CORRELATES OF HIGH-RISK SEXUAL BEHAVIOR AMONG YOUNG MEN WHO HAVE SEX WITH MEN

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Data from a sample (n = 154) of young men who have sex with men (YMSM), aged 13-21, residing in five mid-sized cities in the midwestern United States were used to test the hypothesis that personality variables (impulsive decision making, sensation seeking, anxiety/depression, internalized homophobia) contribute uniquely to the prediction of unprotected anal sex beyond what is accounted for by other high-risk behaviors (i.e., substance use and number of sex partners) and partner status (having a dating partner). Results of hierarchical regression analyses indicated that number of reported anal sex partners and partner status were positively associated with self-reported frequency of unprotected anal sex. Beyond these factors, impulsive decision making significantly contributed to the predictive model. These findings indicate that designing effective prevention programming for YMSM should take into consideration relationship status and the impulsiveness of sexual decision making among members of the target group.

Young men who have sex with men (YMSM) face an increased risk of contracting HIV relative to their exclusively heterosexual peers (Blake et al., 2001; Bok & Morales, 1998; Faulkner & Cranston, 1998). No sexual behavior is more risky than unprotected anal sex, and evidence indicates that the percentages of YMSM who engage in this specific sex behavior remain high. In one study, 37% of the young men sampled reported engaging in unprotected anal sex in the last year (Hays et al., 1997). Because of the high-risk for contracting HIV, documenting factors associated with unprotected anal intercourse among YMSM is important to efficacious education and prevention programming.

Problem behavior theory (R. Jessar, 1992; R. Jessar, Graves, Hanson, & R. Jessar, 1968; R. Jessar, Van-Den-Bos, Vanderryn, & Costa, 1995) hypothesizes that risk behavior results from the interaction of three systems composed of the aspects of the personality, aspects of the environment or situation, and behaviors aligned with...
nonconventional, or “deviant,” rather than conventional norms. To date, problem behavior theory has primarily focused on understanding adolescent substance use (Donovan, R. Jessor, & Costa, 1999; S.L. Jessor & R. Jessor, 1975) and early transition to sexual intercourse (Costa, R. Jessor, Donovan & Fortenberry, 1995; R. Jessor, S. L. Jessor, & Finney, 1973) among presumably heterosexual youth. To our knowledge, no research has extended this model to sexual minority youth. Given the largely atheoretical nature of research on YMSM, the potential utility of problem behavior theory for understanding high-risk sexual behavior in this population is worthy of exploration. Although fully testing this model is beyond the scope of this initial study, we do utilize the tripartite framework to explore selected personality, environmental, and behavioral contributions to the reported frequency of unprotected anal intercourse in a sample of adolescent males who have sex with men. Given that the majority of studies (reviewed below) have focused on environmental and/or behavioral correlates, the focus of this particular study is the unique contribution of selected personality variables (impulsive decision making, high sensation seeking, internalized homophobia, and depression) to a model predicting the frequency of unprotected anal intercourse.

CORRELATES

BEHAVIORAL CORRELATES

Previous studies have reported that YMSM engage in concomitant risk behaviors that increase HIV risk. For instance, YMSM have reported twice as frequent use of drugs and alcohol before sex than their exclusively heterosexual peers (Blake et al., 2001). Other researchers have also documented significant associations between substance use and risky sex behavior (Faulkner & Cranston, 1998; Huba et al., 2000; Kalichman, Heckman, & Kelly, 1996; Mansergh et al., 2001). Steuve, O’Donnell, Duran, Doval and Geier (2002), in a study conducted of over 3,000 MSM aged 15-25, discovered that nearly one third of their sample “reported being high on alcohol or drugs the last time they had sex with a nonmain partner, and men who were high were over 60% more likely to have engaged in unprotected receptive anal intercourse” (p. 491). Furthermore, substance use was associated with other risk factors, including having multiple sex partners, trading sex, and succumbing to peer norms discouraging condom use that “together place young MSM at high-risk of getting or transmitting HIV” (p. 491). These studies underscore the importance of assessing drug and alcohol use as it relates to the sexual activity of MSM youth.

In addition to substance use, YMSM report an earlier age of sexual debut and about 1.3 times the number of sexual partners (Blake et al., 2001). In other words, YMSM, compared with their exclusively heterosexual peers, typically have more opportunities to engage in risky sexual behaviors due to their earlier initiation into sexual activity and their greater number of sexual partners. These findings are consistent with problem behavior theory’s assumption that a specific risk behavior is more likely to the extent that it is part of a “constellation” of problem behaviors.

