strengthen

an emotional bond, or to express love, *Enhancement* refers to the extent to which one has sex because it's exciting, feels good (physically or emotionally), or is adventurous (Cooper et al., 1998, 2006).

In their review of the extant literature focusing on the correlates, consequences, and trajectories of each SMS sex motive, Cooper and colleagues (2006) found that both intimacy and enhancement motives increase with age and are associated with positive feelings about sex (i.e., high erotophilia and low erotophobia). Intimacy motives are found to be associated with fewer, less risky, better known sexual partners and lower rates of unplanned pregnancies, whereas “approach motivations unfettered by concerns with intimacy...appear to translate into a pattern of promiscuous sex” (Cooper et al., 2006, p. 253). Although Cooper and colleagues (1998) failed to look at individuals who were high in both intimacy and enhancement, they found that individuals with high intimacy motives were more likely to stay in committed relationships over time whereas individuals high in sex-for-enhancement motives were less likely to stay in committed relationships. In general, Enhancement motives alone have been found to be associated with more acceptance of casual sex, more frequent and risky sex, more sexual partners, and higher rates of STIs (please see Cooper et al., 2006 for review). It seems that high enhancement motives may not be inherently problematic. Rather, it may be that high enhancement motives for sex *in the absence of intimacy motives* may be associated with more risky outcomes.

***Correlates and consequences of avoidance motives.*** Cooper and colleagues' (1998) Sex Motives Scale includes four avoidant motives for sexual behavior. *Peer* and *Partner Approval* motives for sex assess the extent to which one has sex to gain approval

and avoid social censure from a social significant “other”, from one’s peer group (Peer Approval) or from a sexual partner (Partner Approval). *Coping* motives refer to the extent to which one uses sex to avoid, escape, or minimize negative internal emotional states, whereas *Affirmation* sex motives refer to the extent to which one uses sex to alleviate feelings of inadequacy specifically (Cooper et al., 1998, 2006).

In their review of the correlates, consequences and distinct trajectories of sex motives, Cooper and colleagues (2006) found that individuals high in avoidance motives reported negative feelings about sexuality (i.e., high erotophobia) as well as dysfunctional patterns of behaviour, presumably due to the fact that such motives are rooted in the BIS. Coping motives were often associated with a pattern of promiscuous but “safe” sex whereas Partner Approval motives were associated with “risky” sexual practices as well as a failure to take precautions (e.g., no birth control), thus leading to higher unplanned pregnancies. Individuals high in Affirmation motives were also more likely to have an unplanned pregnancy. Finally, peer motives, although rare, seemed to be associated with increased sexual risk-taking. Combined, such evidence suggests that avoidance motives-for-sex are more likely to be “risk prone”, consistent with Baumeister and Scher’s (1988) “self-destructive” theory,

Lending further support to the distinction between approach versus avoidance motives for sex, in the two studies to date that have explored the relationship between approach/avoidance motives-for-sexual behaviour and relationship satisfaction, Impett and colleagues (2002, 2005) found approach motives (e.g., it feels good, to express love for a partner) to be positively associated with positive personal (positive affect, satisfaction with life) and interpersonal (satisfaction with relationship, closeness to



partner, fun in the relationship) affect and negatively associated with relationship conflict (Impett & Peplau, 2002; Impett et al., 2005). Impett and colleagues (2005) found that avoidance sex motives as reported by college couples were associated with increased reports of negative affect and relationship conflict and decreased relationship satisfaction and fun in the relationship. Furthermore, avoidance sex motives were negatively associated with relationship longevity. In a pilot study, Impett (2002) found that having sex for avoidant reasons (e.g., to cope with negative emotions, to prevent my partner from becoming angry at me) was associated with subsequent feelings of anger, shame, and fear. Consistently, having sex to avoid tension and to prevent a partner from losing interest was associated with less relationship satisfaction.

Although sex motives have been studied extensively in older adolescent and adult populations (Cooper et al., 1998, 2006; Impett et al., 2005; Schachner & Shaver, 2004), it is not yet clear whether early adolescents endorse the same sex motives. Further, it is not yet clear how sex motives may differ by age or gender. A developmental understanding of sex motives is critical across adolescence, a time when physical, behavioural, psychological, and social changes prepare individuals for “mature” intimate relationships in adulthood. The following section outlines normative developmental changes that emerge across adolescence.

### ***Adolescence: A Developmental Framework***

Introduced by G. Stanley Hall (1904) as a distinct developmental period between childhood and adulthood, “adolescence” has become widely accepted as a period of life marked by unique physiological, cognitive, psychological, and social changes in which children are “transformed” into adults. Physically, adolescence is marked by considerable

growth and reproductive maturation leading to the capacity for reproduction (Hyde et al., 2004). Increases in the levels of hormones cause changes in physical size and shape as well as the development of secondary sex characteristics (Hyde et al., 2004; Sprinthall & Collins, 1988). Generally, this sequence of events referred to as “puberty”, occurs between eight and 18 years of age. Although female students tend to reach puberty about two years earlier (approximately 8 – 12 years of age) than male students, there are wide variations in individual experiences (Bee, Boyd, & Johnson, 2005). By about 15-16 years of age, nearly all adolescents, male or female, have developed adult physical characteristics, indicative of the final stage (Tanner, 1990) of puberty.

Accompanying these physical changes is the emergence of social-sexual behaviours (Katchadourian, 1990), with sexual attraction being reported, on average, at ten years of age (McClintock & Herdt, 1996). Prevalence rates suggest that social-sexual behaviours generally emerge developmentally, progressing from kissing, through french kissing, breast and genital fondling, to intercourse and oral-genital contact (King et al., 1988). Although most adolescents have engaged in some form of social-sexual behaviour by the time they enter high school (Katchadourian, 1990), only 5 percent of male adolescents and 1 percent of female adolescents in Canada report having engaged in sexual intercourse by the age of 12 (Maticka-Tyndale, 1997). According to the Canadian Youth, Sexual Health, and HIV/AIDS study, 23% of male youth and 19% of female youth report engaging in sexual intercourse “at least once” by grade 9 and 40% of male youth and 46% of female youth report engaging in sexual intercourse “at least once” by Grade 11. Similarly, with regard to oral sexual behaviour, 32% of male youth and 28% of female youth report having engaged in oral sex “at least once” in Grade 9 and 53% of

male youth and 52% of female youth report having had oral sex “at least once” by Grade 11 (Health Canada, 2003). Taken together, although the prevalence rates for oral sex are slightly higher, roughly half of all Canadian male and female students report having had sexual intercourse and oral sex by Grade 11. In contrast, at 12 years of age (Grade 7-8) only 5% of male and 1% of female students report having had sexual intercourse (Maticka-Tyndale, 1997). Although statistics demonstrate change in the rate of social-sexual behaviours with age, little is known about whether motives to engage in social-sexual behaviors change during adolescence. Moving away from a limited, dichotomous understanding of adolescent sexual behaviour (i.e., “did they or didn’t they?”), the present study seeks to investigate motives behind social-sexual behaviours as potential indicators of sexual health.

Accompanying physical and behavioural development in adolescence, is a process of self-differentiation from parents (Paikoff & Brooks-Gunn, 1991). In preparation for adulthood, adolescents must create their own sense of cohesive identity autonomous from their caretakers. Newly developed capacities for self-analysis and reflection allow for critical psychological processes such as autonomy, role differentiation, and identity formation (Harter, 1991). Socially, adolescents are required to adapt to an increasing diversity (i.e., identity differentiation) of roles (Bowlby, 1969/1982) while combining these roles into a coherent and consistent sense of self (Harter, 1990). Developing capacities to differentiate self from others and to differentiate Self into multiple social roles and contexts emerge across adolescence. Associated with enhanced capacities for self-differentiation and self-awareness, adolescents may also develop enhanced awareness and understanding of their own motives to engage in sexual behaviours. If so,

we would expect older adolescents to be better able to differentiate between the subtleties of their own motivations for sex.

### ***Adolescence: An Empirical Framework***

As might be expected given the vast historical and cultural variations of “adolescence” (Hyde et al., 2004), there are wide variations in how adolescence has been empirically defined within the literature. Perhaps due to the accessibility of college populations, “adolescence” is often broadly represented by older adolescent and young adult populations (Browning et al., 2000; Cooper et al., 1998). Whereas the establishment of independence and identity characterizes adolescence (Harter, 1991), young adulthood is a period of life marked by cohabitation, marriage, and procreation combined with increased independence from parents. It is therefore unlikely that findings from young adult populations would generalize to a younger adolescent population. Further, given the wide variations in physical, social, and psychological development across adolescence, a more developmentally specific understanding of sex motives across the adolescent years is imperative. On average, both male and female students have entered the final stage of puberty by 15 years of age and roughly half of Canadian youth (males and female) report having had sexual intercourse and oral sex by Grade 11 (Health Canada, 2003). As such, the current study seeks to understand how younger adolescents (Grades 8 – 10) differ from older adolescents (Grades 11 – 12) in their approach to social sexual behaviours.

***Sexual Motives in Adolescence.*** The first to apply a variation of the SMS<sup>2</sup> to a younger adolescent population, Gebhardt, Kuyper, and Greunsven (2003) examined sexual motives in a sample of Dutch 15-to- 23-year-olds. Factor analytic results for their

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<sup>2</sup> 18 of the original 29 items were used for data reduction purposes. Only the three highest loading items for each of the original factors were maintained in the scale.

sample (n = 470) indicated four distinct factors: (a) the motive to experience pleasure, (b) the motive to express love, (c) the motive to enhance one's mood, and (d) the motive to please others.

Although the Gebhardt and colleagues (2003) study yielded two fewer factors than Cooper and colleagues' (1998) study, their motives seem highly consistent with the four-factor matrix (i.e., Approach-Individual, Approach-Social, Avoidance-Individual, and Avoidance Social) proposed by Cooper and colleagues. Whereas the motive to experience pleasure and the motive to express love are consistent with the enhancement and intimacy motives observed by Cooper and colleagues, the motive to "please others" appears to combine the partner and peer approval motives, and the motive to "enhance one's mood" appears to combine self-affirmation and coping motives. The four-factor solution regarding sex motives was subsequently replicated in a second Dutch sample of 16-to- 24-year-olds (Gebhardt et al., 2006). There are many possible reasons why factor analysis in Gebhardt and colleagues' study yielded a less differentiated set of sex motives, some of which include translation issues and cultural differences between Dutch and American adolescents. It is possible, however, that their studies yielded a less differentiated factor structure because their sample(s) included both young adults and older adolescents (similar to Cooper et al.) *as well as* a number of younger subjects, who may not have differentiated sex motives in a manner similar to older adolescents or young adults. Variations as a function of age were not examined in the Gebhardt et al. studies.

