IMPACT OF VICTIMIZATION DURING YOUTH ON ADULT HIGH-RISK SEXUAL

BEHAVIOUR AMONG GAY AND BISEXUAL MEN

by

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Abstract

Impact of Victimization During Youth on Adult High-Risk Sexual Behaviour Among Gay and

Bisexual Men

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Based on the minority stress model, this study examines the impact of general and gay-specific

childhood teasing on adult high-risk sexual behaviour among gay and bisexual men, mediated by

depression and social anxiety. High-risk sexual behaviour was operationalized as the number of

acts of unprotected anal intercourse with a partner of opposite or unknown HIV status, and also

as the number of partners of opposite or unknown HIV status with whom an individual engaged

in unprotected anal intercourse. Depression, social anxiety, and retrospective self-report of

childhood teasing were measured at baseline, and sexual behaviour was measured at 6-month

follow-up. Results indicate that gay-specific teasing, but not general teasing, was indirectly

associated with number of high-risk sex acts via depression. Additionally, both types of teasing

were directly associated with number of high-risk sex partners after accounting for depression

and social anxiety.

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Impact of Victimization During Youth on Adult High-Risk Sexual Behaviour

Among Gay and Bisexual Men

Since the beginning of the human immunodeficiency virus (HIV) pandemic, over 60 million people have been infected and almost 30 million people have died. Although the number of new infections has decreased by 20% over the past decade, the number of people living with HIV continues to increase due to improved access to antiretroviral treatment (UNAIDS, 2010a). Globally, the greatest prevalence of HIV is in Sub-Saharan Africa, where 68% (22.5 million) of HIV-positive individuals reside, and the dominant modes of transmission are unprotected heterosexual intercourse and mother-infant transmission (UNAIDS, 2010b). In Canada and the United States, the populations at highest risk are gay and bisexual men, injecting drug users, and immigrants from endemic countries. However, the dominant mode of transmission in both countries is unprotected anal intercourse between men (UNAIDS, 2009).

Despite education and prevention efforts aimed at reducing high-risk sexual behaviour among gay and bisexual men, this group continues to have a disproportionately higher HIV prevalence and incidence than any other group in Canada and the United States. In Canada, the incidence of HIV among gay and bisexual men remained relatively stable from 2004 to 2008, and in 2008 the risk group with the largest proportion of new HIV infections was gay and bisexual men, with 44.5% of new infections being attributed to sexual contact between men (Public Health Agency of Canada [PHAC], 2010). In 2009, there were 2,417 new positive HIV cases reported in Canada, with 41.8% of these attributed to sexual contact between adult men (PHAC). This trend is similar in the United States, where approximately 61% of all new HIV infections between 2006 and 2009 occurred among gay and bisexual men (Centers for Disease Control and Prevention, 2011). Given that gay and bisexual men continue to make up the

majority of new infections in North America, continued investigation into psychosocial factors that impact high-risk sexual behaviour of gay and bisexual men is warranted (Wolitski and Fenton, 2011).

High-risk sexual behaviour may be operationalized in different ways. The per-contact probability of HIV transmission between men during unprotected anal intercourse is estimated to range from 0.11% for circumcised men engaging in insertive anal intercourse to 1.43% for men engaging in receptive anal intercourse with ejaculation by the insertive partner (Jin et al., 2010). These data suggest that the risk of HIV transmission increases each time an individual has unprotected anal intercourse with someone whose HIV status is either serodiscordant (i.e., an HIV-negative man and an HIV-positive man having sex), or unknown. There are also data to suggest that having four or more male sex partners is associated with an increased risk of HIV transmission compared to men reporting less than four partners (Koblin et al., 2006). In a meta-analysis examining the link between negative affect and sexual risk behaviour (Crepaz & Marks, 2001), high-risk sexual behaviour was operationalized in a number of ways across studies, including *number of times* an individual has had unprotected anal intercourse (either insertive or receptive) with a partner of serodiscordant or unknown HIV status, *number of partners* of serodiscordant or unknown HIV status with whom an individual has had unprotected anal intercourse, and a composite of *number of times* and *number of partners*.

Theoretical Models Explaining Sexual Health Outcomes in Gay and Bisexual Men

Multiple co-occurring psychosocial problems in a given population may sometimes produce a cumulative negative impact on health outcomes, creating what is known as a syndemic, defined by the Centers for Disease Control and Prevention as synergistically interacting epidemics that impact a given population (CDC, 2012). According to the syndemic

model, one explanation for the disproportionately high incidence of HIV among gay and bisexual men may be the additive impact of multiple psychosocial problems faced by some members of this community, such as mental health problems, substance use, verbal and physical victimization, and minority stress (Stall et al., 2003). Several studies have documented the additive effects of multiple psychosocial problems in predicting high-risk sexual behaviour and HIV-positive status among gay and bisexual men (e.g., Mustanski, Garofalo, Herrick, & Donenberg, 2007; Stall et al., 2003).

Although the syndemic model illustrates that multiple co-occurring psychosocial problems such as mental health problems and victimization have an additive negative impact on sexual health outcomes, the syndemic model does not elucidate the way in which these psychosocial problems interact with one another nor does it indicate the directionality of influence. The concept of minority stress, defined as psychosocial stress resulting from having minority status (Brooks, 1981), has been incorporated into research examining adverse mental health outcomes among gay men (Meyer, 1995). The minority stress model (Meyer, 2003) adds to the syndemics literature by indicating the nature of the relationships among psychosocial problems. The minority stress model is used to explain why minority group members such as gay and bisexual men experience disproportionately higher rates of mental health problems as compared with non-minorities. According to this model, stressors such as stigma, prejudice, and discrimination that are directed toward gay and bisexual men create a hostile social environment resulting in mental health problems. Meyer proposes that minority stress occurs along a continuum ranging from distal to proximal. Distal stressors are objective events such as discrimination, victimization, or violence that are experienced by the individual. Proximal stressors are subjective personal processes such as internalized homophobia, concealment of

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sexual orientation, and expectations of rejection that are based on an individual's experiences. The use of the terms *distal* and *proximal* in the minority stress model refers to distance from the individual (i.e., outer vs. inner processes), rather than temporal distance (i.e., past vs. present)

Hatzenbuehler and colleagues (2008) tested the minority stress model and reported that proximal minority stress within the past 12 months was associated with depression symptoms as well as high-risk sexual behaviour, indicating that minority stress may play a role in both mental and sexual health outcomes. Hatzenbuehler (2009) then proposed a psychological mediation framework whereby minority stress (i.e., discrimination, expectations of rejection) experienced by members of stigmatized minority groups leads to an increase in general negative psychological processes (i.e., emotion dysregulation, social and interpersonal problems, maladaptive cognitive processes) that are associated with mental health problems. These general psychological processes, in turn, mediate the relationship between minority stress and mental health problems. In light of evidence suggesting proximal minority stress is associated with high-risk sexual behaviour among adults (Hatzenbuehler, 2008), the current study examines the long-term impact of distal minority stress experienced during childhood on high-risk sexual behaviour in adulthood. Specifically, the current study examines the impact of childhood victimization, a form of distal minority stress that is disproportionately experienced by gay and bisexual men (Bontempo & D'Augelli, 2002), on sexual health outcomes in adulthood, proposing that mental health problems will mediate the association between minority stress and high-risk sexual behaviour.

Mental Health Problems

As might be predicted by the minority stress model, gay and bisexual men suffer from mental health problems such as mood, anxiety, and substance abuse disorders at a higher rate

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than heterosexual men (Cochran, Sullivan, & Mays, 2003; Sandfort, de Graaf, Bijl, & Schnabel, 2001). Specifically, they are more likely than heterosexual men to experience major depression, bipolar disorder, and all anxiety disorders except for generalized anxiety disorder. They are also 2.7 times more likely than heterosexual men to suffer from comorbid psychological disorders (Sandfort et al.).

Mental health problems have also been implicated in high-risk sexual behaviour between gay and bisexual men (e.g., Safren, Blashill, & O'Cleirigh, 2011; Stall et al., 2003; Mustanski, Garofalo, Herrick, & Donenberg, 2007). Depression severity has been associated with greater risk for HIV infection (Alvy et al., 2011; Hutton, Lyketsos, Zenilman, Thompson, & Erbelding, 2004; Koblin et al., 2006; Ryan, Forehand, Solomon, & Miller, 2008), including higher rates of unprotected receptive anal intercourse (Parsons, Halkitis, Wolitski, & Gomez, 2003) and having three or more sex partners in a six-month period (Perdue, Hagan, Thiede, & Valleroy, 2003). The association between depression and high-risk sexual behaviour has not been consistently demonstrated across all studies, possibly because there is a curvilinear relationship between the two variables or because additional variables may moderate the association (Crepaz & Marks, 2001). Meta-analytic results suggest that depression may be a slightly stronger correlate of high-risk sexual behaviour among gay and bisexual men than among other populations (Crepaz & Marks).

Another mental health problem that has been associated with high-risk sexual behaviour among gay and bisexual men is social anxiety (Hart & Heimberg, 2005; Hart, James, Purcell, & Farber, 2008; Hart, James, Roberts, Meyers, Calzavara, & Loutfy, 2009). Social performance anxiety, which is anxiety in situations where one may be observed while performing an activity, has been associated with insertive unprotected anal intercourse (UAI) among young gay and

bisexual men (Hart & Heimberg) as well as HIV-positive gay and bisexual men (Hart et al., 2008; Hart et al., 2009), even after controlling for depression and the use of club drugs and tobacco (Hart et al., 2008). Evidence suggests that social anxiety predict sexual risk behaviour six months later among gay and bisexual men (Hart et al., 2009).

Childhood Victimization as a Predictor of Both Sexual and Mental Health

Another psychosocial problem associated with high-risk sexual behaviour among gay and bisexual men is early victimization. Childhood victimization can take many forms, including abuse and neglect, verbal assault and teasing, verbal threats of physical harm, physical assault with or without a weapon, damage to personal property, and sexual assault. Childhood victimization may be experienced either directly or vicariously, and may be perpetrated by peers, caregivers, or other adults. Studies have demonstrated that sexual minority youth experience peer victimization at greater rates than their heterosexual peers (Bontempo & D'Augelli, 2002, Russell, Franz, & Driscoll, 2001). Bontempo and D'Augelli (2002) reported that lesbian, gay, bisexual, and questioning (LGBQ) youths were more likely to experience victimization than heterosexual peers, with 10.1% of sexual minority females and 24.0% of sexual minority males reporting victimization versus 1.1% and 2.7% of heterosexual females and males, respectively. For LGBQ adolescents, victimization related to sexual orientation appears to be the norm rather than the exception. For example, D'Augelli, Pilkington, and Hershberger (2002) found that 59% of LGBQ youths reported experiencing verbal abuse related to sexual orientation in high school, 11% reported physical abuse, 11% reported having objects thrown at them, and 24% were threatened with physical violence. In another sample of young gay and bisexual men, 87% reported some type of verbal sexual orientation victimization, with an average age of onset of 11 years (D'Augelli, Grossman, & Starks, 2006).

Among gay and bisexual men and other sexual minorities, physical and verbal peer victimization have been negatively associated with mental health outcomes (Burton, Marshal, Chisolm, Sucato, & Friedman, 2013; D'Augelli et al., 2002; Hightow-Weidman et al., 2011; Rivers, 2004). For example, Burton and colleagues (2013) reported that gay, lesbian, and bisexual youth who experienced sexual minority-specific victimization reported higher levels of depression and suicidality. Hightow-Weidman and colleagues (2011) found that young gay and bisexual men who experienced sexual minority-specific victimization were 2.29 times more likely to report clinically significant depression symptoms than those who did not experience such victimization. D'Augelli and colleagues (2002) found that LGBQ youth who reported more frequent verbal victimization were more likely to experience mental health problems such as posttraumatic stress symptoms and past-week general mental health problems as measured using the Brief Symptom Inventory (see Derogatis, 1993).

The impact of childhood victimization on mental health in adulthood has received much less attention. Two studies have examined associations between childhood peer victimization and mental health in adulthood; however, these did not examine the impact of victimization among sexual minority populations. A retrospective, longitudinal study associated retrospective self-report of bullying in school with current depression in adulthood among a sample of middle-aged men (Lund et al., 2009). A prospective longitudinal birth cohort study (Gibb, Horwood, & Fergusson, 2011) associated parental report of bullying during adolescence with depression and anxiety in adulthood. Gibb and colleagues reported small to medium effect sizes prior to adjusting for eleven covariates, after which the effects were no longer statistically significant. It is possible that the results of these retrospective and prospective longitudinal studies may differ for sexual minority populations.

Childhood peer victimization has also been associated with high-risk sexual behaviour among sexual minority youth (Bontempo & D'Augelli, 2002). Bontempo and D'Augelli examined the victimization of LGBQ youth in the form of assault (or threat of assault) with a weapon and/or damage or theft of private property. LGBQ youth experienced higher rates of victimization than heterosexual peers and highly victimized LGBQ youth exhibited more sexual risk behaviour (i.e., unprotected sexual intercourse and/or using alcohol or drugs at last intercourse) than did less victimized LGBQ youth. These studies suggest that victimization is associated with mental health problems as well as high-risk sexual behaviour in young gay and bisexual men.