ENVIRONMENTAL CORRELATES

As a particularly salient proximal cue to engage in sexual behavior, it is surprising that only a few researchers have examined relationship status as a correlate of sexual risk behavior. For instance, recent findings from qualitative interviews with adult men who have sex with men (MSM) indicated that having a steady dating partner may paradoxically increase the risk of contracting HIV by reducing condom use with the
steady partner in a demonstration of intimacy and trust (Adam, Sears, & Schellenberg, 2000; Diaz & Ayala, 1999; Worth, Reid, & McMillan, 2002). Two quantitative studies also examined relationship status in relation to high-risk sexual activity among MSM and documented increased risk behavior in steady relationships (Appleby, Miller, & Rothspan, 1999; Choi, Han, Hudes, & Kegeles, 2002). Individuals who forgo using condoms in a sexually exclusive relationship, however, still face potential risk of disease transmission to the extent that “exclusive” partners have sex outside their primary relationship (Doll et al., 1994). Therefore, we assess this specific environmental factor and its contribution to the frequency of unprotected anal intercourse among YMSM.

PERSONALITY CORRELATES

In addition to concomitant problem behaviors such as substance use and environmental factors such as partner status, some evidence has suggested the salience of personality factors to understanding sexual risk taking. Specifically, risky sexual behavior has been found to be associated with impulsivity (Hays et al., 1997; Semple, Patterson, & Grant, 2000) and sensation seeking (Ostrow, DiFranceisco, & Kalichman, 1997; Ostrow, McKirnan, Klein, & DiFranceisco, 1999). Chng and Géliga-Vargas (2000) found that among older multiethnic MSM, sexual sensation seeking and being in a sexually exclusive relationship significantly predicted unprotected anal sex. These findings support theoretical conceptualizations of an impulsive, sensation-seeking personality factor that may place individuals at greater risk for contracting HIV (Zuckerman, Kuhlman, Joireman, Teta, & Kraft, 1993). No study, to date, however, has tested this hypothesis in YMSM.

Impulsivity and sensation-seeking may serve as coping strategies for the regulation of negative affect (see Cooper, Agocha, & Sheldon, 2000). Findings regarding the association between negative affect and risky sex behaviors, however, have been mixed. Some researchers have documented an association between increased rates of unprotected anal intercourse and emotional distress among YMSM (Rotheram-Borus, Reid, Rosario, & Kasen, 1995) and MSM (Semple et al., 2000). Other researchers, however, have found no association between depressive symptoms and risky sexual behaviors among MSM (Dilley, McFarland, Sullivan, & Discepolo, 1998; Kelley, St. Lawrence, & Brasfield, 1991).

A recent meta-analytic review by Crepaz and Marks (2001), for example, investigated the association between negative affect and increased sexual risk behavior in 34 samples of MSM, substance users, and other heterogeneous samples. Although several researchers have hypothesized a link between negative affect and increased sexual behavior (e.g., Marks, Bingman, & Duval, 1998; Perkins, Leserman, Murphy, & Evans, 1993), empirical data from the meta-analysis do not support an association between negative affect (including depressive symptomatology, anxiety, and anger) and sexual behaviors that place individuals at risk for contracting or transmitting HIV. However, the contribution of negative affect, though seemingly insignificant to the decision making of adults, may be highly significant to risk behavior during the developmental course of adolescence (Pennebaker & Stone, 2003).

Beyond affective state, individual differences in internalized oppression or homonegativity have been postulated to be important to understanding risky sexual behavior in MSM (Wright, Gonzalez, Werner, Laughner, & Wallace, 1998). Despite the potential importance of this factor in the lives of YMSM who are in the process of forming sexual identities, few findings are available in the published literature. In one
notable exception, Rosario, Hunter, Maguen, Gwadz, and Smith (2001) found that negative attitudes toward homosexuality were positively associated with unprotected sexual activity.

The purpose of this article, therefore, was to build on previous findings by examining the influence of specific personality factors (i.e., impulsivity, sensation seeking, anxious/depressed mood, and internalized homophobia) that may affect sexual decision making, specifically the decision to engage in unprotected anal intercourse. We tested the hypothesis that, beyond the constellation of risk behaviors (i.e., substance use, multiple partners) previously demonstrated to be associated with high-risk sexual behavior, an impulsive and sensation-seeking personality style, higher anxious/depressed mood, and internalized homophobia would add significantly to a model predicting unprotected anal intercourse among YMSM. Consistent with the tenets of problem behavior theory and previous empirical findings, we also included the presence of a dating partner as an important proximal environmental contributor to risky sexual behavior. Finally, we included age and race as demographic control variables based on previous research that reported significant associations between these variables and high-risk behaviors (Bok & Morales, 1998).