Only two studies to date, both unpublished theses, have attempted to describe sex motives in younger, exclusively early-middle adolescent samples using the SMS. Balter

(2005) examined sex motives in 244 Canadian adolescents (ages 13 – 18) and Sing-Barrett (2005) examined sex motives in 45 and 55 American adolescents (ages 14 – 18), who reported prior engagement in sexual intercourse (n = 45) or oral sex (n = 55). In the Balter study<sup>3</sup>, factor analytic results indicated five distinct factorial dimensions for sex motives: (a) enhancement, (b) intimacy, (c) self-affirmation, (d), partner approval, and (e) peer approval. Although the sample was too small to complete factor analysis in the Sing-Barrett study, intercorrelations reported for sexual motives indicated that items reflecting coping motives were strongly correlated with items reflecting self affirmation motives for intercourse (.81 to .84) and oral sex (.88 to .90) as well as items reflecting partner pressure motives for intercourse (.78 to .82) and oral sex (.62 to .78). The high magnitude of these correlations raises questions concerning the distinctiveness of these various motives. Items reflecting partner approval motives were moderately correlated with peer approval motives (.42 - .56) for sex. Combined, these findings may suggest that younger individuals differentiate some sex motives less than older individuals.

The present study examined, more directly, the hypothesis that younger adolescents differentiate between avoidance sex motives less than older adolescents. Although there is extensive evidence to suggest that the expression, correlates, and consequences of sexual behaviour are largely influenced by the underlying function that the behaviour serves, underscoring the importance of understanding adolescent sex motives more thoroughly, the majority of the research has been undertaken with an older adolescent (17-to-18-years-old) and young adult population (e.g., Browning, Hatfield,

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<sup>3</sup> In this study, using the same data set as the current study, only 24 of the original 29 items of the SMS were used. Specifically, the four items thought to measure coping were removed, as they were not thought to be relevant in middle and early adolescent populations. Another item was removed as it was reported to load poorly across all components.

Kessler, & Levine, 2000; Cooper et al., 1998; Hill & Preston, 1996; Levinson et al., 1995). Literature linking sex motives to specific correlates and consequences of sexual behaviour in *adolescence* specifically is only beginning to emerge.

***Correlates and consequences of sex motives in adolescence.*** Findings from the handful of studies linking sexual motives and “risky” sexual behaviours in a younger adolescent population have been inconsistent. Gebhardt and colleagues (2003) found that adolescents and young adults (ages 15 – 23) who reported intimacy motives were less likely to participate in casual sex and were more likely to consistently use condoms with casual sex partners. They also found that, amongst adolescents who had experience with casual sex, engaging in sex to either “enhance one’s mood” or to “please others” (avoidant motives) was positively related to the number of reported casual sex partners ( $p < .01$ ). Further, female adolescents who reported sex to “please others” were less likely to use condoms with casual sex partners. In Singh-Barrett’s (2005) unpublished dissertation, no significant links were found between sex motives and “risky” sexual behaviours (i.e., multiple sex partners, lack of STD protection, and influence of drugs or alcohol during sexual behaviour) with a middle adolescent population (ages 14 – 18). The Singh-Barrett results must be interpreted with caution because the lack of significant findings may be attributable to the small convenience sample ( $n = 55$ ) utilized in her study.

The literature linking sex motives to specific correlates and consequences in adolescence is still emerging. Given the positive implications of intimacy and the adverse implications of avoidance motives demonstrated in later life however, further investigation into the motives behind sexual behaviour is warranted in adolescence. Although there are no longitudinal studies, to date, that have investigated the

developmental trajectory of sex motives over time, it is possible that sex motives developed adolescence may continue into adulthood. Investigating grade and gender differences may help create a better understanding of sexual motives from a developmental perspective in adolescence, a time when first sexual relationships are forming.

It should be noted that, to date, the majority of studies looking at motivations behind sexual “behaviour” in adolescence have exclusively focused on sexual intercourse (Browning et al., 2000; Cooper et al., 1998; Hill & Preston, 1996; Horowitz, 2000), or sexual intercourse and oral sexual behaviour (Singh-Barrett, 2005), neglecting the myriad of other sexual activities that adolescents engage in (Maticka-Tyndale, 2001). Given the normative progression of social sexual behaviours in adolescence (King et al., 1988), the current investigation examines sex motives consistent with Balter (2005), broadening the definition for “sex” to include a wide variety of social sexual behaviours in adolescence.

### ***Gender and Age Differences in Reported Sex Motives***

To date, several studies appear to confirm commonly held beliefs that men and women may have sex for different reasons. In general, research has suggested that men are more likely to report physical, pleasure-based reasons whereas women are more likely to report emotional, interpersonal-based reasons for sex (e.g., Browning et al., 2000; Carroll et al., 1985; Hill & Preston, 1996; Leigh, 1989; Regan & Dreyer, 1999). However, in a recent unpublished dissertation, Harowitz (2000) found that the links observed between gender and sex motives (men reporting more pleasure motives and women reporting more love-affection motives) were mediated (explained) by the psychosocial factors of sensation seeking (men) and communality (women). This



information suggests that societal norms, rather than an inherent aspect of gender may account for widely held beliefs linking gender and sex motives.

Consistent with this notion, recent research has suggested that these “gendered” differences in sex motives may not be evident at all ages. Using the SMS with a sample of late adolescents and young adults, Cooper and colleagues (1998) found that men, as expected, were more likely to endorse pleasure motives, but found no gender differences in reported intimacy motives for sex. Consistent with this finding, no gender differences concerning intimacy motives were found in the only two studies (both unpublished theses) looking at sex motive differences in a younger adolescent population.

Specifically, with a sample of 13-to-18-year olds, Balter (2005) found that, although male students were more likely to endorse enhancement, peer approval, and self-affirmation motives, no gender differences were found with regard to intimacy or partner approval motives. In a sample of 14-to-18-year-olds, Singh-Barrett (2005) found no gender differences in motives reported for either intercourse or oral sex, with the exception that male youth reported pleasure as a motive for oral sex more often than female youth.

Taken together, these findings suggest that widely held beliefs regarding the relationships between gender and motives for sex may look quite different in younger adolescent populations owing, perhaps, to differential societal norms and expectations within this population.

With regard to age differences, in a sample of older adolescents and young adults (ages 17 – 21), Cooper and colleagues (1998) found endorsement of intimacy and enhancement motives (Approach) to be positively correlated with age and endorsement of peer and partner approval motives (Avoidance) to be negatively correlated with age.

Self-affirmation motives (Avoidance) were unrelated to age. Despite the limited age range sampled, these findings clearly suggest that sex motive profiles should be interpreted in light of both gender and age.

Singh-Barrett (2005) was the first to investigate sex motives in light of both gender and age in a young adolescent (ages 14 – 18) population in her unpublished dissertation. Although no gender differences were found in motives for sexual *intercourse*, she found that male adolescents were more likely to endorse pleasure motives for *oral* sexual behaviour. Further, she found that older adolescents were more likely than younger adolescents to endorse pleasure motives for sexual intercourse. Given her small convenience sample (n = 55) combined with highly unequal cells, her results are suspect. Further, given that most of her data was collected in public libraries, replication with a more normative sample of adolescents may be warranted.

### ***Peer Relationships in Adolescence***

As children move through adolescence, the amount of time spent with peers relative to the amount of time spent with family increases substantially (Larson & Richards, 1991). Indeed, time spent with family members has been found to decrease by 60% from the fifth to the twelfth grade (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). Peer relationships have been argued to serve as critical sources of intimacy, attachment, influence, and social feedback (see Allen & Land, 1999 for review).

Within the peer literature, the developmental importance of peers is beginning to receive well deserved consideration specific to emerging romantic relationships (e.g., Connolly & Goldberg, 1999; Connolly & Johnson, 1996; Furman, 1999; Scharf &

Mayselless, 2001). Unlike parent-child relationships, peer relationships are similar to romantic relationships in that they are voluntary, reciprocal, and affiliative in nature (Furman, 1999). Peer relationships are therefore thought to provide children and adolescents with developmentally appropriate opportunities to develop reciprocity, cooperation, and reciprocal altruism within non-hierarchical relationships (Furman, 1999), each of which are important social competencies for romantic relationships. As such, peer relationships are often conceptualized both as a “prototype” for romantic relationships as well as a “secure base” from which adolescents are able to explore these emerging relationships (Connolly & Goldberg, 1999; Furman, 1999).

In his review of the literature, Furman (1999) found perceived support, relational styles, and working models of relationships between peer and romantic relationships to be more consistently related than those between parents and romantic partners. Similarly, in a longitudinal study of high school students, Connolly, Furman, and Konarski (2000) found ratings of support in best friendships to be predictive of ratings of support in romantic relationships one year later. Finally, Shulman and Scharf (2000) found affective intensity within romantic relationships to be related to concurrent affective intensity with a same-gendered friend but not with parental relationships. The current study investigated the possible links between perceived mattering in peer relationships and motives to engage in social-sexual behaviour in “romantic” relationships.

### ***Peer Mattering***

Marshall (2001, p. 474) defined perceived mattering as “the psychological *tendency to evaluate the self as significant to specific other people* [italics added].” Marshall was the first to develop an empirically validated measure of perceived mattering

to significant others (i.e., mother, father, and friends) in adolescence. Mattering, or perceived significance to others, is one aspect of the social component of self-concept that is thought to help individuals locate themselves socially. Perception that one “matters” is believed to foster a sense of relatedness, thereby reducing marginality within the social context (Marshall, 2001). Although a sense of mattering has been described as important for psychosocial well being across the lifespan (e.g., Coopersmith, 1967; Rosenberg, 1985; Rosenberg & McCullough, 1981), it is argued to be of critical importance in adolescence (Marshall, 2001; Rosenberg, 1985), a time of profound cognitive, emotional, and behavioural transformation (Allen & Land, 1999) as well as the consolidation of identity (Erickson, 1968; Harter, 1990). Research has supported the importance of mattering in adolescence, demonstrating that adolescents who reported higher mattering to parents and friends were more likely to indicate a sense of belonging to their family and friends (Marshall, 2001).

As part of the social self-concept, perceived mattering is thought to develop through interpersonal and intrapersonal processes (Mak & Marshall, 2004; Marshall, 2001). Specifically, the formation and maintenance of perceived mattering is thought to occur through attention from others (interpersonal) and continuous interpretations (intrapersonal) of attending behaviours from others. Regardless of the objective quality and quantity of attention received from significant others, perceptions of attending behaviours are thought to be subjective, influenced by both individual perceptive and social comparative psychological processes (Mak & Marshall, 2004; Marshall, 2001). An individual’s subjective evaluations of attending behaviours-to-self are susceptible to

distortion, as they are influenced by existing self-conceptions which, in turn, influence interpretations of, and expectations for attending behaviours from others.

Basing their theoretical framework on the extant self-verification literature and on Rosenberg's (1990) work on reflexivity, Mak and Marshall (2004) argued that the development of perceived mattering is *recursive*. People tend to selectively attend to and differentially evaluate attention from others in ways that *reinforce* their established self-conceptions and expectations of importance to the other. It may follow that self-conceptions established in early peer relationships, during the critical time of identity formation (Erickson, 1968) in adolescence, are developmentally important as they may serve to influence subjective perceptions and the development of perceived mattering in future romantic relationships.