Goal and Hypotheses

The above studies examined the link between peer victimization during youth and temporally proximal mental and sexual health outcomes among gay and bisexual men and other sexual minorities. However, previous research has not examined how victimization by peers during youth is associated with more distal sexual health outcomes among gay and bisexual men, and whether this relationship is mediated by poor mental health outcomes. The current study will therefore examine the association between peer victimization during youth and current adult mental health problems in order to better understand how these psychosocial variables lead to subsequent high-risk sexual behaviour among gay and bisexual men. It is hypothesized that peer victimization during youth will be associated with poorer mental health outcomes in adulthood and that this will be associated with subsequent high-risk sexual behaviour. Figure 1 illustrates the hypothesized relationship between these variables. For the purpose of this study, victimization during youth will be operationalized as being verbally bullied or teased about a range of general and gay-specific characteristics and behaviours. As illustrated above,

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depression and social anxiety are both elevated in gay and bisexual men and have also been associated with high-risk sexual behaviour, therefore these two mental health problems will be used in the current study as potential mediators of the relationship between victimization and high-risk sexual behaviour. Recent research (Burt & Thiede, 2012; Hart, James, Hagan, & Boucher, 2010; Holtgrave, Crosby, & Shouse, 2006) indicates that HIV-positive gay and bisexual men are more likely than HIV-negative men to engage in UAI. HIV serostatus will therefore be included in the model as a covariate in order to control for its impact on UAI.

For the purpose of this study, high-risk sexual behaviour was operationalized in two ways: *number of times* an individual has had unprotected anal intercourse (either insertive or receptive) with a partner of serodiscordant or unknown HIV status; and *number of non-primary partners* of serodiscordant or unknown HIV status with whom an individual has had unprotected anal intercourse. Victimization was operationalized as being verbally harassed or teased by peers, either for general reasons (i.e., being ugly or unattractive), or gay-specific reasons (i.e., acting like a sissy) in childhood. The teasing referred to in the present study does not refer to good-natured teasing between friends, but rather teasing that is intended to belittle, insult, or ostracize an individual.

There are two sets of hypotheses in the current study, one set for each of the two operationalizations of high-risk sexual behaviour. The first set of hypotheses will predict high-risk sexual behaviour as *number of times* an individual has had unprotected anal intercourse with a partner of serodiscordant or unknown HIV status, hereafter referred to as number of high-risk sex acts. Hypothesis 1a is that general teasing during youth, reported retrospectively, will be significantly associated with the number of high-risk sex acts, and that this relationship will be completely mediated by severity of depression and social anxiety after controlling for HIV

status. For Hypothesis 1b, general teasing will be replaced with gay-specific teasing in predicting high-risk sexual behaviour. The second set of hypotheses (2a and 2b) will mirror the first set, with the exception that high-risk sexual behaviour will be operationalized as the *number of non-primary partners* of serodiscordant or unknown HIV status with whom the individual has had unprotected anal intercourse, hereafter referred to number of high-risk sex partners. Depression, social anxiety, HIV status, and retrospective self-report of teasing were measured at baseline, and high-risk sexual behaviour was measured at 6-month follow-up. This was to ensure the mediators occurred temporally prior to the outcome variables.

Method

Participants

The initial sample consisted of 302 self-identified gay and bisexual men recruited for the Sexual Health and Attitudes Research Project (SHARP; e.g., James et al., 2012). Recruitment was conducted so that the sample was approximately 50% HIV-negative and 50% HIV-positive, as the original study conducted analyses to compare men by HIV status. SHARP participants were recruited from the Polaris Seroconversion Cohort Study (Calzavara et al., 2003) and from advertisements in local print media magazines for gay men (see Appendix A). The Polaris study was a multidisciplinary in-depth study of recently seroconverted gay and bisexual men and HIV-negative controls; therefore, the present sample included both HIV-positive and HIV-negative men. The two groups of HIV-positive and HIV-negative men in the original Polaris study were equivalent in terms of age, education, race, and sexual orientation. The inclusion criteria were that participants must 1) be men of 18 years of age or older, 2) speak and understand English, 3) have had sexual contact with another male in the past six months, and 4) give informed consent to participate in the study. Participants in SHARP were excluded if during the interview or times

during the data collection section it was found that their ability to understand and complete the self-report questionnaires was compromised due to physiological or psychological constraints such as 1) central nervous system conditions (e.g., advanced HIV-associated dementia), 2) acute psychotic conditions, and/or 3) acute mood dysregulation (e.g., manic states).

All 302 participants completed the baseline questionnaires, and 238 participants completed the questionnaires at 6-month follow-up, representing a 6-month attrition rate of 21%. The initial sample consisting of all 302 participants was used to examine the internal consistency and factor structure of the 13 gay-specific teasing items. The majority of this sample identified as either gay (90%) or bisexual (8%). The sample was primarily White (76%) and as per study design, was composed of equal numbers of HIV-positive (50%) and HIV-negative (50%) men. Sociodemographic characteristics are presented in Table 1.

The final sample at 6-month follow-up consisting of 238 participants was used to conduct the mediation analysis. The majority of men in the final sample self-identified as gay (94%), White (77%), and had some sort of university degree (45%). The final sample was roughly equivalent in terms of HIV status with a slight majority reporting as HIV-negative (52%). Consistent with other studies examining sexual behaviour variables (e.g., Crepaz et al., 2009; Williamson, Dodds, Mercey, Hart, & Johnson, 2008), the outcome variables were not normally distributed. Number of high-risk sex acts and high-risk sex partners were both extremely positively skewed ($z_{skew} > 33.0$, $p < .0001$ for both variables), and leptokurtic ($z_{kurtosis} > 104.0$, $p < .0001$ for both variables). These variables were not transformed, given that bootstrapping mediation analysis, used in the current study, does not require normally distributed data. The means and standard deviations of study measures are presented in Table 2.

Measures

Teasing Questionnaire-Revised. The Teasing Questionnaire-Revised (TQ-R; Storch, Roth, Coles, Heimberg, Bravata, & Moser, 2003) is a multifactorial 29-item self-report scale used to measure memories of childhood teasing in adults across five domains: performance, academics, social behaviour, family background, and appearance. Participants indicate to what degree they were teased about each topic based on a 5-point Likert-type scale ranging from "I was never teased about this" to "I was always teased about this". The Cronbach's alpha for the TQ-R for heterosexual adult participants is .87, indicating excellent internal consistency. Because the current study examines memories of teasing among gay and bisexual men, 13 items reflecting gay-specific teasing were created and added to the TQ-R. These items are presented in Table 3. An exploratory factor analysis was conducted to determine the factor structure and internal consistency of the gay-specific items.

Center for Epidemiological Studies Depression Scale. The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) is a 20-item self-report scale designed to measure depression symptoms in the general population. Participants rate how often they experienced each of the symptoms over the past week on a 4-point Likert-type scale ranging from 0 ("rarely or none of the time (less than 1 day)") to 3 ("most or all of the time (5-7 days)"), with a maximum total score of 60. The scale includes four reverse-coded items such as "I felt hopeful about the future" and "I enjoyed life". The CES-D has very good split-half internal consistency in both general and clinical populations (Cronbach's alpha = .85 and .90, respectively), and adequate test-retest reliability, ranging from $r = .51$ for a 2-week retest period to .67 for a 4-week retest period (Radloff). Test-retest correlations for 6- and 8-week periods were between the above values. The CES-D discriminates well between psychiatric inpatients

and the general population, with 70% of inpatients but only 21% of individuals in the general population scoring an arbitrary cutoff score of 16 or above in Radloff's original validation study. The CES-D has not been validated among gay men; however, it has been used in studies of psychological functioning among gay men (e.g. Ostrow et al., 1989; Perdue et al., 2003).

Liebowitz Social Anxiety Scale. The Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987) is a clinician-administered semi-structured interview designed to assess the types of situations that individuals with social anxiety fear and avoid. It is comprised of 24 questions that assess the level of fear and avoidance across 11 social interaction situations (e.g., going to a party) and 13 performance situations (e.g., being the center of attention). The clinician asks the client to rate the level of fear and avoidance over the past week for each situation on a 4-point Likert-type scale ranging from 0 to 3. Client ratings of fear range from "none" to "severe", and ratings of avoidance range from "never (0%)" to "usually (67-100%)". As the LSAS is a semi-structured interview, the clinician may follow-up on answers to clarify responses. An overall total score is calculated as well as six possible subscale scores: 1) total fear, 2) fear of social interaction situations, 3) fear of performance situations, 4) total avoidance, 5) avoidance of social interaction situations, and 6) avoidance of performance situations.

Mennin, Fresco, Heimberg, Schneier, Davies and Liebowitz (2002) performed a Receiver Operating Characteristics analysis to determine optimal cut-off values for the LSAS. It was determined that a cut-off score of 30 provides an optimal balance of sensitivity and specificity for diagnosing social anxiety disorder whereas the generalized subtype of social anxiety disorder is best diagnosed using a cut-off score of 60. A cutoff score of 15 on the total social interaction and total performance subscales is optimal for diagnosing social anxiety disorder. An alternative suggested range of cut-off values for the LSAS total score is 51 or less indicating mild social

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anxiety, 52-81 indicating moderate social anxiety, and 82 or greater indicating severe social

anxiety (Montgomery, 1998).

The LSAS and its subscales have excellent internal consistency (Heimberg et al., 2003).

Cronbach's alpha for the total score is .96 and ranges from .81 to .92 for each of the six

subscales. The total score is extremely highly correlated with the total social interaction and

total fear subscales (rs = .98), and is very highly correlated with all other subscales (rs range

from .90 to .93). The correlations between all six subscales ranged from r = .68 to r = .94. The

LSAS total score has convergent validity with the Social Interaction Anxiety Scale (SIAS;

Mattick & Clarke, 1998) and the Social Phobia Scale (SPS; Mattick & Clarke) with r values of

.73 and .61, respectively (p < .001). There is convergent validity between the total fear subscale

and the SIAS and SPS (rs = .70 and .62, p < .001, respectively), as well as between the total

avoidance subscale and the SIAS and SPS (rs = .72 and .58, p < .001, respectively; Heimberg et

al.). Heimberg et al. demonstrated discriminant validity between the LSAS and the Hamilton

Rating Scale for Anxiety (HAM-A; Hamilton, 1959), a measure of general anxiety, as well as

between the LSAS and the Beck Depression Inventory (BDI; Beck et al., 1961), and the

Hamilton Rating Scale for Depression (HAM-D; Hamilton, 1960), measures of depression.

Sexual behaviour questions. Following other HIV behavioural science research (e.g.,

Hatzenbuehler, O'Cleirigh, Mimiaga, & Safren, 2011; Koblin et al., 2003), the sexual behaviour

questions ask about participants' history of high risk sexual behaviour over the past six months.

Specifically, participants were asked about number of primary and/or casual partners, HIV status

of partners, frequency of insertive and receptive anal sex acts, and frequency of condom use.

Participants were asked to respond yes or no to each question indicating a given type of sexual

behaviour (e.g., insertive anal intercourse with male partners of unknown HIV status), and where

appropriate, to indicate the number of times a behaviour occurred. To assist participants in accurately reporting frequency of behaviours, they were provided with a scale indicating the number of times a given behaviour would have occurred over six months if it happened an average of once per month, once per week, 2-3 times per week, or daily. To examine high-risk sexual behaviour with partners of serodiscordant or unknown HIV status, data were collapsed as appropriate. For example, for HIV-negative participants, a variable was created indicating number of insertive anal intercourse *acts* with partners of HIV-positive or unknown HIV status and number of *partners* of HIV-positive or unknown HIV status. All measures are presented in full in Appendix B.

Procedure

Trained research assistants contacted potential participants from the Polaris study by telephone to inform them about the current study. Potential participants were advised that the current study was investigating the psychological functioning and sexual behaviour of gay and bisexual men, involved completing several questionnaires and a brief interview, would take approximately 3 hours to complete over two sessions, and that $80 would be provided as compensation for their time. Inclusion criteria were assessed over the phone during this initial contact. Individuals who agreed to participate were provided with more detailed information about the study before providing informed consent. Polaris participants provided informed consent at the Polaris site at the University of Toronto before coming to the HIV Prevention Lab to complete the brief interview and questionnaires. Participants who contacted the HIV Prevention Lab directly through advertisements provided informed consent at the HIV Prevention Lab (see Appendix C).

Once on site, participants provided informed consent by signing a consent form explaining the potential risks and benefits of participation. The risks and benefits associated with the study were minimal. There was minimal risk of participants experiencing emotional discomfort while answering some of the questions. The principal investigator, a clinical psychologist working with gay and bisexual men of both HIV-negative and HIV-positive statuses, provided training to all research assistants to deal with any emotional discomfort and to provide psychological and/or support referrals if needed. Another potential risk involved breach of confidentiality. To safeguard participants' identities, names and contact information were stored separately from questionnaire and interview data, which was associated only with a participant identity code.

Self-report questionnaires were completed via Audio Computer-Assisted Self-Interview (A-CASI) at two sessions: baseline and 6-month follow-up. A-CASI methodology has been shown to increase reporting of stigmatized behaviours relative to interviewer-administered personal interview (Perlis, Des Jarlais, Friedman, Arasteh, & Turner, 2004; Tourangeau & Smith, 1996; Turner, 1998). Upon completion of a session, participants were debriefed and received $30 for compensation.

Statistical Analyses

Given that previous studies have indicated that sexual behaviour variables are not normally distributed (e.g., Crepaz et al., 2009; Williamson, Dodds, Mercey, Hart, & Johnson, 2008), bootstrapping, a nonparametric resampling procedure, was used to test the mediation hypotheses. Bootstrapping is an inferential statistical procedure that uses resampling to approximate a given sampling distribution without assuming normality, resulting in more accurate confidence intervals than standard methods (Hayes & Preacher, 2010). Some

advantages of bootstrapping when testing indirect effects of mediation are that assumptions about the sample distribution are unnecessary, statistical power and Type I error rates are more favourable with small to moderate samples when using bootstrapping as compared to parametric procedures, and confidence intervals are often asymmetric and more accurately represent true versus ideal sampling distributions (Hayes & Preacher; Fritz & MacKinnon, 2007).