METHODS

PARTICIPANTS

One hundred sixty-nine homosexually active young men from five mid-sized cities in the midwestern United States were recruited for participation. As described below, 15 participants were excluded from the sample, resulting in 154 participants included in the final analyses. The age of participants ranged from 13 to 21 years old, with a mean age of 18.04. The ethnicity of the sample was as follows: 14.9% African American, 0.6% American Indian/Alaskan Native, 2.6% Asian American, 72.1% Caucasian/White, 3.9% Hispanic American, and 5.8% other or mixed race.

PROCEDURES

All participants were contacted either through GLBT (gay, lesbian, bisexual, transgender) youth groups or at gay-friendly public venues (e.g., coffee shops, cafés). A “passive” recruitment method was employed to give individuals the choice of whether or not to participate in a pencil-and-paper community health survey that required approximately 25 minutes to complete. In the public venues, fliers and posters describing the survey and criteria for participation were distributed throughout the establishment. These materials instructed interested and eligible persons to request the survey from one of the on-site research assistants, who were usually seated at a separate table away from the flow of traffic. In this manner, no one was approached directly and noninterested individuals could self-select out. Eligibility criteria included being male, aged 13-21, and being homosexual or having had sex with a member of the same sex. Research assistants present during data collection estimated that approximately two thirds of the potentially eligible clientele in the larger venues (i.e., establishments holding more than 200 people) approached them regarding the survey, whereas nearly 95% of the potentially eligible clientele in the smaller venues (i.e., establishments holding fewer than 50 people), inquired about the survey.

A similar procedure was followed for the youth groups. Researchers contacted the youth group leaders approximately a month in advance to allow them to describe the purpose of the survey to their group members. Data collection was typically scheduled to take place during a regular meeting of the youth group at which regular pro-
gramming was taking place. Research assistants described the nature of the survey to all members of the youth group and instructed them to request a survey at some point in the evening if they were interested in participating. In this manner, youth group members could choose not to participate without feeling pressured by other members. Data were collected in the youth groups from both males and females, although only the male data are reported here. The research assistants present during data collection estimated that more than 95% of all youth group members agreed to participate in the survey.

In both the youth groups and public venues, before participating, each volunteer signed and received copies of informed consent forms that detailed the nature of the study, the confidential treatment of information collected, and the investigators’ contact information. The university internal review board for the ethical treatment of human subjects approved all survey and data collection procedures and materials. Upon completion of the survey, participants were given a $15 stipend to compensate them for their time and were reminded of the community health information that was readily and visibly available to them at each of data collection sites. This information included sexual health pamphlets and listings of HIV testing centers and other resource agencies within their community. The survey, consent forms, and receipt of payment forms were kept separate at all times to ensure that no identifying information could be linked to survey data.

MEASURES

Sexual Orientation. A Likert-type scale measured an individual’s current sexual behavior. Sample response categories are “exclusively homosexual,” “equally homosexual and heterosexual (bisexual),” “exclusively heterosexual,” and “no sexual feelings or behavior” (Klein, Sepekoff, & Wolf, 1985). This item was used to verify eligibility for inclusion in the final sample of YMSM.

High-Risk Behaviors. The frequency of marijuana use, alcohol consumption, and number of sexual partners were assessed with single survey items. To assess marijuana use, participants were asked, “How many times have you used marijuana (pot) in the past 30 days?” with response categories of “none,” “1-2 times,” “3-5 times,” “6-10 times,” “11-15 times,” “16-20 times,” and “21 or more times.” To assess alcohol use, participants were asked, “In the past 30 days, on how many different days have you had alcohol to drink?” with the same response categories as above. To assess number of sexual partners, participants were asked, “During the past 3 months, with how many partners have you had anal sex?” with response categories of “none”, “1-3”, ”4-6”, ”7-9”, ”10-12”, and “13 or more.”

Relationship Status. Relationship status was assessed by means of a dichotomous one-item question: “Do you have one special person that you are seeing/dating?” Participants who indicated that they were not involved in a dating relationship were coded as 0 and those who indicated that they were dating someone were coded as 1.