At the same time, subjective perceptions are thought to be influenced by social comparisons. Mak and Marshall (2004) suggest that social comparisons are used to establish a "baseline" of personal and societal expectations of relationship that serve to influence the development of perceived mattering. Perceptions of attending behaviours from a specific other (i.e., the giver) will depend on comparisons between the giver's attending behaviours and (a) attending behaviours the individual has received from the giver or others in past or present relationships, (b) an individual's perception of the quality and quantity of attending behaviours the giver targets at others, and (c) perceptions of societal norms of relationships.

In Marshall's (2001) model, then, a sense of peer mattering will largely depend on subjective (intrapersonal) evaluations of attending behaviour from others. Regardless of the influences of subjective perceptions, it is likely that those who perceive themselves as

matter less will seek more attention from others (interpersonal process) in an effort to boost their perceived sense of mattering. It was hypothesized that adolescents who perceive themselves as mattering less to friends will be more likely to engage in social sexual behaviours for attention-seeking purposes (i.e., peer approval, partner approval). No studies, to date, have looked at the relationship between mattering to peers and motives to engage in sexual behaviours in adolescence. As such, the current study extends the literature by investigating the relationship between perceptions of peer mattering and peer and partner approval motives.

### The Present Study

Recognizing that behavioural patterns established in early romantic relationships may have lifelong implications, there has been an increased urgency in sexual research to “...go beyond an exploration of the knowledge, attitudes, and behaviour of youth, to an exploration of the contexts under which they engage in sexual activities and the belief systems that inform both positive and negative actions” (Boyce et al., 2003, p. 3). Researchers have begun to move beyond overt sex behaviours (e.g., age of coitus, condom use, number of partners) to focus on the *reasons* or *motives* behind sexual behaviour (e.g., Cooper et al., 2006; Cooper et al., 1998; Davis et al., 2004; Gebhardt et al., 2006; Gebhardt et al., 2003; Impett & Peplau, 2003; Impett et al., 2005; Tracy, Shaver, Albino, & Cooper, 2003). Rooted in a functionalist perspective of behaviour, this line of research has suggested that the antecedents, correlates, and consequences of sexual behaviour are influenced by the underlying functions or motives that the behaviour serves, particularly whether these behaviours service approach or avoidance motivations. Research has demonstrated that approach motives-for-sex are related to relationship satisfaction and longevity (Impett & Peplau, 2002; Impett et al., 2005), and it seems that it is intimacy, in particular, that may “buffer” the detrimental effects of having sex for physical pleasure motives alone (see Cooper et al., 2006 for review). In contrast, research has demonstrated that avoidance motives-for-sex are consistently associated with an increase in risky sexual behaviour in late adolescence and adulthood as well as a decrease in relationship satisfaction in adulthood (see Cooper et al., 2006 for review). Relative to approach motives, avoidance motives, with their roots in BIS, are thought to be more

motivating (Cooper et al., 2006; Gray, 1970, 1987) and are more strongly associated (albeit negatively) with relationship well being over time (Impett et al., 2005).

Although variations of the Sexual Motives Scale (SMS) have been used extensively to study sex motives in older adolescent and adult populations (e.g., Cooper et al., 2006; Cooper et al., 1998; Impett et al., 2005; Schachner & Shaver, 2004), it is not yet clear whether early adolescents endorse the same sex motives. Gebhardt and colleagues (2003) were the first to apply a variation of the SMS to a population (ages 15 – 23) which included middle adolescence. Factor analytic results from their study and subsequent replication (Gebhardt et al., 2006) with 16–to-24-year-olds indicated four distinct factors: (a) the motive to experience pleasure, (b) the motive to express love, (c) the motive to enhance one’s mood, and (d) the motive to please others. Interestingly, these motives seem highly consistent with the four-factor matrix (i.e., Approach-Individual, Approach-Social, Avoidance-Individual, and Avoidance Social) developed by Cooper et al. (1998) and may suggest that, although younger adolescents endorse sex motives in a manner similar to older adolescents or young adults, they may differentiate between avoidance motives (i.e., partner vs. peer approval) less than older adolescence/young adults.

Only two studies to date, both unpublished theses, have attempted to describe sex motives in younger, exclusively early-middle adolescent samples using the SMS. In a population of adolescence ages 13 – 18, Balter (2005) found five distinct factorial dimensions for sex motives: (a) enhancement, (b) intimacy, (c) self-affirmation, (d), partner approval, and (e) peer approval. Given that she did not administer the SMS items measuring coping, this factor structure is consistent with Cooper and colleagues (1998)



original study. Singh-Barrett (2005), in a small sample of adolescents aged 14 – 18, found sex motives, in particular avoidance motives for sex, to be significantly correlated. These results may suggest that avoidance motives are less differentiated within a middle adolescent population. The present study examined whether a younger adolescent population differentiates between avoidance sex motives less than an older adolescent - young adult population.

Sexual motives may also vary as a function of gender. In general, research to date has shown that men are more likely to report physical, pleasure-based reasons whereas women are more likely to report emotional, interpersonal-based reasons for sex (e.g., Browning et al., 2000; Carroll et al., 1985; Hill & Preston, 1996; Leigh, 1989; Regan & Dreyer, 1999). More recently, Harowitz (2000) suggested that psychosocial factors may help explain the relationship between gender and sex motives. The only two studies that have looked at gender differences in an exclusively young-middle adolescent population have not found the expected gender differences in intimacy (Balter, 2005; Singh-Barrett, 2005). Although the findings of her unpublished dissertation are questionable, Singh-Barrett found that older adolescents reported more pleasure motives than younger adolescents. The present study examined variations in sexual motives as a function of both sex and age.

Finally, the current study investigated the relationship between perceptions of mattering in peer relationships and motives for engaging in social sexual behaviours in adolescence. Peer mattering is thought to be influenced by subjective evaluations of attending behaviour received from others (Mak & Marshall, 2004). It was hypothesized that adolescents who perceive themselves as mattering little to friends would be more

likely to report engaging in sexual behaviour for attention-seeking purposes (i.e., peer and partner approval).

To summarize, the purpose of the current study was threefold: (1) to determine whether sex motives in a young-middle adolescent population, considering a broad range of social-sexual behaviours (i.e., not just sexual intercourse), are similar to those reported by older adolescents and young adults, (2) to investigate age and gender differences in motives for social sexual behavior in this population, and (3) to investigate the association between perceived mattering to peers and motives for social sexual behaviour. Towards this end, the following hypotheses were proposed based on the existing literature.

**(1) Although it was hypothesized that a young-middle adolescent population would endorse sex motives in a manner similar to older adolescents and young adults, it was also hypothesized that this population would differentiate less than an older adolescent-young adult population between avoidance motives for sex.** This hypothesis emerges from previous studies that have utilized Cooper and colleagues (1998) Sex Motives Scale (SMS) with a younger adolescent population. Whereas Gebhardt and colleagues (2003, 2006) found only four distinct factors (experience pleasure, express love, enhance one's mood, please others) which mapped directly on Cooper and colleagues (1998) four-factor model (Approach/Avoidance, Individual/Social), Balter (2005), in her study of 13-to-18-year-olds, found the same factor structure as Cooper and colleagues (enhancement, intimacy, self affirmation, partner approval, and peer approval), although she did not administer the coping factor items of the SMS. In her study of 55 students, Singh-Barrett found that avoidance

motives were highly correlated within her middle adolescent population. These findings suggest that a population of younger adolescents may differentiate avoidance motives less than older adolescents and young adults. This hypothesis is consistent with the developing capacity for both self-awareness and self-differentiation characteristics of adolescent psychological development (Harter, 1991).

**(2) It was hypothesized that no gender differences would be found concerning intimacy or enhancement motives for sex in a young-to-middle adolescent population. It was expected that approach motives would be positively associated with grade whereas avoidance motives would not be associated with grade. No hypothesis with regard to possible age by gender interactions was proposed, as this was primarily exploratory.** No gender differences have been found with regard to intimacy motives in the two studies involving a younger adolescent population. Balter (2005) found that male youth endorsed pleasure motives for a wide range of social sexual behaviour more frequently than females, and Singh-Barret (2005) found male youth to endorse pleasure motives more frequently for oral sex in particular. Consistent with Cooper and colleagues (1998) original study, Singh-Barrett also found pleasure motives to be positively associated with age. The only study to date which has explored sex motive differences as a function of both gender and age (Singh-Barret, 2005) is an unpublished dissertation based on a small, select sample. The current investigation of age by gender interactions is exploratory.

**(3) It was hypothesized that perceptions of peer mattering would be negatively correlated with peer and partner approval motives for sex in early-middle adolescence.** A sense of mattering is thought to foster a sense of relatedness,

reducing marginality within the social context (Marshall, 2001). Research has supported the importance of mattering in adolescence, demonstrating that adolescents who reported higher mattering to parents and friends were more likely to indicate a sense of belonging to their family and friends (Marshall, 2001). The formation and maintenance of perceived mattering is thought to occur through interpersonal (attention from others) and intrapersonal (continuous interpretations of attending behaviours from others) processes. It is therefore likely that those who perceive themselves as mattering less will seek more attention from others (interpersonal process), in an effort to boost their perceived sense of mattering. It is therefore hypothesized that, over and above the influences of gender and grade, adolescents who perceived themselves as mattering less to friends would be more likely to engage in social sexual behaviours for attention seeking purposes (i.e., peer approval, partner approval).

## Method

### *Participants*

Participants were taken from the first three waves of a larger longitudinal project designed to assess adolescent life and experiences among British Columbian High-school students (Grades 8 – 12). The study was conducted by Dr. Sheila Marshall following ethical review and approval by the Vancouver School Board (VSB), the secondary school administration, and the University of British Columbia.

In all three waves, one year apart, consent forms were distributed to all students, Grades 8 through 12, in a single urban secondary school. As an incentive to maximize return rates, all returned consent forms were entered into a draw for gift certificates and a pizza party. Only participants' "first time" responses to the questionnaire were used in the present study, yielding a total sample of 978 students. Five hundred and sixty four students were taken from Wave 1, 250 from Wave 2, and 164 from Wave 3. In all three waves, only students who indicated that they had engaged in social-sexual behaviours with a partner (e.g., kissing, fondling genitals, vaginal-penile intercourse, oral sex or touch to mouth genitals, and masturbating with a partner) completed the sex motives portion of the questionnaire and were included in the final sample.

A total of 396 participants (41%) reported engaging in social-sexual behaviours. Two of the cases were dropped due to incomplete or invalid data, yielding a final sample size of 394 students. Of the final 394 participants, 195 were female and 199 were male. Ages ranged from 12 to 18 years, with a mean age of 15.02 years. A total of 83 students (43 boys, 40 girls) were in Grade 8; 62 students (40 boys, 22 girls) were in Grade 9; 86 students (43 boys, 43 girls) were in Grade 10; 84 students (37 boys, 47 girls) were in

Grade 11; and 79 students (36 boys, 43 girls) were in Grade 12. Sixty six percent (n = 260) of the students identified themselves as Caucasian/European, 19.8% (n = 78) as Asian (South Asian, East Asian, and South East Asian), 2% (n = 8) as Latino/Hispanic, 1% (n = 4) as African, .5% (n = 2) as First Nations/Native, and 8.4% (n = 31) as mixed ethnic background, with 3% (n = 11) of the students not indicating their ethnic/cultural background.