Bias-corrected bootstrap mediation analysis is the most powerful type of mediation in terms of detecting an effect, with recommended sample sizes ranging from $n = 34$ to $n = 462$, depending on the size of the paths between predictor, mediator, and outcome variables (Fritz & MacKinnon, 2007). For mediation models with medium associations between variables, recommended sample size is $n = 148$ when bias-corrected bootstrap mediation is used. For mediation models with small associations between variables, the recommended sample size increases to at least $n = 368$ (Fritz & MacKinnon). Prior longitudinal research examining the impact of childhood peer victimization on adult mental health problems has demonstrated small to medium effects (Gibb et al., 2011). The level of association between mental health problems in adulthood and high-risk sexual behaviour in the context of childhood peer victimization is unknown. It is possible that the current sample of $n = 238$ is sufficient to detect an effect, given the guidelines outlined by Fritz and MacKinnon.

As the hypotheses involved multiple parallel mediators and continuously distributed variables, the *Process* bootstrapping macro for SPSS version 2.04 (Hayes, 2013) was used to perform the mediation analyses. The *Process* macro incorporates most of the features of pre-existing macros and is designed to estimate direct and indirect effects in mediation models with multiple mediators, and also supports the use of moderators, covariates, and mediators acting in serial versus parallel sequence (Hayes). The number of samples performed may vary from 1000

to 50,000, but 10,000 has been used in statistical demonstrations of bootstrapping in peer-reviewed publications (Hayes & Preacher, 2010; Preacher & Kelley, 2011), therefore 10,000 samples were used in the present study. In order to correct for skew in the sample, the bias-corrected bootstrap rather than the percentile bootstrap was used.

In traditional mediation models, several paths are tested for statistical significance in order to determine whether mediation is present. The *a* path refers to the impact of the independent variable (X) on the mediator(s) (M), and the *b* path refers to the impact of the mediator(s) (M) on the dependent variable (Y). The product of the *a* and *b* paths, *ab,* refers to the impact of the independent variable (X) on the dependent variable (Y), via the mediator(s) (M), and is known as the indirect effect. The c path refers to the total impact of the independent variable (X) has on the dependent variable (Y), not accounting for the impact of any other variables, and is known as the total effect. Finally, the *c'* path refers to the impact of the independent variable (X) on the dependent variable (Y), accounting for the impact of all other variables (i.e., *a* and *b* paths), and is known as the direct effect. The total effect (*c*) is the sum of the direct (*c'*) and indirect (*ab*) effects. For each of the four hypotheses, a bootstrapping mediation analysis was conducted to examine total, direct, and indirect effects.

Results

Group Equivalence

A series of independent samples *t*-tests revealed that dropouts and completers did not differ on any of the study variables: TQ-R, TQ-R gay specific items, CESD, LSAS, or dependent variables scores. A series of chi-square tests revealed that dropouts and completers did not differ on ethnicity, educational background, employment status, HIV status, or sex role (e.g., top, bottom, versatile). The only statistically significant sociodemographic differences between

groups were sexual orientation, χ^2 (2) = 13.88, p < .01, and total annual income, χ^2 (5) = 12.05, p < .05, with dropouts being more likely to identify as straight or bisexual and to report belonging to a lower annual income category. There were only three straight-identified men in the sample, and only one of them completed the study.

Bivariate Analyses

Two-tailed Spearman correlations were performed on all variables, as the outcome variables were nonparametric. The results are presented in Table 3. Number of high-risk sex acts was correlated with all variables, and number of high-risk partners was correlated with all variables except depression and social anxiety.

Exploratory Factor Analysis

An exploratory factor analysis (EFA) with maximum likelihood extraction was used to examine the factor structure of the 13 gay-specific teasing items (see Table 2) added to the TQ-R for the purpose of the study. All item correlations were between r = .30 and r = .90. As the factors were expected to correlate with one another, an oblique rotation (direct oblimin) was applied. The Kaiser-Meyer-Olkin value (KMO = .94) testing sampling adequacy was greater than the acceptable minimum limit of .50 (Hutcheson & Sofroniou, 1999), indicating superb adequacy. Bartlett's test of sphericity, χ^2 (78) = 3473.30, p < .001, indicated sufficient correlations between items to conduct EFA. Results revealed two factors with eigenvalues greater than Kaiser's criterion of 1.0 that together explained 68.6% of the variance after extraction. Because the sample size exceeds 250 (n = 302) and the average of the communalities (0.69) is greater than 0.60, it is appropriate to accept Kaiser's criteria of retaining any factors with eigenvalues greater than 1 (Field, 2009). The scree plot also indicated a two-factor solution; therefore due to the convergence of these indicators, a two-factor solution was retained.

Factor loadings are presented in Table 2. Based on the items that cluster together, Factor 1 appears to represent nonconforming gender presentation and Factor 2 nonconforming gendered social activity. The two factors had a strong positive correlation ($r = .70$). The internal consistency of all 13 gay-specific teasing questions was excellent, Cronbach's $\alpha = .95$, and the internal consistencies of factors 1 and 2 ranged from good ($\alpha = .87$) to excellent ($\alpha = .95$), respectively. Because the results of the EFA indicated the presence of two underlying factors, two separate mediation analyses were conducted to examine the possibility that being teased for nonconforming gender presentation and being teased for nonconforming gendered social activity would be associated in different ways with the study's outcome variables. Therefore, each set of hypotheses (1 and 2) included three mediation analyses: one for each of the three separate independent variables, namely (a) general teasing, (b) teasing for nonconforming gender presentation, and (c) teasing for nonconforming gendered social activity.

Mediation Analyses

Hypothesis 1a, that general teasing during youth would predict number of high-risk sex *acts* during follow-up, was tested with the bootstrapping mediation analysis using depression and social anxiety as mediators and HIV status as the covariate. There was a total effect of general teasing on number of high-risk sex acts, $B = .10$, $p < .01$, such that teasing was positively associated with number of high-risk sex acts. There were no direct or indirect effects, however, after accounting for the mediators and the covariate. The results of this analysis are summarized in Figure 2.

Hypothesis 1b, that teasing for nonconforming gender presentation during youth would predict number of high-risk sex *acts* during follow-up, was tested with the bootstrapping mediation analysis using depression and social anxiety as mediators and HIV status as the

covariate. There were no total, direct, or indirect effects observed. These results are summarized in Figure 3.

Hypothesis 1c, that teasing for nonconforming gendered social activity during youth would predict number of high-risk sex *acts* during follow-up, was tested with the bootstrapping mediation analysis using depression and social anxiety as mediators and HIV status as the covariate. There were no total or direct effects observed, but there was a total indirect effect, B = .09, 95% CI [.009, .233], such that teasing was positively associated with number of high-risk sex acts via higher levels of mental health problems. This indirect effect was not specific to either depression or social anxiety. These results are summarized in Figure 4.

Hypothesis 2a, that general teasing during youth would predict number of high-risk sex *partners* during follow-up, was tested with the bootstrapping mediation analysis using depression and social anxiety as mediators and HIV status as the covariate. There was a total effect of general teasing on number of high-risk sex partners, B = .09, *p* < .001, as well as a direct effect, B = .08, *p* < .01, after accounting for mediators and covariate. General teasing was positively associated with number of high-risk sex partners. There were no indirect effects observed. These results are summarized in Figure 5.

Hypothesis 2b, that teasing for nonconforming gender presentation during youth would predict number of high-risk sex *partners* during follow-up, was tested with the bootstrapping mediation analysis using depression and social anxiety as mediators and HIV status as the covariate. There was a total effect of teasing for nonconforming gender presentation on number of high-risk sex partners, B = .10, *p* < .05, as well as a direct effect, B = .08, *p* < .05, after accounting for mediators and covariate. This type of teasing was positively associated with

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number of high-risk sex partners. There were no indirect effects observed. These results are summarized in Figure 6.

Hypothesis 2c, that teasing for nonconforming gendered social activity during youth would predict number of high-risk sex *partners* during follow-up, was tested with the bootstrapping mediation analysis using depression and social anxiety as mediators and HIV status as the covariate. There was a total effect of teasing for nonconforming gendered social activity on number of high-risk sex partners, $B = .21$, $p < .05$, as well as a direct effect, $B = .19$, $p < .05$, after accounting for mediators and covariate. This type of teasing was positively associated with number of high-risk sex partners. There were no indirect effects observed. These results are summarized in Figure 7.

Exploratory Mediation Analyses

For Hypothesis 1c, an indirect effect was observed that was nonspecific to either depression or social anxiety. Due to the possibility that there was insufficient power to detect a unique effect of either mediator, and to examine whether the same pattern of results would be observed for each mediator individually, each of the initial hypotheses was also tested using only one mediator at a time. With depression as the sole mediator, the pattern of results was the same as was observed as in the proposed analyses for all hypotheses except 1b (impact of nonconforming gender presentation on number of high-risk sex *acts*). For Hypothesis 1b, an indirect effect of nonconforming gender presentation on number of high-risk sex acts, mediated by depression, $B = .04$, 95% CI [.001, .103] was observed, such that teasing was positively associated with number of high-risk sex acts.

With social anxiety as the sole mediator, in comparison to the proposed analyses, there were no additional indirect effects observed, and the sole indirect effect—that of nonconforming

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gendered social activity on number of high-risk sex acts (Hypothesis 1c)—disappeared. The

total effects in Hypotheses 1c, 2a, 2b, and 2c remained, and a direct effect of general teasing on

number of high-risk sex acts (Hypothesis 1a) appeared, B = .10, $p < .01$. This direct effect was

such that general teasing was positively associated with number of high-risk sex acts. The direct

effect of nonconforming gender presentation on number of high-risk sex partners (Hypothesis

2b) disappeared. The pattern of results for all mediation analyses is presented in Table 4.

Discussion

Exploratory Factor Analysis

The results of the exploratory factor analysis suggest that the gay-specific teasing

questions used in the present study assessed two different types of gay-specific teasing. One of

these types was being teased for nonconforming gender presentation such as making feminine

gestures, and the other was being teased for nonconforming gendered social activity, such as

playing with girls. Upon examining the impact of each of these types of gay-specific teasing on

high-risk sexual behaviour separately in the mediation analyses, it appears that they do not

always impact sexual health outcomes in the same way, suggesting that different types of gay-

specific teasing may have differential impacts on high-risk sexual behaviour, as described below.

Mediation Analyses

In the current study, the minority stress model (Meyer, 2003) was adapted to include

sexual health outcomes along with mental health problems as a consequence of minority stress.

It also examined the impact of a distal stressor: childhood peer victimization. The results of the

mediation analyses partially support the hypotheses and suggest that both general and gay-

specific teasing during youth may play a small role in high-risk sexual behaviour later in

adulthood among gay and bisexual men. This provides initial support for adapting the minority

stress model (Meyer, 2003) to include sexual health outcomes. The results do not indicate a consistent impact of all types of teasing for all sexual health outcomes measured in this study. Rather, the results indicate that teasing might impact number of high-risk sex acts and number of high-risk sex partners in different ways.

      Number of high-risk sex acts. A consistent impact of all types of teasing was not observed on number of high-risk sex acts. Rather, each type of teasing impacted this sexual health outcome in a different way. There were no statistically significant direct or indirect effects of general teasing on number of high-risk sex acts observed in the mediation analysis, but there was a total effect of the entire model. It is possible that general teasing during youth does not impact high-risk sexual behaviour in adulthood. Alternatively, general teasing may impact high-risk sexual behaviour, but to such a small degree that there was insufficient power in the current study to detect it.

      There were also no statistically significant direct or indirect effects of being teased for nonconforming gender presentation on number of high-risk sex acts. There was, however, an indirect effect of being teased for nonconforming gendered social activity on number of high-risk sex acts. During the exploratory analyses in which depression and social anxiety were examined as mediators individually rather than in tandem, an indirect effect was observed via depression, but not social anxiety, for both types of teasing. This suggests that gay or bisexual men who are teased during childhood for things such as acting "like a girl," or being too feminine, or for engaging in social activities atypical for boys such as playing with girls or having a lot of female friends, may engage in more frequent high-risk sexual behaviour years later when depressed. Although the direct and indirect effects of teasing on high-risk sexual behaviour observed in this study were small, the self-reported teasing occurred in childhood, and the mean age of

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participants was 44.2 years. That even a small effect of childhood teasing is observable decades later in adulthood illustrates the far-reaching impact of this type of victimization and the need for interventions aimed to reduce bullying during childhood.

Number of high-risk sex partners. In the current study, all types of teasing (general and both types of gay-specific teasing) were directly related to number of high-risk sex partners after accounting for the impact of depression and social anxiety. Although this relation was statistically significant, the observed effects were small, suggesting that other variables may play a more important role in contributing to high-risk sexual behaviour. Several variables, intrapersonal and situational, have been associated with unprotected anal intercourse in gay and bisexual men. Some examples of such intrapersonal variables include sensation seeking (Bancroft, Carnes, & Janssen, 2005; Wim, Christiana, & Marie, 2013), internalized homophobia (Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008), self-efficacy for safer sex (Bedoya et al., 2012), being the victim of childhood sexual abuse (Mimiaga et al., 2009), and mental health problems such as depression (Houston, Sandfort, Dolezal, & Carballo-Dieguez, 2012; Wim et al.) and posttraumatic stress symptoms (Reisner, Mimiaga, Safren, & Mayer, 2009). Some examples of situational characteristics that have been associated with unprotected anal intercourse among gay and bisexual men include erectile dysfunction (Bancroft et al.), alcohol and substance use (Bedoya et al., 2012; Jacobs et al., 2010; Mayer et al., 2012; Ostrow et al., 2009; Wim et al.), and meeting partners online (Jenness et al., 2010; Mayer et al., 2012; Wim et al.).