Impulsive Decision Making. Eleven items measured an individual’s level of impulsivity in the decision making process. Five response categories ranged from “never” to “always.” Sample items included “I think about all my choices very carefully” (reverse scored) and “I do whatever I think will be the most fun” (Donohew et al., 2000). Higher scores indicate higher levels of impulsive decision making. Cronbach’s alpha for this sample was $\alpha = .81$.

Sensation Seeking. Eight items measured an individual’s tendency to seek out novel and exciting situations. Five response categories ranged from “disagree a lot” to
“agree a lot.” Sample items included “I like wild parties” and “I like to do scary things” (Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002). Higher scores indicate higher levels of sensation seeking. Cronbach’s alpha for this sample was $\alpha = .81$.

**Negative Affect.** A five-item subscale from the SF-36 Health Survey (Ware, Snow, Kosinski, & Gandek, 1993) measured symptoms of anxious or depressed mood during the past four weeks. Six response choices ranged from “all of the time” to “none of the time.” Sample items included “Have you felt downhearted and blue?” and “Have you been a very nervous person?” Higher scores indicated higher levels of anxiety and depression. Cronbach’s alpha for this sample was $\alpha = .85$.

**Internalized Homophobia.** Nine items measured the extent to which negative attitudes towards homosexuality have been internalized. Five response categories ranged from “strongly agree” to “strongly disagree.” Sample items from this measure include “I have a positive attitude about being gay/lesbian/bisexual” and “I wish I weren’t attracted to the same sex” (reverse scored) (Wright, Dye, Jiles, & Marcello, 1999). Higher scores indicate higher levels of internalized homophobia. Cronbach’s alpha for this sample was $\alpha = .84$.

**High-Risk Sexual Activity.** The outcome of interest was assessed with a single item measure of frequency of unprotected anal sex during the past 3 months. Specifically, participants were asked, “Within the last 3 months, how many times have you had anal sex without a condom?” with response categories of “none,” “1-3,” “4-6,” “7-9,” “10-12,” and “13 or more.”

**ANALYSES**

The composite variables described above were created by computing a mean score of the data collected from only those participants who fully completed each measure so that missing data would not misrepresent the associations among variables. Preliminary correlation analyses between all variables of interest were performed prior to model testing. Hierarchical regressions were used to test the hypothesized model. So that we could explore possible interactive effects, as theorized in problem behavior theory (R. Jessor et al., 1968), all predictor variables were centered (Aiken & West, 1991). Because age was a significant correlate and race was not, we entered age as Step 1 of the model and dropped race from further analyses. In Step 2, we entered the risk behaviors and relationship status variable. In the final step, we added the personality variables (impulsive decision making, high sensation seeking, negative affect [anxious/depressed], and internalized homophobia) to determine whether or not these variables contributed significantly to the prediction of frequency of unprotected anal sex beyond the variance accounted for by other risk behaviors and relationship status variables entered in Step 2.

**RESULTS**

As noted above, participants’ responses to the sexual orientation scale (Klein et al., 1985) were used to ensure that the sample for analysis included only males who engaged in at least some level of sexual behavior with other males. Specifically, participants’ current sexual behaviors had to fall within the range of purely homosexual to

1. The distribution of the measure of unprotected anal intercourse was checked for skewness and was found to fall within acceptable limits. As such, hierarchical regression analyses were performed on this continuous measure as opposed to dichotomizing high-risk behavior and performing a logistic regression.
primarily heterosexual. By these criteria, data from 15 exclusively heterosexual participants were excluded from the data set, leaving a sample of 154 participants. Of these, 88 (59.9%) reported having anal sex with one or more partners within the last 3 months, and of all who reported anal sex 39.2% were high-risk (i.e., no condom was used). Fifty-nine percent of those individuals who reported unprotected anal intercourse were involved in a dating relationship. In the whole sample, 77 males (50%) were involved in a romantic relationship, whereas 77 males (50%) were not.

The ranges, means and standard deviations of the personality variables and high-risk behaviors can be found in Table 1. Correlational analyses (see Table 2) indicated several significant associations between the outcome variable and predictors. Specifically, the frequency of unprotected anal intercourse was positively associated with more anal sexual partners in the past three months ($r = .37, p < .01$), and having a dating partner ($r = .21, p < .01$). Significant associations were also found between frequency of unprotected anal intercourse and two personality variables: impulsive decision making ($r = 0.33, p < .01$) and sensation-seeking ($r = 0.25, p < .01$).