Items assessing peer mattering were only administered in the second and third waves of the study. As a result, only 139 (35.6%) (76 boys, 63 girls) of the original 394 participants were included in analyses addressing mattering to peers. Of these students, 38 (19 boys, 20 girls) were in Grade 8, 25 (19 boys, 6 girls) were in Grade 9, 36 (10 boys, 17 girls) were in Grade 10, 22 (12 boys, 10 girls) were in Grade 11, and 18 (8 boys, 10 girls) were in Grade 12. Ages ranged from 12 – 18 years of age with a mean age of 14.65. Of the students, 66.2% (n = 92) identified themselves as Caucasian/European, 20.1% (n = 28) as Asian (South Asian, East Asian, and South East Asian), 2.2% (n = 3) as Latino/Hispanic, 1.4% (n = 2) as African, and 7.8% (n = 11) as mixed ethnic background. A total of 2.2% (n = 3) students did not indicate their ethnic/cultural background.

### ***Procedures***

For each wave of the study, on-line data collection took place at the school across several days. Trained researchers explained the purpose of the study and issues of anonymity and confidentiality as classes were filtered through two computer labs in a single secondary school. Students were allotted an 80-minute class block to complete the online survey and were asked to return to their classrooms once they completed the survey.

## *Measures*

***Demographic information.*** Participants reported their sex, age, grade, birth date, birth country, ethnicity, and family constellation (See Appendix A).

***Sex Motives Scale (SMS).*** The SMS (Cooper et al., 1998) is a self-report questionnaire designed to measure the underlying psychosocial motives behind sexual behaviour in adolescence and young adulthood. The SMS taps six broad sex motives, Intimacy, Enhancement, Peer Approval, Partner Approval, Self-Affirmation, and Coping, each of which are categorized along the two major motivational dimensions thought to underlie human behaviour which are approach versus avoidance and autonomy versus relatedness. These two dimensions intersect to form a four-motive typology, yielding four broad categories of motives as follows: (1) appetitive self-focused motives; (2) appetitive social motives; (3) aversive self-focused motives; (4) aversive social motives.

On the SMS, respondents are asked to rate to “*how often you personally have sex for each of these reasons*” on a five-point Likert-type scale (1 = “never/almost never” and 5 = “always/almost always”). The SMS is unique in that it allows individuals to endorse a variety of motives that may be relevant for them, as different motives may simultaneously inform sexual decisions. Originally consisting of 29 items, factor analytic work revealed six motive subscales, each of which could be categorized into one of the four aforementioned motive classes. *Enhancement* (e.g., “I have sex because it feels good.”) and *Intimacy* (e.g., “I have sex to feel emotionally closer to my partner.”) motives were categorized as approach-self and approach-social motives respectively. *Coping* (e.g., “I have sex to help me deal with disappointments in my life.”) and *Self-affirmation* (e.g., “I have sex to reassure myself that I am attractive.”) motives were

categorized as aversive-self motives. *Partner Approval* (e.g., “I have sex because I don’t want my partner to be angry at me.”), and *Peer Approval* motives (e.g., “I worry people will talk about me if I don’t have sex.”) were categorized as discrete aversive-social motives.

Three validation studies involving college and community samples have supported the psychometric quality of the scale, with Cronbach’s alphas ranging from .82 to .90 (Cooper et al., 1998). The scale has demonstrated moderate cross time-stability over one-year. Correlations between the SMS and a set of validity measures (e.g., erotophobia, erotophilia, social desirability, and sensation seeking) provided clear evidence of convergent and discriminate validity of the scale, whereas prediction of distinct profiles of sexual relationships and sexual risk has supported the predictive validity of the scale.

In this data collection, the SMS was modified in several important ways. First, in the interest of including the diverse sexual behaviours and orientations of the target population, the definition of “sex” was modified to include kissing, fondling genitals, vaginal-penile intercourse, oral sex or touch mouth to genitals, and masturbating with a partner. Participants were only given the SMS items if they reported engaging the aforementioned social sexual behaviours. Second, the four items thought to measure *Coping* were not administered because the principal investigator did not consider them to be appropriate in early and middle adolescent populations. The scale as it appears in this study contains 24 items (See Appendix B). Of interest in the present study was whether responses to the 24-item SMS yielded similar categories of sex motives among younger



adolescents and whether endorsement of particular sex motives varied as a function of age and/or gender.

*Mattering to Others Questionnaire-Friends (MTOQ-Friends)*. Marshall (2001) developed the Mattering to Others Questionnaire (MTOQ) to assess perceptions of mattering among adolescents aged 13-18. The MTOQ is an 11-item self-report questionnaire. Each item can be altered to pertain to a different referent (i.e., mother, father, or friends), allowing for an examination of perceived mattering within different social contexts and relationships.

The MTOQ has demonstrated strong psychometric properties in previous research. Cronbach's alphas of the MTOQ-Friends scale have been found to be .93 (Marshall, 2001; Mak & Marshall, 2004), indicating strong internal consistency. Furthermore, correlations between the three original versions of the MTOQ (reflecting mattering to mother, father, and friends, respectively) and a number of validity measures (i.e., self-esteem, relatedness to family and friends, meaningfulness, parental attention, and attention from peers) have provided clear evidence of convergent and discriminate validity (Marshall, 2001).

In the present study, students were asked to evaluate mattering in relation to peers using a subset of four of the original eleven items as identified by S. Marshall (personal communication, September 13, 2008). The MTOQ was only administered to students in the second and third waves of the study, yielding data for only a subset of the students included in the present sample ( $n = 139$ ).

Responses to the four items on the reduced MTOQ-Peers scale were made on a 5-point Likert scale (1 = "not much", and 5 = "a lot"). A copy of the mattering to peers

scale as used in the present study is presented in Appendix C. Following Marshall (2001), the MTOQ-Peers was scored by calculating the mean of responses (ranging from 1 to 5) across relevant items. Higher scores reflected greater or more positive perceptions of mattering to peers. The reduced MTOQ-Peers scale demonstrated good internal consistency in the present sample (Cronbach's alpha = .88, n = 139).

## Results

### *Preliminary Data Analysis*

To assess whether student responses varied across the three different waves of the study, between group analyses of variance (ANOVA) were conducted with “wave” serving as the independent variable and each of the sex motive and peer mattering items serving as the dependent variables. As no significant differences were found ( $\alpha > .05$ ) between waves of the study, the data was combined so that only students’ first response to the survey was included in the present study (e.g., if a student had completed the survey in both waves 2 and 3 of the study, only their wave 2 results were included in the present sample).

### *Data Analysis*

The results are presented in sections that correspond to the respective hypotheses and methods of analysis. The first section focuses on hypothesis 1 which explored student responses to the sexual motives survey using exploratory factor analyses. The second section focuses on hypotheses 2 and 3 addressing age and gender differences in sex motives as well as the relationship between perceptions of peer mattering and motives to engage in sexual behaviour. The second and third hypotheses were investigated using analyses of variance and hierarchical multiple regression analyses, respectively.

### *Hypothesis 1: Factor Analyses*

The first hypothesis predicted that although a young-middle adolescent population will endorse sex motives in a manner similar to older adolescents and young adults, this population will differentiate less than an older adolescent-young adult population amongst avoidance motives for sex. A series of factor analyses were used to investigate

this hypothesis. In the interest of consistency, principal axis factor extractions with oblique rotations were utilized in the current study, similar to Cooper and colleagues' (1998) original factor analysis of their Sex Motives Scale with older adolescents and young adults. Exploratory factor analyses with oblique rotations were deemed appropriate because the factor structure of the SMS is largely speculative within a young-middle adolescent population. Previous research (Cooper et al., 1998) has suggested that the SMS factors may be correlated.

For each factor analysis, the number of factors extracted was determined by Kaiser's criterion (Gardner, 2001), the percentage of variance accounted for by each factor (Tinsley & Tinsley, 1987), and factor (i.e., pattern and structure) loadings. Factor loadings with absolute values greater than or equal to .30 were considered significant (Gardner, 2001).

**Full sample.** Initially, a principal factor analysis with oblique rotation was conducted with the full sample ( $n = 394$ ) using 24 of the original 29 items of the SMS. As previously mentioned, the five items measuring coping were not administered in the survey because the principle investigator considered them inappropriate for a young-middle adolescent population. With 394 subjects, the full sample was sufficient in size, as suggested by the guiding principle of 10 subjects per scale item. Consistent with Cooper and colleagues' (1998) original study, five eigenvalues greater than one emerged (see Table 1) with all five factors well-defined and conceptually cohesive. This factor solution accounted for 78.48% of the total variance in the data. Table 1 identifies the SMS items in descending order of structural factor loadings within each factor.

Factor 1 (Self Affirmation) accounted for 37.3% of the variance and was defined by five items (with loadings of .74 or higher), with all items pertaining to the use of social-sexual behaviour to affirm or bolster one's sense of self (e.g., "I engage in social-sexual behaviours to feel better about myself."). Factor 2 (Partner Approval) accounted for 20.5% of the variance and was defined by four items (with loadings of .85 or higher), with all items pertaining to using social-sexual behaviour to please or appease one's partner (e.g., "I engage in social-sexual behaviours because I'm afraid my partner will leave me."). Factor 3 (Intimacy) accounted for 9.1% of the variance and was defined by five items (with loadings of .67 or higher), with all items pertaining to using social-sexual behaviour for intimacy (e.g., "I engage in social-sexual behaviours to make an emotional connection."). Factor 4 (Enhancement) accounted for 7.0% of the variance and was defined by five items (with pattern loadings of .61 or higher), with all items pertaining to using social-sexual behaviour for enhancement purposes (e.g., "I engage in social-sexual behaviours for excitement."). Finally, Factor 5 (Peer Approval) accounted for 4.5% of the variance and was defined by four items (with loadings of .63 or higher), with all items pertaining to using social-sexual behaviour to please or appease one's peers (e.g., "I engage in social-sexual behaviours because other people will kid me if I don't have sex."). One item was removed (i.e., "I engage in social-sexual behaviour because my friends are having sex.") because its factor loadings were weak across all five components. The remaining 23 items loaded on the same factors as in Cooper and colleagues' (1998) original study. Although the factors were distinct, several cross-loadings were found suggesting potential overlap across specific types of motives. Specifically, cross loadings of .5 or greater were found between the partner and peer

approval motives and between the intimacy and enhancement motives. These “overlaps” were further supported by correlations of .63 and .50, respectively.

Table 1.