The finding that all types of teasing were directly related to number of high-risk sex partners is consistent with past research indicating that among college-age females, retrospective self-report of childhood peer victimization, particularly teasing, was positively associated with

total number of sexual partners (Gallup, O'Brien, White, & Wilson, 2009). This same research, however, reported the opposite pattern among college-age males, that retrospective self-report of peer victimization was negatively associated with total number of sexual partners. It should be noted that all males identified as heterosexual, and these findings may not be generalizable to gay or bisexual men. Gallup and colleagues (2009) propose that in a male dominance system, being the victim of peer victimization lowers a male's social status, impacting sexual desirability and mating opportunities. For females in a male dominance system, being the victim of peer victimization does not have the same impact on sexual desirability. It is possible that for gay and bisexual men, being the victim of peer victimization does not have the same detrimental impact on sexual desirability that it has for heterosexual males in a male dominance system. The study by Gallup and colleagues did not examine this association among sexual minority populations. The current study broadens the scope of these findings to include gay and bisexual men, and provides initial evidence that childhood teasing impacts adult sexual behaviour in different ways for heterosexual versus gay or bisexual men.

One reason why individuals who are victimized by their peers in the form of verbal bullying engage in high-risk sexual behaviour may be to find acceptance and approval. Individuals who experience more rejection from peers may be more likely to engage in high-risk behaviour, including unprotected sexual intercourse, in order to seek acceptance. This may also explain why teasing was associated with number of partners but not number of acts—it is possible that individuals find a greater sense of acceptance by engaging in sex with multiple partners rather than multiple times with the same partner. There is evidence from a sample of heterosexual African American adolescents to suggest that men who report self-esteem enhancing reasons for having sex report a greater number of sexual partners than those who

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report other reasons for having sex (Robinson, Holmbeck, & Paikoff, 2007). It is possible that individuals who engage in sex with multiple partners may do so in an effort to improve self-esteem or gain acceptance. The current study demonstrates that childhood peer victimization negatively impacts sexual health outcomes in adulthood. These results provide support for the minority stress model by demonstrating the impact of a distal stressor, namely childhood peer victimization, on sexual health outcomes. For this outcome—number of high-risk partners—there was no evidence of mediation via depression or social anxiety.

In the current study, social anxiety did not mediate any of the proposed relationships. Research suggests that social anxiety is associated with specific types of high-risk sexual behaviour. For example, social anxiety has been associated with unprotected insertive anal intercourse, but not unprotected receptive anal intercourse (Hart, James, Purcell, & Farber, 2008). In the current study, acts of insertive and receptive anal intercourse were combined to operationalize high-risk sexual behaviour, and this may have masked any potential mediation via social anxiety.

Mediation analyses summary. In summary, these findings suggest that being teased for different types of gender nonconformity during youth may indirectly impact number of high-risk sex acts later in life via depression, although to a small degree. General, non-gay-specific teasing does not appear to be associated with number of high-risk sex acts later in life, either directly or indirectly. All types of teasing, however, appear to have a direct effect on number of high-risk sex partners even after accounting for depression and social anxiety, possibly reflecting a misguided search for approval and acceptance. Given that scales are available that measure motivations for sex, such as motivations to have sex to get approval from peers or to get approval from one's partners (e.g., Cooper, Shapiro, & Powers, 1998), it may be useful to examine the

motivations for sex among gay men who report a history of childhood teasing. There is a paucity of literature examining how motivations for sex are associated with high-risk sexual behaviour in gay and bisexual men; therefore more research is needed in this area.

In the current study, the minority stress model was adapted to include sexual health outcomes as well as mental health problems as a consequence of minority distress. The results provide limited initial support that minority stress may be associated with negative sexual health outcomes as well as mental health outcomes. The finding that gay-specific teasing, but not general teasing, impacts number of high-risk sex acts via depression supports this extension of the minority stress model to include sexual health outcomes. However, in order to provide further support for extending this theoretical model to include sexual health outcomes among gay and bisexual men, it may be useful to examine other potential mediators that may be closely related to high-risk sexual behaviour not examined in the present study. Some examples of potential mediators that have been associated with high-risk sexual behaviour among gay and bisexual men include internalized homophobia (Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008), sensation seeking (Bancroft, Carnes, & Janssen, 2005; Wim, Christiana, & Marie, 2013), self-efficacy for safer sex (Bedoya et al., 2012), posttraumatic stress symptoms (Reisner, Mimiaga, Safren, & Mayer, 2009), erectile dysfunction (Bancroft et al.), and alcohol and substance use (Bedoya et al., 2012; Jacobs et al., 2010; Mayer et al., 2012; Ostrow et al., 2009; Wim et al.).

The minority stress model (Myer, 2003) proposes that there are two types of stressors that may contribute to negative psychological processes: distal and proximal. Distal stressors are those that the individual experiences in one's environment, and proximal stressors are those that occur within the individual in response to distal stressors. The current study examined the impact

of childhood victimization, a distal stressor, on sexual health outcomes. It is possible that using a proximal stressor such as internalized homophobia may provide further evidence in support of adapting this theoretical model to include sexual health outcomes as well as mental health outcomes. Although the minority stress model has previously focused on the impact of minority stressors on mental health outcomes, in extending this to include sexual health outcomes, it would be useful to consider other variables that are correlates of high-risk sex among gay and bisexual men, such as substance use (Hart et al., 2008). Hatzenbuehler's psychological mediation framework (Hatzenbuehler, 2009) proposes that the way experiences of minority stress become associated with mental health problems is via maladaptive psychological processes such as emotion dysregulation. Internalized homophobia is a type of maladaptive psychological process; therefore, examining it as a mediator between childhood victimization and adult high-risk sexual behaviour would not only provide further support for adapting the minority stress model to include sexual health outcomes, but would also provide support for extending the psychological mediation framework to include sexual health outcomes as well. Indeed, there is evidence that experiencing homophobic events in the past 12 months is associated with unprotected anal intercourse among both HIV-negative and HIV-positive gay men (Jeffries et al., 2013). It may therefore be useful to examine the impact of internalized homophobia and other proximal stressors on sexual health outcomes in the context of the minority stress model and Hatzenbuehler's psychological mediation framework.

Limitations

There are several limitations to the current study that relate to the self-report data. First, childhood teasing was assessed via retrospective self-report, and this period of retrospection ranged from 5 to 55 years, depending on the age of participants. It is possible that participants

did not accurately recall their childhood teasing experiences, or that their recall was biased or otherwise impacted by more recent life events. Because this period of retrospection ranged so greatly between participants, age may have been a confounding variable. It is possible that a stronger effect would have been observed in younger versus older participants, as memories of childhood teasing may be more salient among younger individuals. Second, participants were asked to self-report a stigmatized behaviour: unprotected anal intercourse. It is possible that participants underreported stigmatized behavior. However, to minimize this possibility, A-CASI was used to collect sexual behaviour data. As mentioned above, A-CASI has been shown to increase reporting of stigmatized behaviour over interviewer-administered face-to-face interviews and self-administered questionnaires (Perlis et al., 2004; Tourangeau & Smith, 1996; Turner, 1998). Third, HIV status was used as a covariate in the mediation analyses, and was collected via self-report rather than a more invasive blood test. Approximately 19% of HIV-positive individuals in Canada may be unaware of their HIV status (PHAC, 2011); therefore even if all participants reported honestly, it is likely that some of those reporting to be HIV-negative were in fact HIV-positive. The impact of HIV status on sexual behaviour in the current study, therefore, more accurately reflects one's self-identity rather than one's biological HIV status, especially for the self-identified HIV-negative participants who may not know their actual HIV status.

There are also some limitations unrelated to the use of self-report data. Several mediation analyses were conducted, thereby increasing the probability of a Type I error. If the current α of .05 were reduced to a more stringent α of .01, some of the results would have been rendered statistically non-significant. As a second methodological concern, the TQ-R has not been fully validated using a sample of gay men. The internal consistency and test-retest

reliability of the TQ-R were assessed for the current study, but its validity has not yet been demonstrated among this population. Future research using the TQ-R to examine the impact of teasing among sexual minority populations should include a full psychometric validation of the questionnaire among the populations of interest. Finally, it is possible that individuals who were teased during childhood for general or gay-specific reasons may continue to experience discrimination or stigmatization later in life. The current study did not assess present-day experiences of discrimination, which may have confounded the results. It is possible that what appears to be an effect of childhood teasing in the current study is in fact an effect of present-day discrimination or stigmatization. Future research should take current experiences of discrimination into account as a potential mediator of childhood teasing.

Future Directions

In the current study, childhood teasing was associated with having a greater number of high-risk sex partners, but the study design does not provide an explanation for why that is. Depression and social anxiety did not mediate the impact of teasing on number of high-risk sex partners; therefore, future research should examine other potential mechanisms, either through qualitative exploration or quantitative assessment. One potential mechanism mentioned above is the desire to gain approval or social acceptance. In general, research examining the impact of childhood teasing on high-risk sexual behaviour among gay and bisexual men could benefit from examining individuals' motivations for sex, as there is currently a paucity of research in this area. There is evidence that specific motivations for sex have been associated with high-risk sexual behaviour among heterosexual young adults, including having sex to enhance physical or emotional pleasure, to please one's partner, and to cope with threats to self-esteem or avoid negative emotions (Cooper, Shapiro, & Powers, 1998). By better understanding why people

engage in high-risk sex, it may be possible to design more effective interventions to prevent HIV transmission or to target problematic attitudes or behaviours before they lead to high-risk sexual encounters.

It may also be helpful for future research to compare the impact of childhood teasing on high-risk sexual behaviour between older versus younger cohorts of gay and bisexual men. Research has demonstrated that age may moderate predictors of high-risk sexual behaviour among gay and bisexual men (Jacobs et al., 2010; Lelutiu-Weinberger et al., 2013). In addition, baseline rates of unprotected anal intercourse may not be equivalent across different age cohorts of gay and bisexual men. For example, research has demonstrated that frequency of sexual risk behaviour increases and peaks during young adulthood (Fergus, Zimmerman, & Caldwell, 2007). Alternatively, the cohort effect may be such that different generations that came of age in different socio-historical climates, or who experienced different types of peer victimization (online versus face-to-face) may react differently to victimization.

Clinical Implications

The current study has several clinical implications for gay and bisexual men. This study provides evidence that childhood teasing is associated with high-risk sexual behaviour among gay and bisexual men later in life, albeit to a small degree. This suggests that campaigns to reduce peer bullying in childhood may have a far-reaching impact, potentially reducing behaviour that would place individuals at risk of contracting HIV and other sexually transmitted infections. In this way, anti-bullying campaigns may also contribute to HIV prevention efforts. In recent years, peer bullying has come into the spotlight, and anti-bullying campaigns have proliferated in the media and in schools. It is imperative that these continue in order to help reduce the experience of bullying in childhood and adolescence.

The impact of gay-specific teasing on number of high-risk sex *acts* was mediated by depression in the current study. This suggests that it may be particularly important for gay and bisexual men who report a history of gay-specific teasing during childhood to receive treatment for depression in order to reduce not only depressive symptoms, but also risk of contracting HIV. Clinicians working with gay and bisexual men at high risk for contracting or transmitting HIV should be aware to assess for depressive symptoms. The results of this study also suggest that clinicians working with gay and bisexual men should be aware of clients' experiences of minority stress, both past and present. Clinical assessments rarely delve beyond assessing for symptoms of common mental disorders; therefore, assessing for minority stressors may provide valuable additional information for case conceptualization and treatment planning.

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Table 1

Socio-Demographic Characteristics of the Exploratory Factor Analysis (EFA) vs. Mediation Analysis Samples

Variable	EFA (*n* = 302)		Mediation (*n* = 238)	
	n (*M*)	% (*SD*)	*n* (*M*)	% (*SD*)
Age[a]	44.1	9.74	44.2	9.72
Ethnicity				
Caucasian	229	75.8	182	76.5
Latino, Hispanic	16	5.3	13	5.5
Mixed race, Multiracial	15	5.0	12	5.0
Native-American	12	4.0	7	2.9
African-American, Black	4	1.3	4	1.7
Other	24	7.9	19	8.0
Education				
No high school diploma	32	10.6	21	8.8
High school diploma or GED	33	10.9	26	10.9
< 3 years post-secondary	109	36.1	85	35.7
Bachelor's degree	90	29.8	75	31.5
Graduate or professional degree	38	12.6	31	13.0
Employment				
Unemployed: on disability	71	23.5	53	22.3
Unemployed: other	60	19.9	42	17.6
Student (full or part time)	6	2.0	4	1.7
Employed part-time: < 40 hours	39	12.9	33	13.9
Employed full-time: 40+ hours	108	35.8	93	39.1
Other	15	5.0	11	4.6
Income				
Less than $10,000	38	12.6	27	11.3
$10,000 to $19,999	88	29.1	69	29.0
$20,000 to $29,999	29	9.6	19	8.0
$30,000 to $39,999	29	9.6	22	9.2
$40,000 to $49,999	35	11.6	34	14.3
$50,000 or more	71	23.5	58	24.4
Sexual Orientation				
Straight or heterosexual	3	1.0	1	0.4
Bisexual	24	7.9	13	5.5
Gay or homosexual	273	90.4	223	93.7
Sex Role				
Top	63	20.9	50	21.0
Bottom	70	23.2	60	25.2
Versatile	154	51.0	116	48.7
HIV status				

negative	150	49.7	125	52.5
positive	152	50.3	113	47.5

Note. Percentages may not add up to 100 due to missing data or participants refusing to answer. The mediation sample is a subset of the EFA sample.

[a]The values presented for *age* are mean and standard deviation.