As shown in Table 3, results of the hierarchical regression analyses indicated that reporting a higher number of anal sex partners in the previous 3 months ($\beta = .30, p < 0.01$), and/or having a dating partner ($\beta = .24, p < .01$) were associated with more frequent unprotected anal intercourse. Beyond these variables, young men who reported higher levels of impulsive decision making reported more frequent unprotected anal sex ($\beta = .28, p < .01$). Together, these variables accounted for 29% of the variance in the outcome. Additional post hoc analyses were then conducted to test for possible interactive effects between each of the personality variables and the high-risk indicators (e.g., Impulsive Decision Making × Alcohol, Sensation Seeking × Number of Partners). None of these interaction terms were significant.

**DISCUSSION**

These results support the notion that prevention programming for YMSM should take into consideration both the influence of personality and environmental/interpersonal variables. The majority of prevention and education efforts have focused on addressing a constellation of risk behaviors that include having multiple sex partners...
### TABLE 2. Correlations Among Demographic, Personality Variables, and Risk Behaviors in Young Men Who Have Sex With Men (n = 154)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
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<th>10</th>
<th>11</th>
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<td>Age</td>
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<td>Race</td>
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<td>1.00</td>
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<td>IDM</td>
<td>–0.06</td>
<td>–0.03</td>
<td>1.00</td>
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<td>SS</td>
<td>0.09</td>
<td>0.12</td>
<td>0.44**</td>
<td>1.00</td>
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<tr>
<td>Anxiety/Depression</td>
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<td>–0.02</td>
<td>0.10</td>
<td>–0.04</td>
<td>1.00</td>
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<tr>
<td>IH</td>
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<td>0.00</td>
<td>0.05</td>
<td>–0.14</td>
<td>0.23*</td>
<td>1.00</td>
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<tr>
<td>Alcohol use</td>
<td>0.28**</td>
<td>0.01</td>
<td>0.13</td>
<td>0.12</td>
<td>0.12</td>
<td>0.20**</td>
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<td>Marijuana</td>
<td>0.06</td>
<td>0.08</td>
<td>0.22*</td>
<td>0.06</td>
<td>0.10</td>
<td>0.03</td>
<td>0.36**</td>
<td>1.00</td>
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<td>Number of partners</td>
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<td>0.01</td>
<td>0.20*</td>
<td>0.32**</td>
<td>0.04</td>
<td>–0.02</td>
<td>0.14</td>
<td>0.18*</td>
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<tr>
<td>Dating status</td>
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<td>–0.15</td>
<td>0.02</td>
<td>0.20*</td>
<td>–0.25**</td>
<td>–0.04</td>
<td>–0.11</td>
<td>–0.13</td>
<td>0.19*</td>
<td>1.00</td>
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</tr>
<tr>
<td>Unprotected anal sex</td>
<td>–0.01</td>
<td>–0.12</td>
<td>0.33**</td>
<td>0.25**</td>
<td>0.08</td>
<td>–0.06</td>
<td>0.06</td>
<td>0.15</td>
<td>0.37**</td>
<td>0.21**</td>
<td>1.00</td>
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*Note. IDM = impulsive decision making; SS = sensation-seeking; IH = internalized homophobia. *p < 0.05. **p < 0.01.
and using drugs and alcohol during sex. Clearly, personality and environmental/relational variables may interfere with risk reduction efforts. Specifically, levels of a gay male’s impulsive decision making are significantly associated with frequency of unprotected anal intercourse. Therefore, effective intervention programming should include teaching specific strategies targeted to impulsive decision-makers. Such strategies should include teaching individuals to carry condoms with them at all times, to keep condoms stored in a place where they are most likely to have sexual intercourse (next to the bed), and to proactively identify and avoid situations that are likely to lead to unprotected sex. Other psychoeducational interventions that may be useful for impulsive decision makers include increasing awareness of impulsive tendencies, overrehearsing responses to sexual pressure, and overrehearsing decision-making steps.

Future research efforts should be directed to continuing to discover personality factors that contribute to HIV risk. Recently, for instance, Trobst, Herbst, Masters, & Costa (2002) found that three of the “Big Five” personality factors (high Neuroticism, low Conscientiousness, and low Agreeableness) were associated with high-risk behavior in a sample of heterosexual African Americans. Similar theoretically based models should be tested with YMSM. Also, a direct test of problem behavior theory could be conducted by measuring additional personality variables (e.g., motivational factors, independence, and achievement expectations) and perceived environmental influences (e.g., peer norms regarding sexual activity and the compatibility between parent and peer expectations).