*Results of Principal-Axis Factoring with Oblimin Rotation for Early-Middle Adolescents*

<i>Item</i>	<i>Factor Loadings</i>				
	<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>	<i>Factor 4</i>	<i>Factor 5</i>
13. Feel more interesting to others	<b>.90 (.92)</b>	.33		.40	.40
12. Feel better about myself	<b>.89 (.87)</b>		.34	.46	.40
15. Feel desirable	<b>.87 (.84)</b>		.35	.46	.36
14. Feel more self-confident	<b>.86 (.84)</b>	.32	.33	.43	.37
11. Prove I am attractive	<b>.80 (.74)</b>	.33	.33	.43	.35
18. Worry partner won't want me	.33	<b>.92 (.88)</b>			.61
17. Afraid partner will be angry	.32	<b>.91 (.91)</b>			.58
19. Afraid partner will leave me	.33	<b>.91 (.85)</b>			.64
16. Afraid partner won't love me	.34	<b>.89 (.87)</b>			.58
9. Feel closer to partner	.40		<b>.92 (.89)</b>	.50	
10. Feel emotionally closer to partner	.37		<b>.92 (.93)</b>	.43	
8. Make emotional connection	.35		<b>.91 (.91)</b>	.46	
7. Express love			<b>.89 (.89)</b>	.45	
6. Be more intimate with partner	.32		<b>.80 (.66)</b>	.60	
3. For excitement	.43		.44	<b>.90 (.93)</b>	
4. Thrill of it	.48		.41	<b>.86 (.84)</b>	
2. Feels good	.34		.48	<b>.83 (.81)</b>	
5. Satisfy sexual needs	.47		.47	<b>.80 (.70)</b>	
1. Feel horny	.40		.43	<b>.70 (.61)</b>	
20. Worry people will talk	.40	.62			<b>.89 (.86)</b>

Item	Factor Loadings				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
if I don't have sex					
22. Other people will kid me if I don't have sex	.37	.52			<b>.87 (.91)</b>
21. People will think less of me if I don't have sex	.37	.60			<b>.86 (.80)</b>
24. Have sex so others won't put me down	.43	.57			<b>.78 (.63)</b>
23. Friends are having sex	.33				.35
Eigenvalues	8.95	4.93	2.18	1.69	1.09
% of variance	37.29	20.52	9.09	7.04	4.54

*Note.* Numbers in bold type represent significant factor loadings. Numbers in ( ) represent factor loadings within pattern matrix.

**“Early” versus “middle” adolescent sample.** To explore the potential impact of grade differences on the factor structure, the early-middle adolescent group was split into “early” (Grade 8 – 10; n = 231) and “middle” (Grades 11 – 12; n = 163) adolescent groups. Although the sample size of the middle adolescent (n = 163) group was somewhat small, as suggested by the guiding principle of 10 subjects per item, exploratory factor analysis was undertaken with this group for comparative purposes only. With 231 subjects, the early adolescent sample was sufficient in size for a factor analysis of the 23-item scale, given that the item “I engage in social-sexual behaviour because my friends are having sex” had been dropped from the analysis. Accordingly, factor analyses of the 23 SMS items were conducted with the early and middle adolescent groups separately, using principal-components analysis followed by oblique rotations in each case. Results of these analyses are presented in Tables 2 and 3.

As hypothesized, the early (Grades 8 – 10) adolescent sample produced a less differentiated four-factor solution (see Table 2). Whereas the five “intimacy”, five

“enhancement”, and five “self-affirmation” items loaded on the same factors as in the original and full sample factor analysis, the four “peer approval” and the four “partner approval” items loaded on one single factor (with pattern loadings of .68 or higher) in the younger adolescent sample.



Table 2.

*Results of Principal-Axis Factoring with Oblimin Rotation for Early Adolescents (Grades 8 – 10)*

Item	Factor Loadings			
	Factor 1	Factor 2	Factor 3	Factor 4
13. Feel more interesting to others	<b>.92 (.94)</b>	.38	.36	.50
14. Feel more self confident	<b>.90 (.87)</b>	.36	.40	.54
15. Feel desirable	<b>.89 (.88)</b>	.37	.40	.49
12. Feel better about myself	<b>.88 (.86)</b>	.31	.44	.53
11. Prove I am attractive	<b>.80 (.74)</b>	.38	.42	.46
18. Worry partner won't want me	.34	<b>.90 (.91)</b>		
19. Afraid partner will leave me	.32	<b>.90 (.91)</b>		
16. Afraid partner won't love me	.33	<b>.89 (.88)</b>		
17. Afraid partner will be angry	.32	<b>.85 (.86)</b>		
21. People will think less of me If I don't have sex	.36	<b>.80 (.79)</b>		
20. People will talk if I don't have sex	.32	<b>.80 (.80)</b>		
24. Have sex so others won't put me down	.43	<b>.74 (.68)</b>		
22. Other people will kid me if I don't have sex	.37	<b>.72 (.69)</b>		
9. Feel closer to partner	.50		<b>.93 (.88)</b>	.50
8. Make emotional connection	.43		<b>.93 (.92)</b>	.46
10. Feel emotionally closer to partner	.45		<b>.92 (.91)</b>	.45
7. Express love	.40		<b>.88 (.84)</b>	.51
6. Be more intimate with partner	.41		<b>.76 (.64)</b>	.57
3. For excitement	.52		.44	<b>.87 (.84)</b>
2. Feels good	.42	.57	.45	<b>.85 (.88)</b>
5. Satisfy sexual needs	.54		.56	<b>.84 (.72)</b>
4. Thrill of it	.58		.43	<b>.84 (.74)</b>
1. Feel Horny	.50		.45	<b>.72 (.61)</b>
Eigenvalues	9.77	4.58	2.06	1.51
% of variance	42.46	19.93	8.93	6.55

*Note.* Numbers in bold type represent significant factor loadings. Numbers in ( ) represent factor loadings within pattern matrix.

As shown in Table 3, results of the factor analysis conducted for the middle (Grades 11 – 12) adolescent sample, yielded a five-factor solution with all 23 items loading on the same factors as was found in the original full sample analysis.

Results of these analyses indicated that middle adolescents distinguished between peer and partner approval items whereas younger adolescents did not. Thus, younger adolescents differentiate less between peers and partners when engaging in social sexual behaviours to gain approval and avoid social censure from a socially significant “other”.

Table 3.

*Results of Principal-Axis Factoring with Oblimin Rotation for Middle Adolescents (Grades 11- 12)*

<i>Item</i>	<i>Factor Loadings</i>				
	<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>	<i>Factor 4)</i>	<i>Factor 5</i>
12. Feel better about myself	<b>.91 (.89)</b>			.35	.42
13. Feel more interesting to others	<b>.85 (.87)</b>		.32		.39
14. Feel more self-confident	<b>.83 (.80)</b>			.33	.32
15. Feel desirable	<b>.82 (.79)</b>		.33	.32	.32
11. Prove I am attractive	<b>.79 (.75)</b>			.36	.33
9. Feel closer to partner		<b>.92 (.88)</b>		.45	
10. Feel emotionally closer to partner		<b>.91 (.93)</b>		.37	
8. Make emotional connection		<b>.90 (.88)</b>		.42	
7. Express love		<b>.89 (.91)</b>		.35	
6. Be more intimate with partner		<b>.83 (.70)</b>		.61	
17. Afraid partner will be angry	.32		<b>.91 (.89)</b>		.48
18. Worry partner won't want me	.31		<b>.90 (.89)</b>		.47
19. Afraid partner will leave me	.32		<b>.89 (.83)</b>		.54
16. Afraid partner won't love me	.35		<b>.89 (.90)</b>		.41
3. For excitement		.42		<b>.90 (.90)</b>	
4. Thrill of it	.34	.37		<b>.88 (.88)</b>	
2. Feels good		.48		<b>.85 (.80)</b>	
5. Satisfy sexual needs	.37			<b>.74 (.74)</b>	
1. Feel horny		.34		<b>.64 (.60)</b>	
20. Worry people will talk if I don't have sex	.39		.52		<b>.94 (.92)</b>
22. Other people will kid me if I don't have sex	.36		.46		<b>.91 (.92)</b>
21. People will think less of me If I don't have sex	.39		.46		<b>.86 (.82)</b>
24. Have sex so others won't put me down	.40		.44		<b>.81 (.73)</b>
Eigenvalues	7.35	5.52	2.24	1.92	1.45
% of variance	31.96	24.00	9.76	8.37	6.32

Note. Numbers in bold type represent significant factor loadings. Numbers in ( ) represent factor loadings within pattern matrix.

**Male versus female sample.** For exploratory purposes, follow up factor analyses were conducted by gender (n = 199 male, 195 female participants) in order to determine

whether sex motive differentiation would change as a factor of gender. While the female group yielded a five-factor solution, in which all 23 items loaded on the same factors as the older adolescent and full sample analyses, the male group yielded a less differentiated four-factor solution in which all 23 items loaded on the same factors as the younger adolescent analysis. Similar to the younger sample, peer and partner approval items loaded on one factor (with pattern loadings of .65 or higher) in the male sample. Although the results are preliminary, given the small sample size of both groups, this information may suggest that male youth, like the younger adolescent group, differentiate less between peer and partners when engaging in social sexual behaviour to gain approval and avoid social censure from a socially significant “other”.

Factor analysis as a function of both grade and gender could not be conducted due to an inadequate sample size. Follow up investigation is clearly warranted.

### ***Hypothesis 2: Analysis of Variance (ANOVA) Tests***

The second hypothesis suggested that gender differences would not be associated with intimacy or enhancement motives for sex. Further, it was expected that these approach motives would be positively associated with grade whereas the avoidance motives would not be associated with grade. A series of 2 (gender) by 5 (grade) analyses of variance (ANOVA) tests were used to evaluate the relationship between gender and grade, analyzing the mean differences of several categorical independent variables on a single dependent variable.

***Response variables: Sex motives and peer mattering.*** For these analyses, student responses to relevant items from each of the sex motive subscales (i.e., Enhancement, Intimacy, Self-Affirmation, Partner Approval, and Peer Approval, respectively) which

emerged from the earlier factor analysis undertaken with the “full” sample, as well as the four items from the MTOQ-Friends were used as dependent variables. Subjects’ scores on each dependent variable were an average of scores on relevant items for each of the scales respectively. Each of these composites were evaluated in terms of internal consistency using Cronbach’s alpha. Intercorrelations among the subscales were also examined. Results of these analyses are presented in Table 4.

Table 4.

*Sex Motive Reliabilities and Intercorrelations among the Sex Motive and Peer Mattering Scales among Early-Middle Adolescents*

Scale	$\alpha$	1	2	3	4	5
1. Enhancement	.91	-	-.--	-.--	--	--
2. Intimacy	.95	.55**	-	-.--	--	--
3. Self-Affirmation	.94	.50**	.39**	--	--	--
4. Partner Approval	.95	.12*	.13*	.36**	-	--
5. Peer Approval	.91	.21**	.07	.42**	.67**	-
6. Peer Mattering	.88	-.02	.01	-.05	-.25**	-.20*

Note. Responses were made on a 5-point scale (1 = almost never/never engage in sex for this reason, 5 = almost always/always engage in sex for this reason). \* $p < .05$ , \*\* $p < .01$

As shown in Table 4, the individual sex motives exhibited high internal consistency (all  $\alpha$ s  $\geq .91$ ) as did peer mattering ( $\alpha = .88$ ). Albeit significant, the majority of the sex motives subscale intercorrelations with a younger-middle adolescent sample were low in magnitude, consistent with the notion that these are distinct motives. Enhancement motives demonstrated moderate intercorrelations with intimacy motives (.55) and self-affirmations motives (.50) suggesting some overlap but not complete redundancy. The stronger intercorrelations (.67) between peer and partner approval motives, on the other hand, may suggest that a young-middle adolescent sample does not distinguish between these two motives. This information would be consistent with the less differentiated factor structure as found with the early (Grades 8 – 10) vs. middle (Grades 11 – 12) adolescent samples above.