Table 2

Summary of Bivariate Spearman Correlations, Means, and Standard Deviations for Mediation Analysis Variables

Measure	*M*	*SD*	1	2	3	4	5	6	7
1. TQ-R general	23.5	16.3		.61**	.59**	.43**	.31**	.19**	.19**
2. TQ-R factor 1	10.6	9.7			.77**	.27**	.29**	.18**	.19**
3. TQ-R factor 2	5.7	4.5				.27**	.20**	.14*	.16*
4. CES-D	15.0	13.1					.46**	.14*	.08
5. LSAS	30.4	22.9						.14*	.12
6. Nbr acts	2.5	9.2							.77**
7. Nbr partners	1.6	5.9							

Note. TQ-general = Teasing Questionnaire-Revised general teasing questions; TQ-R factor 1 = nonconforming gender presentation teasing questions; TQ-R factor 2 = nonconforming gendered social activity teasing questions; CES-D = Center for Epidemiological Studies Depression Scale; LSAS = Liebowitz Social Anxiety Scale; Nbr acts = number of times an individual has had unprotected anal intercourse with a partner of serodiscordant or unknown HIV status; Nbr partners = number of non-primary partners of serodiscordant or unknown HIV status with whom the individual has had unprotected anal intercourse. All variables measured at baseline except Nbr acts and Nbr partners which were measured at 6-month follow-up.
*$p < .05$
**$p < .01$

Table 3

Factor Loadings for Exploratory Factor Analysis With Direct Oblimin Rotation of Gay-Specific Teasing Questions

Item	Nonconforming Gender Presentation	Nonconforming Gendered Social Activity
I was teased…		
for talking "like a girl"	**.88**	-.05
for dressing "too gay"	**.58**	.20
for not walking "like a guy"	**.78**	.03
for acting "like a girl"	**.82**	.11
for acting like a "sissy"	**.60**	.33
because I didn't date girls "enough"	**.47**	.20
for being "too feminine"	**.96**	-.09
about making "feminine gestures"	**1.02**	-.16
for not being "masculine enough"	**.79**	.10
because I played with girls	-.09	**.98**
because I had a lot of female friends	.12	**.77**
because I was a boy who didn't play sports	.17	**.56**
because I did not like the same social activities as the other guys	**.43**	**.44**

Note. Factor loadings > .40 are in boldface.

Table 4

Comparison of Pattern of Results for Main and Exploratory Mediation Analyses

Predictor	Outcome	Mediator(s)	Covariate	Effect(s)[a]
Main Analyses				
TQ-R general	Nbr acts	CES-D, LSAS	HIV status	Total
TQ-R gay F1	Nbr acts	CES-D, LSAS	HIV status	-
TQ-R gay F2	Nbr acts	CES-D, LSAS	HIV status	Indirect
TQ-R general	Nbr partners	CES-D, LSAS	HIV status	Total; direct
TQ-R gay F1	Nbr partners	CES-D, LSAS	HIV status	Total; direct
TQ-R gay F2	Nbr partners	CES-D, LSAS	HIV status	Total; direct
Exploratory Analyses I				
TQ-R general	Nbr acts	CES-D	HIV status	Total
TQ-R gay F1	Nbr acts	CES-D	HIV status	Indirect[b]
TQ-R gay F2	Nbr acts	CES-D	HIV status	Indirect
TQ-R general	Nbr partners	CES-D	HIV status	Total; direct
TQ-R gay F1	Nbr partners	CES-D	HIV status	Total; direct
TQ-R gay F2	Nbr partners	CES-D	HIV status	Total; direct
Exploratory Analyses II				
TQ-R general	Nbr acts	LSAS	HIV status	Total; direct[b]
TQ-R gay F1	Nbr acts	LSAS	HIV status	-
TQ-R gay F2	Nbr acts	LSAS	HIV status	-[b]
TQ-R general	Nbr partners	LSAS	HIV status	Total; direct
TQ-R gay F1	Nbr partners	LSAS	HIV status	Total[b]
TQ-R gay F2	Nbr partners	LSAS	HIV status	Total; direct

Note. TQ-general = Teasing Questionnaire-Revised general teasing questions; TQ-R F1 = nonconforming gender presentation teasing questions; TQ-R F2 = nonconforming gendered social activity teasing questions; CES-D = Center for Epidemiological Studies Depression Scale; LSAS = Liebowitz Social Anxiety Scale; Nbr acts = number of times an individual has had unprotected anal intercourse with a partner of serodiscordant or unknown HIV status; Nbr partners = number of non-primary partners of serodiscordant or unknown HIV status with whom the individual has had unprotected anal intercourse. All variables measured at baseline except Number of acts and Number of partners which were measured at 6-month follow-up.
[a]All reported effects statistically significant ($p < .05$ or 95% CI crosses zero).
[b]Exploratory effect differs from main analysis effect.
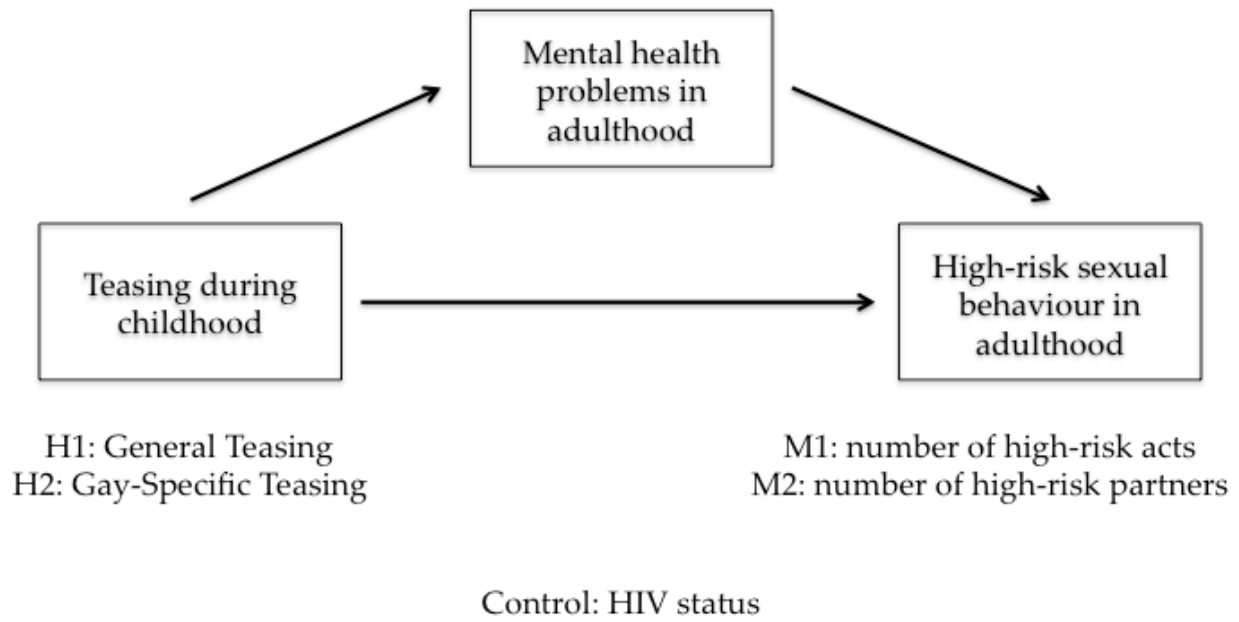
Figure 1. Hypothesized relationship between teasing, mental health problems, and high-risk sexual behaviour.

Figure 2. Results of a mediation analysis testing Hypothesis 1a: the impact of general teasing on number of high-risk sex acts via depression and social anxiety, controlling for HIV status.

Figure 3. Results of a mediation analysis testing Hypothesis 1b: the impact of being teased for nonconforming gender presentation on number of high-risk sex acts via depression and social anxiety, controlling for HIV status.