***Analysis of variance (ANOVA) tests.*** In order to evaluate whether sex motives varied as a function of sex and grade, a series of 2 x 5 analyses of variance (ANOVA) were conducted with gender (Male, Female) and grade (8, 9, 10, 11, 12) serving as the independent variables (IVs) and each of Cooper's original sex motives serving as the dependent variables (DVs). Individual analyses of variance for each motive were considered more appropriate than a multivariate analysis of variance given our interest in each specific motive and given the exploratory nature of the research (Huberty & Morris, 1989).

***Approach Motives.*** As hypothesized, results indicated a significant main effect for sex,  $F(1, 375) = 23.42, p < .05$ , for enhancement motives. Male students ( $M = 3.55, SD = 1.03$ ) reported more sex-for-enhancement motives than female students ( $M = 3.07, SD = 1.04$ ). Male and Female students did not, however, differ significantly in terms of their reports of intimacy motives ( $M = 3.46, SD = 1.19$  for male students;  $M = 3.41, SD = 1.08$  for female students). Results indicated significant variations as a function of grade for both enhancement,  $F(4, 375) = 6.72, p < .05$ , and intimacy  $F(4, 374) = 3.84, p < .05$  motives. Post hoc analysis (Scheffe) indicated that Grade 8 students were significantly less likely to report enhancement motives for sex than students in Grades 9, 10, 11, or 12, with no significant differences between the latter four grade levels. Tamhane's  $t^2$  was used for intimacy post hoc analysis due to violation of the homogeneity assumption as suggested by a significant Levene's test. Significant differences were found between Grade 8 ( $M = 3.09, SD = 1.20$ ) and Grade 10 ( $M = 3.59, SD = 1.09$ ) as well as Grade 8 and Grade 12 ( $M = 3.69, SD = 1.04$ ) students, with Grade 10 and Grade 12 students reporting greater intimacy motives. In summary, results suggest that as hypothesized,

both enhancement and intimacy (approach motives) increase as a function of grade, although the effect sizes were small to modest (Eta squares ranging from .04 to .07).

**Avoidance Motives.** No significant grade or sex differences were found in student reports of partner approval motives. However, a significant main effect for sex was found for self-affirmation motives,  $F(1, 374) = 23.81, p < .05$  and peer approval motives,  $F(1, 362) = 19.04, p < .05$ . Female students were significantly less likely to report peer approval motives for sex ( $M = 1.39, SD = .67$ ) than were male students ( $M = 1.78, SD = .95$ ). Female students ( $M = 2.38, SD = 1.09$ ) were also significantly *less* likely to report having sex for self-affirmation motives than male students ( $M = 2.98, SD = 1.22$ ).

Although no significant grade differences were found for either self-affirmation or peer approval motives, a significant interaction between sex and grade was found for peer approval motives  $F(4, 362) = 3.27, p < .05$ , as shown in Figure 1. Separate ANOVA tests and appropriate post hoc analyses were conducted for male and female students separately. Results indicated a significant main effect for grade  $F(4, 183) = 2.97, p < .05$  for female students only suggesting that females were less likely to report peer approval motives at higher grades. Follow up post hoc analyses with the female student group was undertaken with Tamhane's  $t^2$  test as the homogeneity of variance assumption had been violated (significant Levene's test). No significant post hoc comparisons were found.

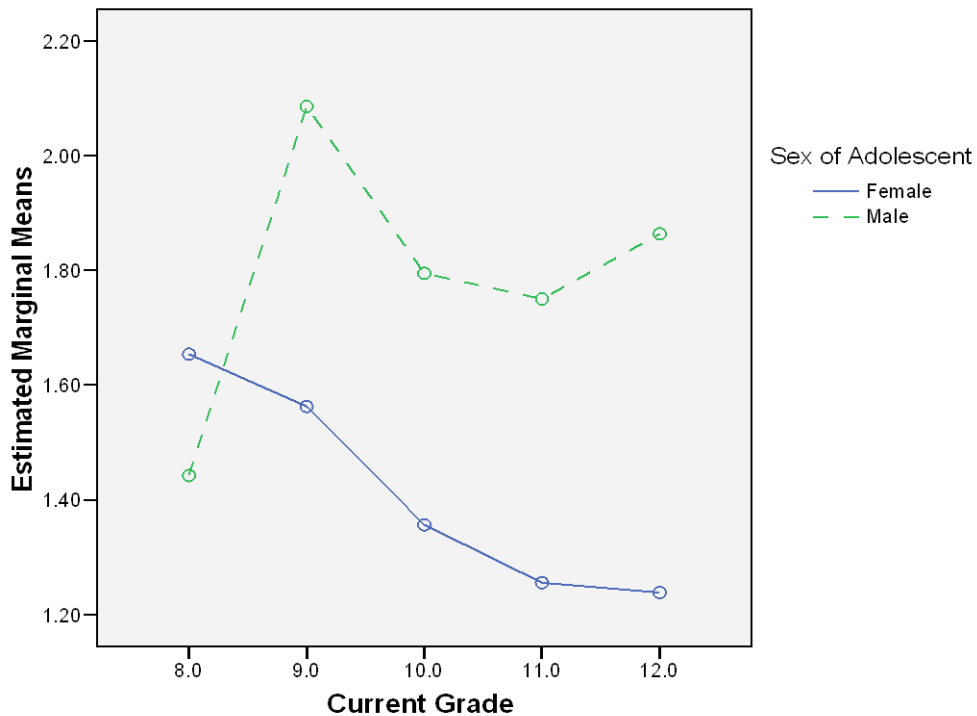


Figure 1: Grade and Sex Differences in Peer Approval Motives

### *Hypothesis 3: Regression Analyses*

The third hypothesis stated that perceptions of peer mattering would be negatively associated with peer and partner approval motives for sex over and above the influences of gender and grade. To evaluate the association between peer mattering and sex motives over and above the influences of gender and grade, a hierarchical multiple regression analysis was employed for each of Cooper's original sex motives with a reduced sample ( $n = 139$ ), which included those subjects who completed the peer mattering scale. In all regressions, gender (coded as 1 for female, 2 for male) and grade (8, 9, 10, 11, 12) were entered in the first step as main effects. To investigate the



possibility of a compensatory model, a coded interaction term (gender x grade) was entered in the second step. To avoid multicollinearity between the independent variables, the independent variables were centered before creating the interaction term (Aiken & West, 1991). Mattering to friends was added in the third and final step to investigate whether perceived sense of peer mattering influenced social sex motives over and above, age, gender, or the interaction of the two. Boxplots and scatterplots were inspected for irregularities in the residuals. Outliers were found to be non influential. The results of the seven hierarchical regressions follow.

***Regression 1: Enhancement Motives.*** The first regression was used to evaluate a model predicting enhancement sex motives from sex, grade level and perceived mattering to peers. As shown in Table 5, only the first model was statistically significant,  $F(2, 129) = 4.432, p < .05, R^2 = .064$ , explaining only 6.4% of the variance in enhancement motives. Within this model, only grade had a significant unique effect ( $\beta = .248, p < .01$ ), consistent with the ANOVA results, with students in higher grades reporting more sex for enhancement motives than younger students. Peer mattering entered in Step 3, did not add significantly to the prediction of enhancement motives for sex. Thus, grade differences accounted for approximately 6% of the variance in reports of enhancement motives for sex, but neither sex of subject nor peer mattering contributed further to this prediction.

Table 5.  
*Hierarchical Regression Predicting Enhancement Sex Motives*

Independent Variables	R <sup>2</sup> Δ	Adjusted R <sup>2</sup>	β
Step 1: Main Effects	.064*	.050*	
Gender			.061
Grade			.248**
Step 2: Two-way interactions	.003	.045	
Gender			.075
Grade			.251**
Gender x Grade			.055
Step 3: Peer Mattering	.001	.068	
Gender			.080
Grade			.256*
Gender x Grade			.055
Peer Mattering			.030

\* $p < .05$ . \*\* $p < .01$ .

**Regression 2: Intimacy Motives.** The second regression was undertaken to predict intimacy motives as a function of sex and grade (Step 1) and then peer mattering (Step 3). As see in Table 6, no statistically significant relationships were observed for this analysis, although a marginally significant trend was observed between grade and intimacy ( $\beta = .164, p = .06$ ). Consistent with results reported previously for the ANOVA test with the larger sample, intimacy motives tend to be positively associated with grade.

Table 6.  
*Hierarchical Regression Predicting Intimacy Sex Motives*

Independent Variables	R <sup>2</sup> Δ	Adjusted R <sup>2</sup>	β
Step 1: Main Effects	.027	.012	
Gender			-.020
Grade			.164 <sup>t</sup>
Step 2: Two-way interactions	.000	.004	
Gender			-.019
Grade			.164
Gender x Grade			.006
Step 3: Peer Mattering	.001	-.003	
Gender			-.014
Grade			.168
Gender x Grade			.005
Peer Mattering			.031

\* $p < .05$ . \*\* $p < .01$ . <sup>t</sup>  $p < .10$ .

**Regression 3: Peer approval motives.** Sex for peer approval motives were examined in the third regression analysis. As shown in Table 7, neither grade nor sex differences contributed significantly to the prediction of peer approval motives, but perceived peer mattering did emerge as a statistically significant predictor,  $F(4, 119) = 2.113, p < .05, R^2 = .066$ , accounting for 6.6% of the variance of peer approval sex motives. As hypothesized, the results indicate that regardless of gender or grade, students

who reported a lower sense of perceived mattering to peers were significantly more likely to engage in social sexual behaviours for peer approval motives.

Table 7.

*Hierarchical Regression Predicting Peer Approval Sex Motives*

Independent Variables	$R^2\Delta$	Adjusted $R^2$	$\beta$
Step 1: Main Effects	.022	.006	
Gender			.142
Grade			-.033
Step 2: Two-way interactions	.013	.011	
Gender			.112
Grade			-.043
Gender x Grade			-.119
Step 3: Peer Mattering	.032*	.035*	
Gender			.089
Grade			-.064
Gender x Grade			-.110
Peer Mattering			-.181*

\* $p < .05$ . \*\* $p < .01$ .

**Regression 4: Partner approval motives.** In the fourth regression, sex for partner approval motives were predicted as a function of sex and grade (Step 1) and then peer mattering (Step 2). Results of this analysis are presented in Table 8. Only the third model was statistically significant,  $F(4, 121) = 2.413, p = .05, R^2 = .074$ , explaining 7.4% of the variance in partner approval motives. Consistent with peer approval motives, a main

effect of peer mattering ( $\beta = -.241, p < .05$ ) was found, with sex for partner approval motives decreasing with a higher sense of perceived mattering to peers. As hypothesized, students who perceived themselves as mattering less to friends were more likely to engage in social sexual behaviour for partner approval motives.

Table 8.

*Hierarchical Regression Predicting Partner Approval Sex Motives*

Independent Variables	R <sup>2</sup> Δ	Adjusted R <sup>2</sup>	β
Step 1: Main Effects	.010	-.006	
Gender			.101
Grade			-.001
Step 2: Two-way interactions	.008	-.006	
Gender			.077
Grade			-.088
Gender x Grade			-.091
Step 3: Peer Mattering	.056**	.043**	
Gender			.045
Grade			-.036
Gender x Grade			-.081
Peer Mattering			-.241*

\* $p < .05$ . \*\* $p < .01$ .

**Regression 5: Self-affirmation motives.** Results of the regression analysis conducted for self-affirmation motives for sex were nonsignificant. Neither grade, sex, nor peer

matterings were found to be associated with self-affirmation sex motives in the reduced sample.

## Discussion

The goal of the present study was to examine the applicability of an existing multidimensional sex motive typology with a younger (early to middle) adolescent population and to examine grade and gender differences regarding sex motives in adolescence. In addition, the current study explored whether perceptions of mattering to peers influenced social sexual motives over and above gender or grade. This is the first study to utilize exploratory factor analysis to investigate the factor structure of the SMS with an early-middle adolescent population exclusively. This is also the first study to investigate the relationship between perceptions of mattering to peers and motives to engage in social sexual behaviours.

Exploratory factor analyses yielded differences in the factor structure of the SMS as a function of the grade level of respondents. Consistent with Cooper and colleagues' (1998) original factor analysis with an older adolescent and young adult sample, five factors were found among the sex motives reported by the full sample of early-middle adolescents in the current study. When factor analyses were conducted separately for students in grades 8-10 and for students in grades 11-12, however, different factor structures were observed. A five-factor solution was found with the middle adolescent (Grades 11-12) sub-sample, but a four-factor solution was found with the early adolescent (Grades 8-10) sub-sample. Although the intimacy, enhancement, and self-affirmation items factored consistently across samples, the peer and partner approval items loaded onto combined single factor within the early adolescent group, similar to findings by Gebhardt and colleagues (2003, 2006). Using PCA, they also found peer and partner approval motives to load onto one common factor, "the motive to please others",

in two samples of Dutch adolescents (ages 15-23 and 16-24, respectively). Taken together with the present results, these studies demonstrate that younger adolescents differentiate less between peers and partners when engaging in social sexual behaviours to gain approval and avoid social censure from a socially significant “other”. Among younger adolescents, then, peers may be as influential as potential sexual partners when sexual behaviour is undertaken in order to please others rather than oneself.

Although results must be interpreted with caution given limited sample sizes, analyses revealed that male students, regardless of age, also failed to differentiate between peers and partners with regard to motives to engage in social-sexual behaviours. Whereas a five-factor solution was found for sex motives among female students, only a four-factor solution, consistent with the “younger” (Grades 8 – 10) sub-sample, was found with the male subsample. Thus, although preliminary, it appears that both age and gender may influence sex motive endorsement among adolescents. Follow up investigation is warranted with adequate sample sizes to allow for an examination of the interaction of the two variables.

The discussion proceeds with an interpretation of the results with regard to Approach motives (i.e., enhancement, intimacy), followed by results with regard to Avoidance motives (i.e., self-affirmation, peer approval, partner approval).

### ***Approach Sex Motives***

Consistent with results reported by Cooper and colleagues (1998), both enhancement and intimacy motives were found to increase significantly as a function of grade in the present study. Gebhardt and colleagues (2003) have found levels of reported intimacy motives to be inversely related to casual sex within an adolescent and young-



adult (ages 15 – 23) populations. Moreover, research indicates that approach motives (i.e., enhancement and intimacy) are associated with greater relationship satisfaction and longevity (Impett & Peplau, 2002; Impett et al., 2005) in adulthood. Given that intimacy motives may in fact “buffer” the detrimental effects of having sex for physical pleasure motives alone (see Cooper et al., 2006 for review), it follows then that younger adolescents who engage in social sexual behaviours for motives other than intimacy may be at a higher risk for developing and maintaining a pattern of risky sexual practices.

Studies exploring gender differences in sexual motives (e.g., Carroll et al., 1985; Cooper et al., 1998; Leigh, 1989; Murstein & Tuerkheimer, 1998) have, by and large, served to support widely held beliefs that men report higher physical or pleasure based motives for sex whereas women report higher love or “intimacy” motives for sex. The one study assessing sex motives in an exclusively younger adolescent population (Balter, 2005) did not find expected gender differences with regard to intimacy. In the present study, male students reported significantly more enhancement motives than female students. No gender differences were found for intimacy motives. The diminished “gender effect” concerning intimacy motives in younger adolescent populations may suggest a shift in psychosocial gendered values within the larger sociocultural climate.

### ***Avoidance Sex Motives***

Contrary to expectations, results indicated that male students were more likely than female students to report sex for peer approval and self-affirmation motives. Male students reported significantly higher self-affirmation and peer approval motives than female students across grade levels (8-12). Sex for peer approval motives were found to decrease with higher grade levels for female students only. Although gender differences

in self-affirmation and peer approval motives may be developmentally connected, it is plausible that such gender differences may be partially explained, or “mediated”, by societal norms within the high school environment. If, for example, engaging in social sexual behaviour is associated with peer popularity for male but not female students, male students may be more likely to engage in social sexual behaviours for self-affirmation and peer approval motives.

With the exception of peer approval motives for female students, avoidance motives for sex did not decrease across grade level. In contrast, approach motives (i.e., enhancement and intimacy) increased with grade level. These findings may suggest that avoidance motives, once developed, are more resistant to change over time. The need for comprehensive sexual health efforts targeted at preventing adolescents from developing behavioural patterns that utilize social sexual behaviour for avoidance purposes is emphasized.

Over and above gender and grade, perceptions of peer mattering were significantly related to peer and partner approval motives. Specifically, the more students felt that they mattered to peers, the less they reported peer and/or partner approval motives for social sexual behaviour. As would be expected from Marshall’s (2001) model of perceived mattering, it seems that adolescents who perceive themselves as mattering less are more likely to seek interpersonal attention (i.e., attention from others) in an effort to boost their sense of perceived mattering.

### ***Practical Implications***

The findings of this study have several implications with reference to the development of positive and healthy approaches to sexuality and sexual relationships in

adolescence, adding to our understanding of the belief systems that inform social sexual behaviour in teens. Within the sex motive literature, there is evidence to suggest that avoidance motives for sexual behaviour are related to problematic outcomes in the areas of risky sexual behaviour (Cooper et al., 1998; Gebhardt et al., 2006; Gebhardt et al., 2003), and sexual compliance (see Impett & Peplau, 2003 for review) as well as interpersonal well-being and relationship quality (Impett et al., 2005). The current results indicate that approach motives (i.e., enhancement and intimacy) increase with grade level, but avoidance motives, with the exception of peer approval motives for female students, remain stable across grade levels. From a behavioural perspective, it may be argued that once sexual behaviours are utilized as an effective strategy to avoid negative affect, they may be reinforced over time, developing into a behavioural pattern that becomes more resistant to change. Longitudinal research is needed to further investigate the developmental trajectory of sexual motives from adolescence through to adulthood.

Results from the present study also demonstrate that male students engage in sexual behavior more for self-affirmation and peer approval motives than female students. The current research also suggest that male students, similar to younger students, are less likely to differentiate between partners and peers when engaging in social sexual behaviour for the approval of a socially significant other. Taken together, this information may underscore the influential effect of the peer group for male students in particular. Normative information pertaining to sexual behaviour and motivations across age and gender groups may serve to challenge erroneous belief systems (e.g., “Everyone else is doing it.” or “I’m the only one my age who’s still a virgin.”) Educational activities that challenge erroneous beliefs may also increase adolescents’

awareness of possible socio-cultural variables (e.g., peer culture, media) that may serve to perpetuate these beliefs.

The current study suggests that the level of sex for peer approval motives decrease for female students at higher grades. This is a heartening finding given that Gebhardt and colleagues (2003) found that female students who reported higher “sex-to-please-other” motives were less likely to use condoms with casual sex partners. Nonetheless, it is likely that both male and female adolescents would benefit from education and discussion pertaining to the implications of sex for particular motives.

Given that previous research has demonstrated that adolescents who utilize sex to please others (e.g., peer approval, partner approval) or to enhance their own mood (e.g., self-affirmation) report a higher number of casual sex partners if they are engaging in casual sex relationships (Gebhardt and colleagues, 2003), sexual health education addressing the implications of sexual motives is imperative. Male students may particularly benefit from such efforts. Information pertaining to the implications of approach/avoidance motives for sex with reference to relationship well-being, satisfaction, and longevity in adulthood (Impett & Peplau, 2002; Impett et al., 2005) may be particularly informative. By supporting self-awareness of underlying sex motives as well as the possible immediate and long-term implications of such motives, adolescents may be empowered to make informed sexual choices.

Peer mattering results further underscored the relationship between the peer group and sexual motives in early-middle adolescence. In particular, the present results showed that one’s sense of mattering to peers is associated with social sexual motives to attain the approval from a socially significant other (peers, partner), lending further support for the

developmental importance of the peer group with regard to romantic relationships, as has been suggested in the field (e.g., Connolly & Goldberg, 1999; Connolly & Johnson, 1996; Furman & Wehner, 1997; Scharf & Mayseless, 2001). The fact that younger adolescents and male adolescents were less likely to differentiate between peer and partner approval motives for sex in the current study may suggest that peers are as influential as potential sexual partners when sexual behaviour is undertaken to gain approval/avoid social censure from others. Given the adverse implications of sex to “please others” for both male and female adolescents (Gebhardt et al., 2003) efforts to facilitate student interconnectedness and belonging may be beneficial. Students who experience a fundamental sense of mattering to others may be less likely to engage in behaviours to gain the approval of others.

### ***Limitations***

The following section discusses methodological and theoretical limitations within this study. Methodological limitations pertain to the study’s sample, design, and measures used. Drawn from a single secondary school in an area considered to be of high socio-economic status, the sample may be somewhat limited in terms of its representativeness and, by extension, limiting the generalizability of the present results. Participation rates were also less than ideal. Of the student population approached for participation, roughly 56% returned forms indicated consent in Wave 1, 65% in Wave 2, and only 37% in Wave 3. The drop in Wave 3 was partially attributed to one teacher declining to collect consent forms as well as a change in administration at the school. Particularly heartening is the fact that the present results are consistent with those of other researchers in this area (Gebhardt, et al., 2006; Gebhardt et al., 2003) with regard to peer/partner approval

motives being distinguished less with younger adolescents. Nevertheless, replication is warranted with a larger and more diverse sample to improve the generalizability of these findings

A second methodological limitation was that the sample size for the older (Grades 11 – 12) adolescents was insufficient to satisfy the guiding principle of 10 subjects per item for factor analysis. Given that the focus of the study was the factor structure of the younger (Grades 8-10) adolescent population, factor analysis was undertaken with the older (Grades 11 – 12) sample for comparative purposes only. The sample size of the younger (Grade 8 – 10) sample was sufficient.