Figure 4. Results of a mediation analysis testing Hypothesis 1c: the impact of being teased for nonconforming gendered social activity on number of high-risk sex acts via depression and social anxiety, controlling for HIV status.
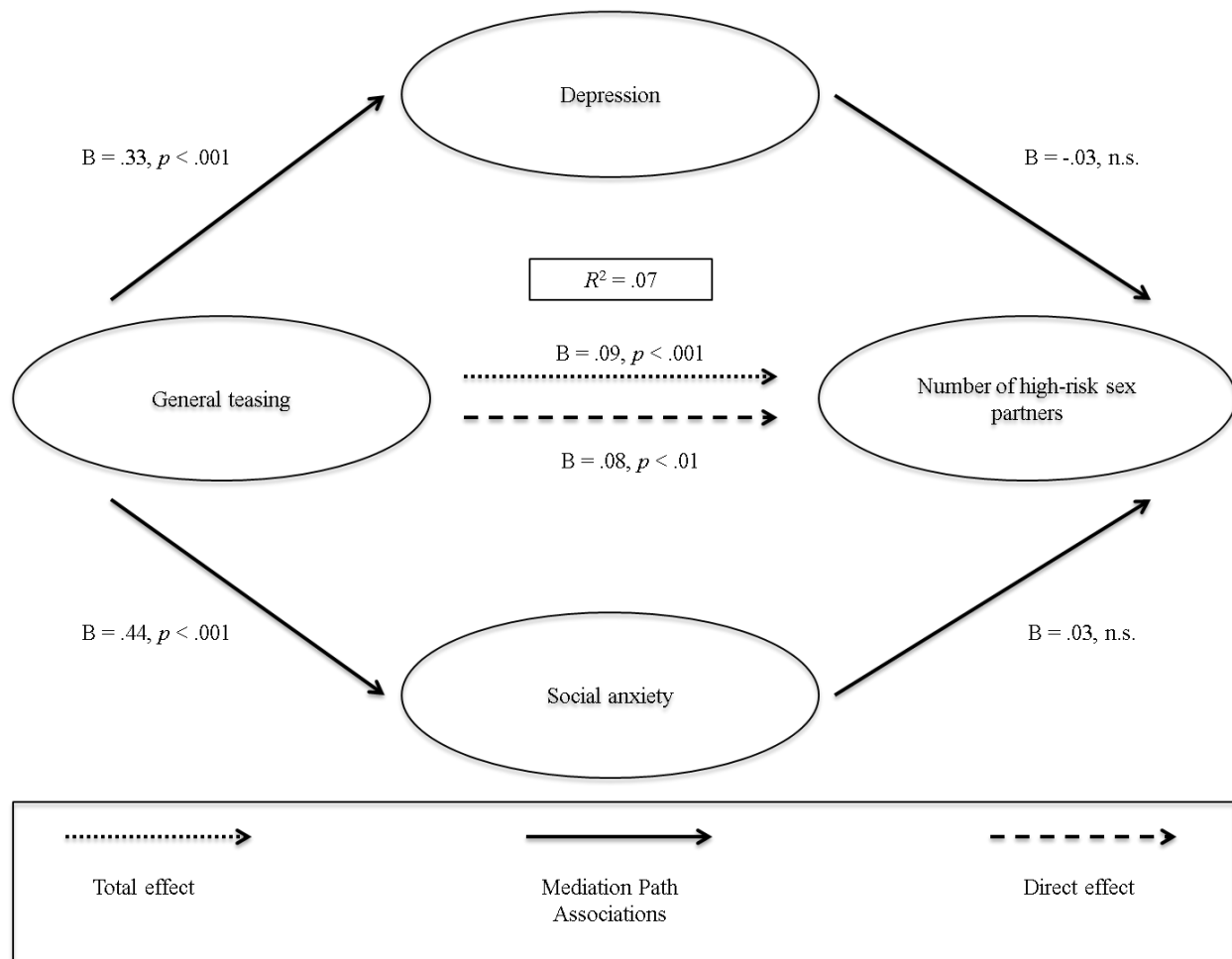
Figure 5. Results of a mediation analysis testing Hypothesis 2a: the impact of general teasing on number of high-risk sex partners via depression and social anxiety, controlling for HIV status.
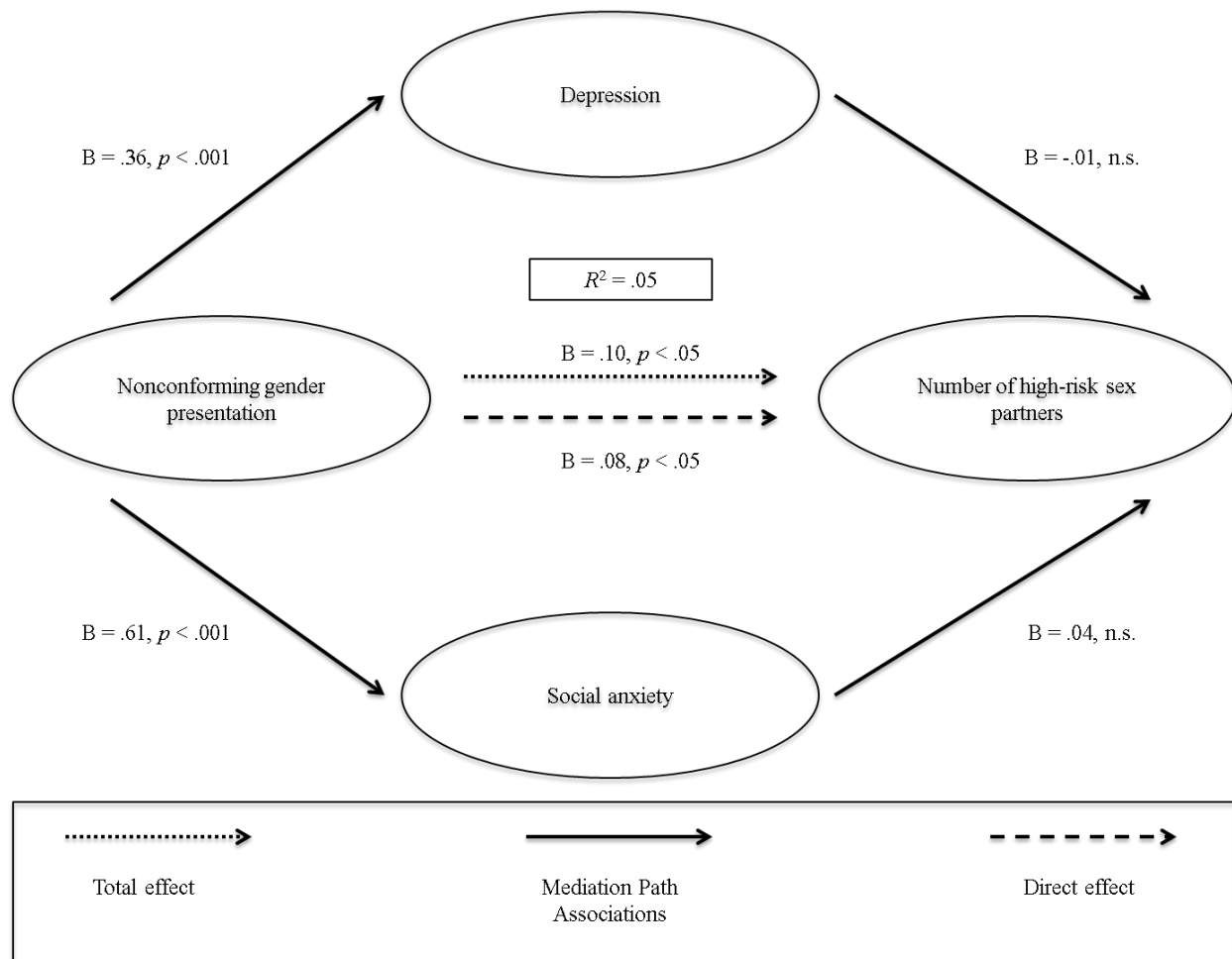
Figure 6. Results of a mediation analysis testing Hypothesis 2b: the impact of being teased for nonconforming gender presentation on number of high-risk sex partners via depression and social anxiety, controlling for HIV status.
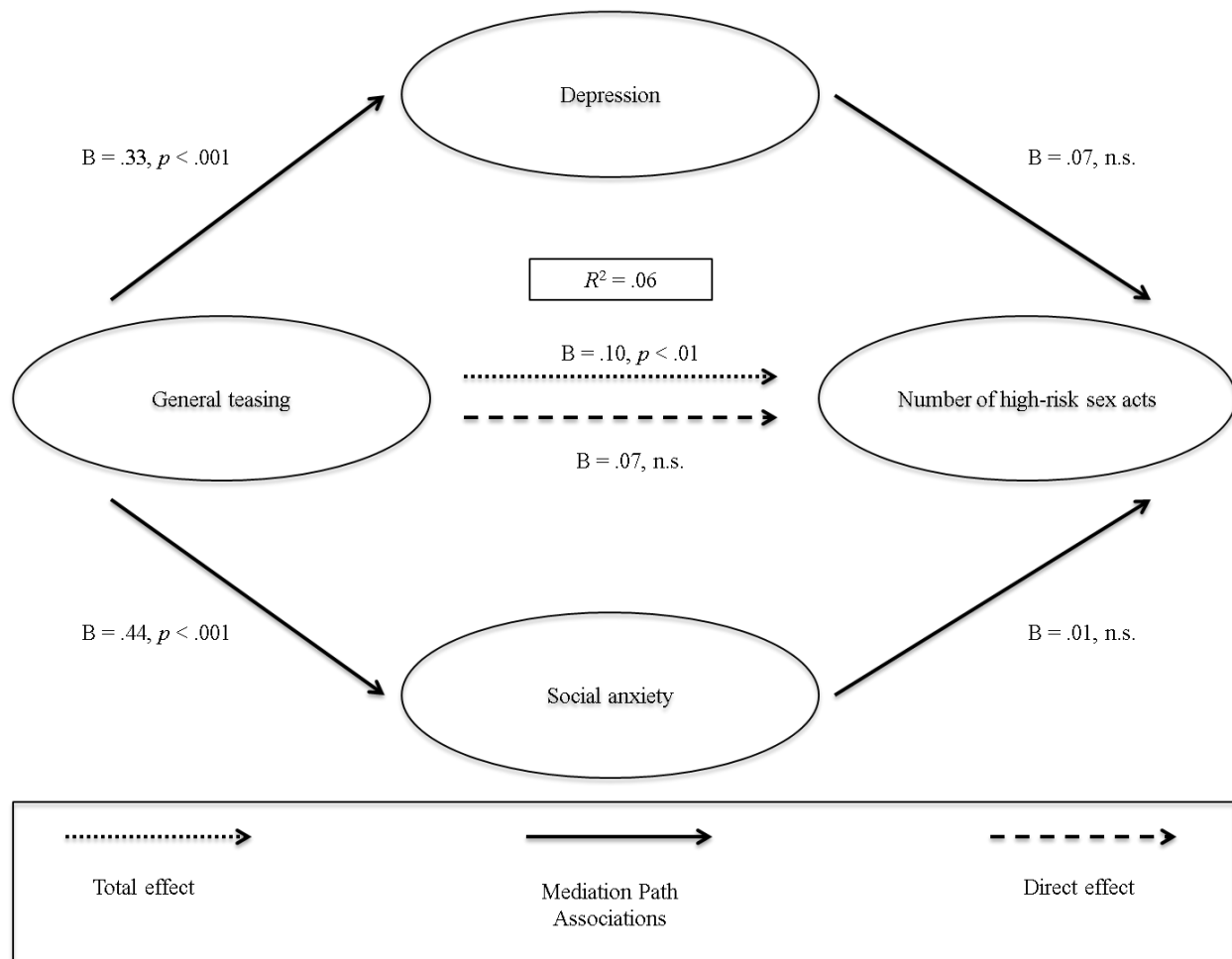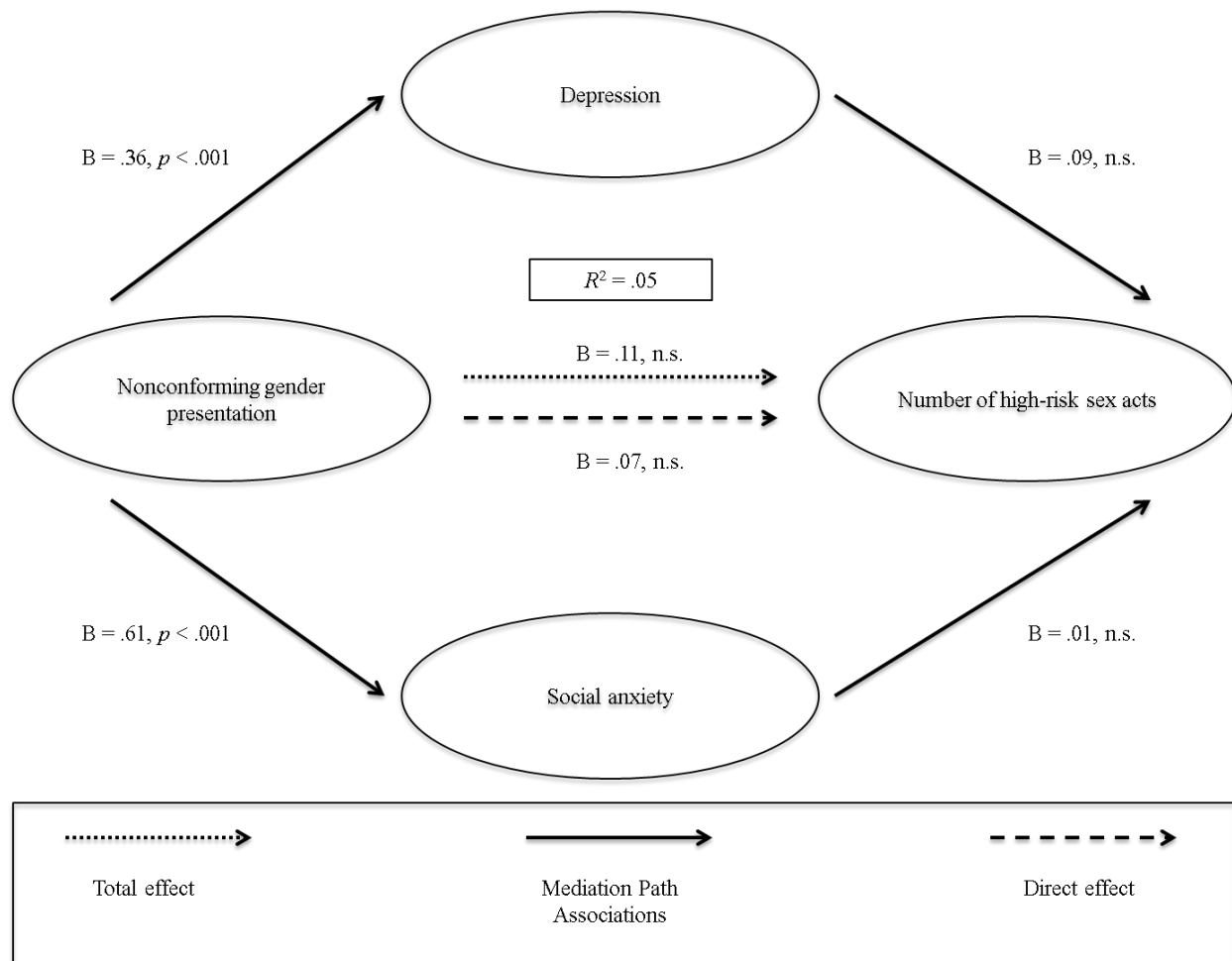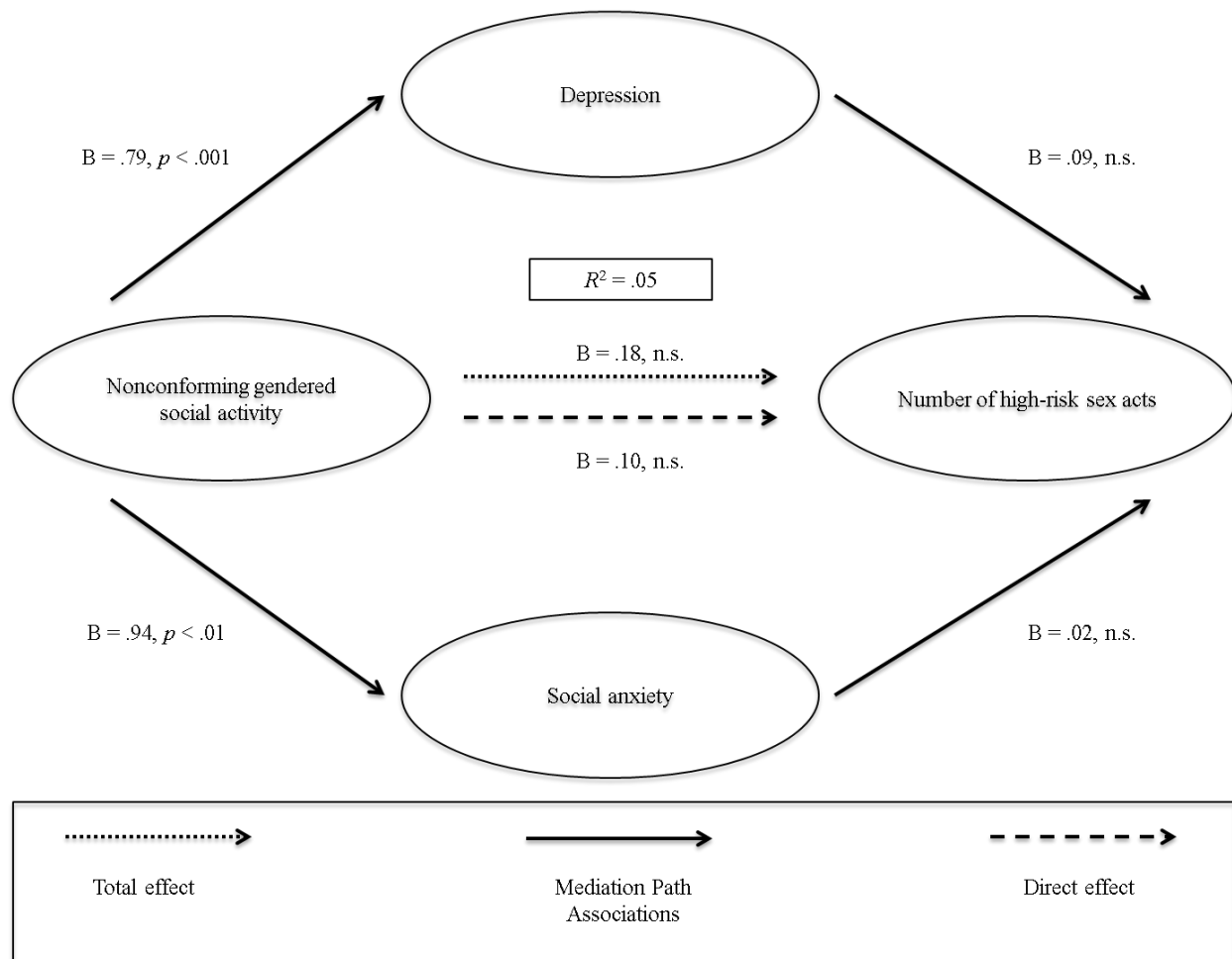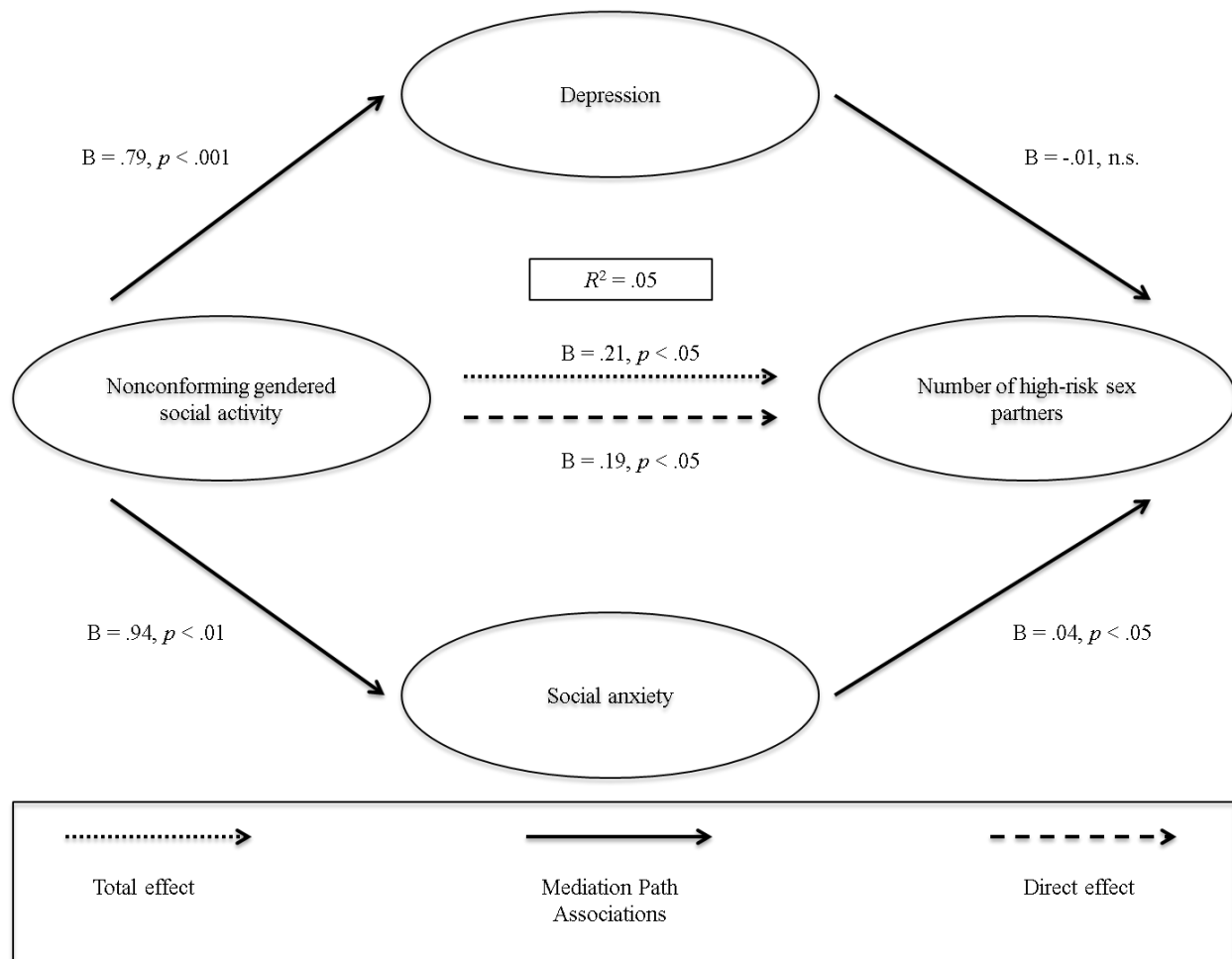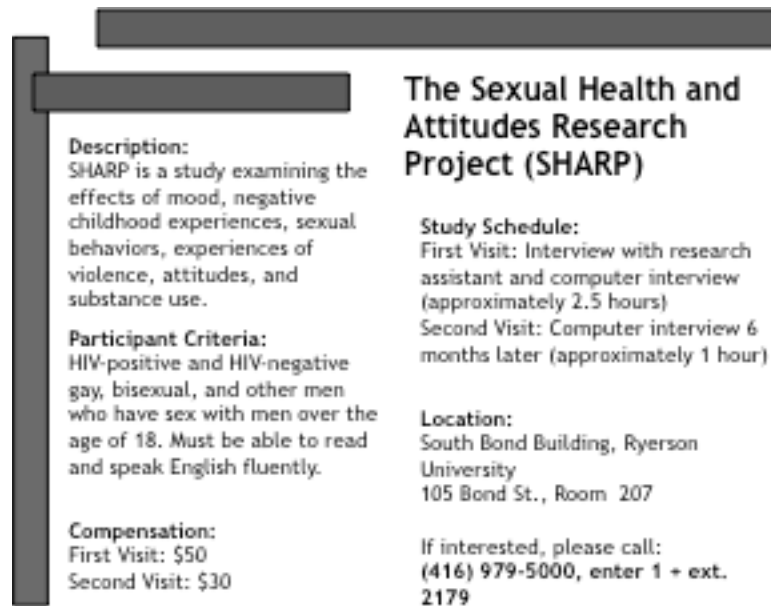
Figure 7. Results of a mediation analysis testing Hypothesis 2c: the impact of being teased for nonconforming gendered social activity on number of high-risk sex partners via depression and social anxiety, controlling for HIV status.