Although drawn from a larger longitudinal project, the cross sectional design of the current study assessed inter-individual differences only, accounting for the relationship between gender, grade, perceptions of peer mattering and sex motives at a particular point in time. By the nature of the design, inferences regarding specific intra-individual differences or broad developmental process could not be made. Further, as the study was correlational, causal conclusions could not be made. However, the results of this study do contribute to our understanding of the role of grade, gender, and peer mattering with reference to motives for social sexual behaviour in early-middle adolescence.

Self-report measures such as those used in this study, are limited in several ways. The potential for inaccuracies is inherent in all self-report data. Information pertaining to sexual motives, however, is of particular concern given the possibility of social desirability bias (e.g., Weideman, 2004), in which participants respond to questions in a

“desirable” rather than an accurate manner. Given the personal and subjective nature of sex motives however, self-report measures were virtually unavoidable.

Another significant methodological limitation lies in the fact that four coping items of the SMS were not administered. Although the principal investigator omitted these items for ethical reasons given the young age of some of the sample, administration of the coping items would have, nonetheless, provided a clearer understanding of the SMS factor structure within a young-middle adolescent population. Further, administration of the coping items would have allowed for a more complete developmental profile of avoidance motives in this population. Given time constraints, only four of the most pertinent items of the MTOQ-Peers were administered, limiting the study further.

The current study altered the definition of “sex” on the SMS to include social sexual behaviours. As such, students responded to the SMS with reference to “kissing, fondling genitals, vaginal-penile intercourse, oral sex or touch mouth to genitals and masturbating with a partner”. Given the diverse implication of these behaviours (e.g., kissing vs. intercourse), it may be argued that motivations for these behaviours are quite different and should not be combined theoretically. Future research is needed to determine whether motives may differ as a function of the particular social sexual behaviour it serves.

### **Future Research**

The findings of the present study have several theoretical implications concerning sex motives within a young-middle adolescent population. Although results demonstrate a less differentiated model of sex motives for younger adolescents, the evidence is

somewhat tentative given the insufficient sample size of the middle adolescent (Grades 11 – 12) sample. Preliminary evidence also suggests that gender may influence the factor structure of the SMS. Future research with larger sample sizes is needed such that the factor structure can be analyzed in light of both grade and gender concurrently.

Overall, the current study suggests that male students are more likely to report sex for enhancement, self-affirmation and peer approval motives. Future research is needed to determine the extent to which societal norms may be contributing to higher self-affirmation and peer approval motives for male students.

To inform a developmental understanding of sex motives in adolescence, longitudinal research is critical. By measuring sex motives over time, longitudinal research may help determine the developmental trajectory of approach and avoidance motives as well as inter or intra personal factors contributing to the emergence and maintenance of particular motivations over time.

Although perceived mattering to peers was significantly related to peer and partner approval motives for sex in the current study, the variance accounted for was quite low. Future research is needed to create a more complete picture of the contextual factors that influence motives for social sexual behaviour in adolescence. For example, parent-adolescent attachment is argued to be the primary relationship in adolescence (Allen & Land, 1999; Bowlby, 1969/1982; Paterson, Pryor, & Field, 1995) even though attachment relationships are expanding to include family members, friends, and romantic partners (Bowlby, 1969/1982; Trinke & Bartholomew, 1997) in adolescence. The inclusion of mattering to parents and romantic partners in future research may create a



clearer understanding of the kinds of relationships that serve to influence affectively based motives for social sexual behaviour.

Further, research is needed to delineate the specific process(es) by which perceptions of peer mattering are related to peer and partner approval motives. Although Marshall's (2001) model suggests that those low in perceived mattering will seek more attention from others, investigation of the process by which perceived peer mattering influences peer/partner approval, and/or whether peer/partner approval influence perceptions of mattering to peers is needed.

Finally, it would be wise for future research to investigate whether differences exist between SMS motives depending on the target behaviour (e.g., kissing vs. oral sex) in an early-middle population. Although the functionalist perspective suggests that the implications of behaviour rests in the underlying motive it serves, it seems critical to understand whether these motives differ depending on the specific social sexual behaviour in question. This remains a critical question, both methodological and theoretical, for future research.

In summary, the current study demonstrated that younger adolescents distinguish less between peer and partner motives for social sexual behaviour than older adolescents and young adults. With reference to grade and gender differences, the two approach motives, enhancement and intimacy, were found to increase with grade. Male students reported significantly more enhancement (approach), self-affirmation (avoidance) and peer approval (avoidance) motives. More specifically, the endorsement of peer approval motives decrease with grade for female students only. The endorsement of peer and partner approval motives for sexual behaviour were positively related to perceptions of peer mattering, suggesting that the peer group may influence sexual decision making in adolescence. The fact that the younger adolescent (Grades 8 – 10) group were less likely to differentiate between peer and partner approval motives for sex further emphasizes the importance of peers in earlier adolescence. The current research contributed to the theoretical understanding of sex motives within a young-middle adolescent population while underscoring the importance of the peer group when addressing issues of adolescent sexual health and decision-making.

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### Appendix A: Demographic Information

1. Are you male or female?
2. What is your age?
3. What is your grade?
4. What is your cultural background?

First Nations / Native

Caucasian / European

Latino / Hispanic

African

South Asian (e.g., India, Pakistan, Sri Lanka)

East Asian (e.g., China, Japan, Korea, Hong Kong, Taiwan, Vietnam)

South East Asian (e.g., Philippines, Indonesia, Thailand)

Appendix B: Sex Motives Scale (Cooper et al., 1998)

*Sex includes many behaviours. These behaviours include kissing, fondling genitals, vaginal-penile intercourse, oral sex or touch to mouth genitals, and masturbating with a partner. Have you ever done **any** of these behaviours with a partner?*

No   

Yes   

*Listed below are different reasons why people have sex. For each, select the response which best describes how often you personally have sex for each of these reasons (on a scale where 1 = almost never, 3 = sometimes, 5 = almost always).*

1. I feel horny.
2. It feels good
3. For excitement
4. For the thrill of it.
5. To satisfy my sexual needs.
6. To be more intimate with my partner.
7. To express love to my partner.
8. To make an emotional connection.
9. To feel closer to my partner.
10. To feel emotionally closer to my partner.
11. To prove I am attractive.
12. I feel better about myself.
13. I feel more interesting to others.
14. I feel more self-confident.
15. It helps me feel desirable.
16. I am afraid my partner won't love me if I don't have sex.

17. I am afraid my partner will be angry with me if I don't have sex.
18. I worry my partner won't want me if I don't have sex.
19. I am afraid my partner will leave me if I don't have sex.
20. I worry people will talk about me if I don't have sex.
21. People will think less of me if I don't have sex.
22. Other people will kid me if I don't have sex.
23. My friends are having sex.
24. I have sex so others won't put me down.

Appendix C: Mattering to Others Questionnaire – Friends (Marshall, 2001)

The statements listed below are about the way you feel about your closest friends. Choose the rating you feel is best for you (on a scale where 1 = not much, 3 = somewhat, and 5 = a lot).

1. I am important to my friends
2. I am needed by my friends
3. I am missed by my friends when I am away
4. I matter to my friends

Appendix D: Lord Byng Student Life Survey Parental Consent Form.

**Lord Byng Student Life Survey  
Parental Informed Consent Form**

**Principal Investigator:** Dr. Sheila Marshall  
Social Work and Family Studies  
(604) 822-5672

**Co-Investigators:** Grant Charles, Lisa Catto, Carla Haber, Alice  
Balter, & Derek Wun  
Social Work and Family Studies  
Phone: 822-5672

Dear Parent,

We are writing to request permission for your son or your daughter to participate in a research project that is being conducting at Lord Byng School. This project is a collaborative project between Lord Byng Secondary School and researchers from the School of Social Work & Family Studies at the University of British Columbia. Part of this study is being conducted to fulfill the thesis requirements for a Master of Arts degree for Lisa Catto and Derek Wun under the direction of Dr. Sheila Marshall.

The overall purpose of the study is to attempt to understand whether the dress code and other programs over the school year are related to students' perceptions of safety and well-being and their day-to-day decision making. The goal for embarking on the study, as established by Lord Byng Secondary School is:

- To improve levels of social responsibility in all students at Lord Byng in order to foster a positive school climate which stimulates student learning.

The objectives are:

- To reduce the amount of theft, vandalism, and graffiti by strengthening the bond between school and student.
- To create awareness, through education and modeling positive language to build a safe and caring learning community.
- Promote respectful and responsible attitudes and safe behaviours around sexuality including body image, sexual expression, and sexual orientation.
- To strengthen student to student relationships.

The research study will examine how students make important decisions about what to wear to school, how to act with same sex and opposite sex friends, scheduling and sleep. Additionally, the research project will track students' feelings of safety and well-being at school. The information that we will acquire from this study will be useful for the educators at Lord Byng, counsellors, and parents of adolescents.

We write this letter to invite your adolescent child to participate in this study. Participation is completely voluntary. You may refuse to allow your child to participate without any consequences. Whether your child participates or not will have no affect on his or her marks or grades.

Involvement in this study includes filling out a questionnaire at the beginning of the school year. In the next 3 years (2006, 2007, 2008), students will have an opportunity to continue participating in the study. Convenient times will be arranged with teachers to ensure that core curricula are not affected. The questionnaires will take about 1 hour to complete. The questionnaires will not be linked to students' names, nor will students write their names on the questionnaires. Students who do not participate will be engaged in self-assigned tasks related to their school work (e.g., finishing homework, reading) while the others complete the questionnaires.

Participants can refuse to answer any question, and may withdraw from the study at any time. To maintain privacy, your child's name will not be recorded at any time.

There are no known risks associated with being involved in this study. In the unlikely event that your child feels uncomfortable as a result of the questions, he or she will be provided with the opportunity to speak to a counsellor.

All information collected for this research will be kept in a locked filing cabinet on the UBC Point Grey campus. No names or other identifying information will appear in any reports of the completed study. Only the research team will have access to the data.

All students who return a consent form will be included in the pizza party draw. The classes returning the largest proportion of consent forms (regardless of whether or not they participate in the survey) will be eligible to win a pizza party that will take place during a lunch hour at school.

If you have any questions or desire further information with respect to this study, you may contact Dr. Sheila Marshall or one of her associates at (604) 822-5670. If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at 604-822-8598.

Thank you for your time and consideration of this request. **Please sign the consent form on the following page and return it with your son or daughter to the school.**

**Consent:**

Your child's participation in this study is entirely voluntary and you may refuse to participate or withdraw your child from the study at any time without penalty.

Your signature below indicates that you have received a copy of this consent form for your own records.

Please indicate whether you consent for your son/daughter to participate in the study with you by checking the appropriate box below:

YES, I

NO, I do not consent to my child's participation in this study.

Child's name (please print):

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Parent Name (please print):

---

---

Parent Signature

Date

**Please return this form to the school.**