Recruitment Flyer

The Sexual Health and Attitudes Research Project (SHARP)

Description:
SHARP is a study examining the effects of mood, negative childhood experiences, sexual behaviors, experiences of violence, attitudes, and substance use.

Participant Criteria:
HIV-positive and HIV-negative gay, bisexual, and other men who have sex with men over the age of 18. Must be able to read and speak English fluently.

Compensation:
First Visit: $50
Second Visit: $30

Study Schedule:
First Visit: Interview with research assistant and computer interview (approximately 2.5 hours)
Second Visit: Computer interview 6 months later (approximately 1 hour)

Location:
South Bond Building, Ryerson University
105 Bond St., Room 207

If interested, please call:
(416) 979-5000, enter 1 + ext. 2179

Appendix B

Questionnaires

Liebowitz Social Anxiety Scale – Clinician Administered

Participant #_____   Date: _____

Fear or Anxiety	Avoidance
0 = None	0 = Never (0%)
1 = Mild	1 = Occasionally (1%-33% of the time)
2 = Moderate	2 = Often (33%-67% of the time)
3 = Severe	3 = Usually (67%-100% of the time)

Situation:	Fear or Anxiety	Avoidance
1. Telephoning in public – speaking on the telephone in a public place	0 1 2 3	0 1 2 3
2. Participating in small groups – having a discussion with a few others	0 1 2 3	0 1 2 3
3. Eating in public places – do you tremble or feel awkward handling food	0 1 2 3	0 1 2 3
4. Drinking with others in public places – refers to any beverage including alcohol	0 1 2 3	0 1 2 3
5. Talking to people in authority – for example, a boss or teacher	0 1 2 3	0 1 2 3
6. Acting, performing, or giving a talk in front of an audience – refers to a large audience	0 1 2 3	0 1 2 3
7. Going to a party – an average party to which you may be invited; assume you know some but not all people at the party	0 1 2 3	0 1 2 3
8. Working while being observed – any type of work you might do including school work or housework	0 1 2 3	0 1 2 3
9. Writing while being observed – for example, signing a check in a bank	0 1 2 3	0 1 2 3
10. Calling someone you don't know very well	0 1 2 3	0 1 2 3
11. Talking with people you don't know very well	0 1 2 3	0 1 2 3
12. Meeting strangers – assume others are of average importance to you	0 1 2 3	0 1 2 3
13. Urinating in a public bathroom – assume that others are sometimes present, as might normally be expected	0 1 2 3	0 1 2 3
14. Entering a room when others are already seated – refers to a small group, and nobody has to move seats for you	0 1 2 3	0 1 2 3
15. Being the center of attention – telling a story to a group of people	0 1 2 3	0 1 2 3

16. Speaking up at a meeting – speaking from your seat in a small meeting or standing up in place in a large meeting	0 1 2 3	0 1 2 3
17. Taking a written test	0 1 2 3	0 1 2 3
18. Expressing appropriate disagreement or disapproval to people you don't know very well	0 1 2 3	0 1 2 3
19. Looking at people you don't know very well in the eyes – refers to appropriate eye contact	0 1 2 3	0 1 2 3
20. Giving a report to a group – refers to an oral report to a small group	0 1 2 3	0 1 2 3
21. Trying to pick up someone – refers to a single person attempting to initiate a relationship with a stranger	0 1 2 3	0 1 2 3
22. Returning goods to a store where returns are normally accepted	0 1 2 3	0 1 2 3
23. Giving an average party	0 1 2 3	0 1 2 3
24. Resisting a high pressure salesperson – avoidance refers to listening to salesperson for too long	0 1 2 3	0 1 2 3

CESD

Please indicate the number which best describes how often you felt or behaved this way **during the past week.**

0	1	2	3
Rarely or none of the time (less than 1 day)	**Some** or little of the time (1-2 days)	**Occasionally** or a moderate amount of time (3-4 days)	**Most or all** of the time (5-7 days)

1. I was bothered by things that usually don't bother me.	0	1	2	3
2. I did not feel like eating; my appetite was poor.	0	1	2	3
3. I felt that I could not shake off the blues even with help from my family or friends	0	1	2	3
4. I felt that I was just as good as other people.	0	1	2	3
5. I had trouble keeping my mind on what I was doing.	0	1	2	3
6. I felt depressed.	0	1	2	3
7. I felt that everything I did was an effort.	0	1	2	3
8. I felt hopeful about the future.	0	1	2	3
9. I thought my life had been a failure.	0	1	2	3
10. I felt fearful.	0	1	2	3
11. My sleep was restless.	0	1	2	3
12. I was happy.	0	1	2	3
13. I talked less than usual.	0	1	2	3
14. I felt lonely.	0	1	2	3
15. People were unfriendly.	0	1	2	3
16. I enjoyed life.	0	1	2	3
17. I had crying spells.	0	1	2	3

18. I felt sad.	0	1	2	3
19. I felt that people disliked me.	0	1	2	3
20. I could not get "going".	0	1	2	3

The following questions refer to your attitudes and behaviour towards **HIV/AIDS testing**

1.   Have you ever taken an HIV test? (Check one)
        ☐ Yes   ☐ No   ☐ I don't know

2.   Do you know your HIV/AIDS status?
                ☐ Yes
                ☐ No

3.   If you know your HIV status, what is it?
                ☐ HIV positive
                ☐ HIV negative
                ☐ I actually don't know my HIV/AIDS status

We are interested in knowing about things you may have been teased about as a child and how you felt if you were teased.

Please circle the number that best describes the degree to which you were teased about each topic.

0	1	2	3	4
I was never teased about this	I was rarely teased about this	I was sometimes teased about this	I was often teased about this	I was always teased about this

1. I was teased because I was not good at sports.	0	1	2	3	4
2. I was teased because I always volunteered to answer questions in class.	0	1	2	3	4
3. I was teased because I didn't do well in school.	0	1	2	3	4
4. I was teased because I was "nerdy."	0	1	2	3	4
5. I was teased because of various ethnic or cultural differences (e.g., skin color, eating different foods than the other kids, wearing special items of clothing such as head coverings, etc…)	0	1	2	3	4
6. I was teased because my family didn't have as much money as the other kids' families.	0	1	2	3	4
7. I was teased about particular aspects of my appearance such as the way that I dressed, wearing glasses, the color of my hair, etc….	0	1	2	3	4
8. I was teased because of the color or style of my hair.	0	1	2	3	4
9. I was teased because I wasn't a very cheerful kid.	0	1	2	3	4
10. I was teased because I studied a lot.	0	1	2	3	4
11. I was teased about being ugly or unattractive.	0	1	2	3	4
12. I was teased about my weight.	0	1	2	3	4
13. I was teased because of the way that I dressed.	0	1	2	3	4
14. I was teased because I often looked nervous (I blushed, had shaky hands, etc.)	0	1	2	3	4
15. I was teased for being the "teacher's pet."	0	1	2	3	4

16. I was teased because I wasn't very good at initiating and maintaining conversations with other kids.	0	1	2	3	4
17. I was teased because I was shy around other kids.	0	1	2	3	4
18. I was teased because I wasn't good at various performance related activities like singing, acting, or speaking in front of others.	0	1	2	3	4
19. I was teased because of the way that I spoke (stuttering, speaking with an accent, etc.)	0	1	2	3	4
20. I was teased because I excelled at school (I was brainy).	0	1	2	3	4
21. I was teased because I matured earlier than other kids my age.	0	1	2	3	4
22. I was teased because I cried a lot or acted like a baby.	0	1	2	3	4
23. I was teased because I was fatter than the other kids.	0	1	2	3	4
24. I was teased because I was scared of doing lots of things (e.g., swimming, going camping, etc.)	0	1	2	3	4
25. I was teased because I cared more about classes than sports or other activities.	0	1	2	3	4
26. I was teased because I wore glasses.	0	1	2	3	4
27. I was teased because I was taller than the other kids.	0	1	2	3	4
28. I was teased about my height.	0	1	2	3	4
29. I was teased for having a "funny" name.	0	1	2	3	4

Teasing questions specifically for gay men

1   I was teased because I was a boy who didn't play sports.

2   I was teased because I played with girls.

3   I was teased for talking "like a girl."

4   I was teased for dressing "too gay."

5   I was teased for not walking "like a guy."

6   I was teased for acting "like a girl."

7   I was teased because I had a lot of female friends.

8   I was teased for acting like a "sissy."

9   I was teased because I didn't date girls "enough."

10 I was teased for being "too feminine."

11 I was teased because I did not like the same social activities as the other guys.

12 I was teased about making "feminine gestures."

13 I was teased for not being "masculine enough."

Sexual Behaviour Questions (A-CASI script version)

Primary Male Partner

fupmiai	How many times did you have insertive anal sex (you put your penis in his ass)? Please write the number of times you did each of these sexual activities with your main partner in the last six months. *If you cannot remember the exact number of times, you can use the scale below to help come up with an estimate:* If you did an activity about once a day, that would be about 180 times. If you did an activity about two or three times a week, that would be about 60 times. If you did an activity about once a week, that would be about 24 times. If you did an activity about once a month, that would be 6 times.
fupmiaic	Of the &[PMIAI] times you had insertive anal sex, how many times did you use a condom?
fupmrai	How many times did you have receptive anal sex (he put his penis in your ass)? Please write the number of times you did each of these sexual activities with your main partner in the last six months. *If you cannot remember the exact number of times, you can use the scale below to help come up with an estimate:* If you did an activity about once a day, that would be about 180 times. If you did an activity about two or three times a week, that would be about 60 times. If you did an activity about once a week, that would be about 24 times. If you did an activity about once a month, that would be 6 times.
fupmraic	Of the &[PMRAI] times you had receptive anal sex, how many times did you use a condom?

Non-main Male Partner

The next questions are about all non-primary man partners that you may have had in the past six months, that is since &[SIXMO]. We will refer to these partners as non-main man partners.

With these questions, include all men partners except &[MAININIT].

fuomsex	In the past six months, did you have sex with any men who were not main partners?
fuompoz	In the past six months, how many of your non main men sex partners told you they were H.I.V. positive?

fuomneg	In the past six months, how many of your non main men sex partners told you they were H.I.V. negative?
fuomunk	In the past six months, how many of your non main men sex partners did not tell you their H.I.V. status or told you that they did not know their H.I.V. status?
No Name	The next group of questions are about your sexual activities during the past six months with your non-main man partners who were **H.I.V. positive**. Please put the number of times you did each of these sexual activities in the last six months with H.I.V. positive non-main man partners. *If you cannot remember the exact number of times, you can use the scale below to help come up with an estimate:* If you did an activity about once a day, that would be about 180 times. If you did an activity about two or three times a week, that would be about 60 times. If you did an activity about once a week, that would be about 24 times. If you did an activity about once a month, that would be 6 times.
fuompiai	How many times did you have insertive anal sex (put my penis in his ass) with H.I.V. positive non-main man partners in the last six months? *If you cannot remember the exact number of times, you can use the scale below to help come up with an estimate:* If you did an activity about once a day, that would be about 180 times. If you did an activity about two or three times a week, that would be about 60 times. If you did an activity about once a week, that would be about 24 times. If you did an activity about once a month, that would be 6 times.
fuompiaic	Of these &[OMPIAI] times you had insertive anal sex with H.I.V. positive non-main man partners, how many times did you use a condom?
fuomprai	How many times did you have receptive anal sex (put his penis in your ass) with H.I.V. positive non-main man partners in the last six months? *If you cannot remember the exact number of times, you can use the scale below to help come up with an estimate:* If you did an activity about once a day, that would be about 180 times. If you did an activity about two or three times a week, that would

be about 60 times.
If you did an activity about once a week, that would be about 24 times.
If you did an activity about once a month, that would be 6 times.

fuompraic	Of these &[OMPRAI] times you had receptive anal sex with H.I.V. positive non-main man partners, how many times did your partner use a condom?
fuompxiai	Earlier you said that you had &[OMPOZ] non-main man partners who were H.I.V. positive. How many of these &[OMPOZ] partners did you have insertive anal sex with (put your penis in his ass) without a condom?
fuompxrai	Earlier you said that you had &[OMPOZ] non-main man partners who were H.I.V. positive. How many of these &[OMPOZ] partners did you have receptive anal sex with (put his penis in your ass) without a condom?
fuomnegiai	How many times did you have insertive anal sex (put my penis in his ass) with H.I.V. negative non-main man partners in the last six months? *If you cannot remember the exact number of times, you can use the scale below to help come up with an estimate:* If you did an activity about once a day, that would be about 180 times. If you did an activity about two or three times a week, that would be about 60 times. If you did an activity about once a week, that would be about 24 times. If you did an activity about once a month, that would be 6 times.
fuomniaic	Of these &[OMNEGIAI] times you had insertive anal sex with H.I.V. negative non-main man partners, how many times did you use a condom?
fuomnegrai	How many times did you have receptive anal sex (put his penis in your ass) with H.I.V. negative non-main man partners in the last six months? *If you cannot remember the exact number of times, you can use the scale below to help come up with an estimate:* If you did an activity about once a day, that would be about 180 times. If you did an activity about two or three times a week, that would be about 60 times. If you did an activity about once a week, that would be about 24 times. If you did an activity about once a month, that would be 6 times.

fuomneraic	Of these &[OMNEGRAI] times you had receptive anal sex with H.I.V negative non-main man partners, how many times did you use a condom?
fuomnxiai	Earlier you said that you had &[OMNEG] non-main man partners who were H.I.V. negative. How many of these &[OMNEG] partners did you have insertive anal sex with (put your penis in his ass) without a condom?
fuomnxrai	Earlier you said that you had &[OMNEG] non-main man partners who were H.I.V. negative. How many of these &[OMNEG] partners did you have receptive anal sex with (put his penis in your ass) without a condom?
fuomnuiai	How many times did you have insertive anal sex (put my penis in his ass) with non-main man partners of unknown H.I.V. status in the last six months? *If you cannot remember the exact number of times, you can use the scale below to help come up with an estimate:* If you did an activity about once a day, that would be about 180 times. If you did an activity about two or three times a week, that would be about 60 times. If you did an activity about once a week, that would be about 24 times. If you did an activity about once a month, that would be 6 times.
fuomnuiaic	Of these &[OMNUIAI] times you had insertive anal sex with non-main man partners of unknown H.I.V. status, how many times did you use a condom?
fuomnurai	How many times did you have receptive anal sex (put his penis in your ass) with non-main man partners of unknown H.I.V. status in the last six months? *If you cannot remember the exact number of times, you can use the scale below to help come up with an estimate:* If you did an activity about once a day, that would be about 180 times. If you did an activity about two or three times a week, that would be about 60 times. If you did an activity about once a week, that would be about 24 times. If you did an activity about once a month, that would be 6 times.
fuomnuraic	Of these &[OMNURAI] times you had receptive anal sex with non-main man partners of unknown H.I.V. status, how many times did you use a condom?
fuomuxiai	Earlier you said that you had &[OMUNK] non-main man partners

who didn't tell you their H.I.V. status. How many of these &[OMUNK] non-main man partners did you have insertive anal sex with (put your penis in his ass) without a condom?

fuomuxrai   Earlier you said that you had &[OMUNK] non-main man partners who didn't tell you their H.I.V. status. How many of these &[OMUNK] non-main man partners did you have receptive anal sex with (put his penis in your ass) without a condom?

Appendix C

Consent and Debriefing Forms

Ryerson University - Consent to be a Research Participant

<u>**Title**</u>: Sexual Health and Attitudes Research Project
<u>**Principal Investigator:**</u> Trevor A. Hart, Ph.D.
<u>**Purpose:**</u>
We are asking you to volunteer for a research study on mood, negative childhood experiences, experiences of violence, attitudes, and sexual behaviours. We hope that the information we get from this study will help us learn more about gay and bisexual men's health-related beliefs and actions.

<u>**Procedures:**</u>
If you agree to participate, we will ask you to answer a number of questions presented on a study computer. You will answer these questions by clicking on the answer that best applies to you. You will not be asked to give your name or other identifying information. A research assistant will be nearby to answer any questions that you may have. You can stop answering the questions at any time, and you are free to leave particular questions unanswered if you choose. You will also participate in a brief interview, in which a research assistant will ask you a number of questions. The whole session should take approximately 2.5 hours to complete.

Five months after your initial session, you will be contacted by the researchers about participating in a 6-month follow-up session. If you agree to participate, we will ask you to answer a number of questions presented on a study computer. The session should take approximately 1 hour.

Your involvement will end with the 6-month follow-up session and there will not be any further contact between you and the researchers.

<u>**Risks:**</u>
There are no physical risks associated with doing this study. However, it is possible that some questions may make you feel uncomfortable. You may withdraw from this study at any time. Your refusal to answer a question and/or withdrawal from the study will not affect any services or relationship you currently have with Ryerson University.

<u>**Benefits:**</u>
You will be given $50 cash for your participation in the initial two-hour session. An additional $30 cash will be given to those participants who participate in the 6-month follow-up session. The information you provide will help the researchers working on the study by providing them with valuable information about health and health issues.

<u>**Confidentiality:**</u>
We will keep all the facts about you private. All information will be kept in a locked file cabinet in a locked office. We will keep this consent form separate from the questionnaires. We will use

a study number rather than your name on study records. No one will see your name and other facts that might point to you when we present this study or publish its results. We will keep your records private to the extent allowed by law. We would have to breach your confidentiality only if:

    a) if you tell us that you are going to harm yourself or others
    b) if you inform us of any instance of child abuse or neglect
    c) if you report abuse by a health care practitioner or
    d) if the records are subject to a subpoena by the courts (records can be opened by a specific court order but it is highly unlikely that this would ever happen).

Contact Person:
To ask more questions about this study, call Dr. Trevor Hart, at (416) 979-5000 extension 6192.

Dr. Trevor Hart
Department of Psychology
Ryerson University
350 Victoria Street.
Toronto, Ontario
M5B 2K3

This study has been reviewed and approved by the Research Ethics Board at Ryerson University within the context of Ryerson University's Tri Council Policy Statement on data collection involving human participants. If you have any questions or concerns, please feel free to contact Ryerson University's Research Ethics Coordinator at (416) 979-5000 extension 7112, or at akaraban@ryerson.ca.

I have received a copy of the informed consent form.

If you are willing to volunteer for this research, please sign below:

Date: _____   Time: _____   Name: _____

Date: _____   Time: _____   Person Obtaining Consent: _____

Ryerson University - Consent to be a Research Participant

Title: Sexual Health and Attitudes Research Project – 6 Month Follow-Up
Principal Investigator: Trevor A. Hart, Ph.D.
Purpose:
We are asking you to volunteer for a 6-month follow up to a research study in which you have already participated. This study will ask you questions related to mood, anxiety, attitudes, personality, substance use, and sexual behaviours. We hope that the information we obtain from this study will help us learn more about gay and bisexual men's health-related beliefs and actions.

Procedures:
If you agree to participate, we will ask you to answer a number of questions presented on a study computer. You will answer these questions by clicking on the answer that best applies to you. You will not be asked to give your name or other identifying information. A research assistant will be nearby to answer any questions that you may have. You can stop answering the questions at any time, and you are free to leave particular questions unanswered if you choose. The whole session should take approximately 1 hour to complete.

Your involvement will end with the 6-month follow-up session and there will not be any further contact between you and the researchers.

Risks:
There are no physical risks associated with doing this study. However, it is possible that some questions may make you feel uncomfortable. You may withdraw from this study at any time. Your refusal to answer a question and/or withdrawal from the study will not affect any services or relationship you currently have with Ryerson University.

Benefits:
You will be given $30 cash for your participation in the follow-up one-hour session. The information you provide will help the researchers working on the study by providing them with valuable information about health and health issues.

Confidentiality:
We will keep all the facts about you private. All information will be kept in a locked file cabinet in a locked office. We will keep this consent form separate from the questionnaires. We will use a study number rather than your name on study records. No one will see your name and other facts that might point to you when we present this study or publish its results. We will keep your records private to the extent allowed by law.

We would have to breach your confidentiality only if:
a) if you tell us that you are going to harm yourself or others
b) if you inform us of any instance of child abuse or neglect
c) if you report abuse by a health care practitioner or
d) if the records are subject to a subpoena by the courts (records can be opened by a specific court order but it is highly unlikely that this would ever happen).

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I have received a copy of the informed consent form.

If you are willing to volunteer for this research, please sign below:

Date: _____   Time: _____   Name: _____

Date: _____   Time: _____   Person Obtaining Consent: _____

Ryerson University

Debriefing Form

Thank you for participating in the Sexual Health and Attitudes Research Project. The information collected from this study will be used to examine if mood, anxiety and personality characteristics are related to HIV risk behaviours, among HIV positive and negative gay and bisexual men. Previous research has indicated that social anxiety may be an important factor for HIV transmission risk among men who have sex with men (MSM).

We ask that you do not disclose any of this information to others who may participate in this study, as we do not want anyone's answers to be influenced by other participants' responses. If you have any additional questions or concerns about this study please feel free to contact Dr. Trevor Hart at (416) 979-5000 extension 6192.

Trevor A. Hart, Ph.D., C.Psych
Department of Psychology
Ryerson University
Jorgensen Hall, 8th Floor
350 Victoria Street
Toronto, Ontario
Canada, M5B 2K3

Since the study asked questions about your mood and other sensitive issues, we would like to offer you a list of psychiatric and psychological services available in the Greater Toronto Area (GTA) and surrounding areas that you can refer to if you are currently (or in the future) experiencing distress. Feel free to contact any of the following facilities to get more details about their services:

Psychiatric & Psychological Services

- ACT Services for People Living with HIV
  399 Church Street, 4th floor
  Toronto, Ontario, M5B 2J6
  Tel: (416) 340-2437
  Website: www.actoronto.org

- Distress Centres of Toronto
  P.O. Box 243, Adelaide P.O.
  Toronto, Ontario, M5C 2J4
  Tel: 416-408-HELP (4357)
  Website: www.torontodistresscentre.com

- Ontario Psychological Association
  730 Yonge Street
  Toronto, Ontario
  Tel: (416) 961-0069
  Toll Free: 1-800-268-0069
  Website: www.psych.on.ca

- Telecare Distress Centre
  P.O. Box 74116
  Brampton, ON, L6V 4J7
  Tel: (905) 459-7777
  Website: www.telecaredistresscentre.org

- Gerstein Centre
  100 Charles Street East
  Toronto, Ontario, M4Y 1V3
  Tel: (416) 929-5200 (Crisis Line)

- Family Service Association of Toronto- David Kelley Services
  Lesbian, Gay & HIV/AIDS Counseling
  355 Church Street
  Toronto, Ontario, M5B 1Z8
  Tel: (416) 595-9618
  Website: www.fsatoronto.com

- St. Elizabeth Health Care
  2 Lansing Square, Suite 600
  Toronto, Ontario, M2J 4P8
  Community Line: (416) 498-8600
  24-hour Mobile Crisis Line: (416) 498-0043 (for residents of North York and Etobicoke)

- Whitby Mental Health Centre
  700 Gordon Street
  Whitby, Ontario, L1N 5S9
  Toll Free Crisis Line: 1-800-263-2679
  Website: www.whitbymentalhealthcentre.ca

- Centre for Addiction and Mental Health (CAMH)
  250 College Street
  Toronto, Ontario, M5T 1R8
  Tel: (416) 535-8501 ext. 6111
  Location Contact List: www.camh.net/about_camh/contact_us/index.html
  Website: www.camh.net