It is possible, however, that young men who are high on impulsive decision making may not attend most formal individual- or group-focused HIV prevention programs where risk reduction strategies are discussed. This possibility underscores the importance of implementing behavioral intervention programs that are most likely to reach the intended population. For example, peer-based community interventions in which peer leaders of the community, such as active members of GLBT youth groups, are trained to have conversations about safer sex and risk reduction strategies with other members of the community in informal social settings may be more effective.
than formal, structured workshops or special events hosted by community agencies. Program evaluations testing the effectiveness of such peer-based interventions, although time and energy intensive, should be strongly encouraged.

Likewise, environmental variables should be considered to determine how high-risk sexual behaviors are affected by, for instance, interpersonal sexual negotiations. For example, further research would benefit from a better understanding of how the levels of exclusivity within a relationship affect the degree of risk partners are willing to accept, either within or outside the primary relationship. Quantitative studies that build on qualitative findings explicating the meanings of trust and intimacy in the context of steady (and nonmonogamous) relationships and the implications for safer sex behavior in those relationships are also urgently needed.

Future research should also extend beyond counting total number of sexual partners an individual has at any time, which may not be a sufficient or meaningful indication of the frequency of risk-taking behavior. For instance, some individuals may regulate the extent of sexual activity they are willing to engage in as a strategy for practicing safer sex. Further research documenting differences in the frequency and nature of high-risk sexual behaviors as a function of various types of relationships, including nonmonogamous, serially monogamous, and partially or completely abstinent is clearly needed.

In our sample, although neither anxiety/depression nor internalized homophobia was associated with the frequency of unprotected anal sex, the association between these variables and alcohol and marijuana use might suggest that these individual differences still have an indirect effect that should be tested with larger samples in future studies. We speculate that one reason why our findings stand in contrast to other studies (e.g., Rosario et al., 2001; Rotheram-Borus et al., 1995; Semple et al., 2000) may be related to our procedures for recruiting participants solely from either gay or gay-friendly establishments for this study. Our survey participants are likely to be much less socially isolated than YMSM who are in rural areas or who do not have comparable interpersonal and social networks within the gay community. Perhaps YMSM who are uncomfortable dealing with issues of sexual orientation would not frequent the venues or attend the youth groups from which we recruited participants, therefore limiting the generalizability of our findings. Certainly, studies with other samples of YMSM who have fewer social resources are needed, although the challenges of locating and recruiting socially isolated and/or “closeted” gay youth are mammoth. Also, future studies should test the hypothesis that affective states and negative beliefs mediate the relationship between impulsivity and risky sexual behavior.

Although this study was correlational, we urge that future studies examine causal relationships through the incorporation of appropriate longitudinal designs. Longitudinal data on a larger sample of young gay men will also be necessary to testing more complex models that take into consideration the possible mediating and moderating effects of personality attributes. The implications of findings from such studies for effective HIV prevention among gay male youth are vast.

There are, of course, particular limitations to this study that should be noted. Given that our participants were recruited in public venues where a lengthier survey would have discouraged participation, our findings are limited to a more circumscribed set of questions than is ideal. For example, although we were interested in determining what factors place young MSM at higher risk for HIV transmission, we did not ask youth to report their current HIV status. Anecdotally, however, only one
youth group member was known (anonymously) to be HIV-positive, as ascertained through conversations with the youth group leaders, suggesting that the addition of HIV status for these analyses would not yield any meaningful information due to the possibly low incidence rate. Nonetheless, the importance of encouraging YMSM to get tested for HIV and other sexually transmitted infections on a regular basis cannot be overstated. As discussed by Rotheram-Borus, Gillis, Reid, Fernandez, and Gwadz (1997), YMSM who engage in HIV-related risk acts are more likely than their heterosexual or bisexual counterparts to get tested, and those highest at risk continue to get retested for HIV over time. Although getting tested does not constitute HIV prevention per se, knowledge of one’s serostatus is and will continue to be a vital part of controlling the spread of the AIDS epidemic.

Furthermore, in this study we did not ask participants to describe their specific sexual positions for anal sex (i.e., insertive or receptive). Past research has documented that the per-contact risk of HIV transmission varies according to sexual positioning and, as stated by Vittinghoff et al. (1999), of all sexual positions, “unprotected anal sex is the riskiest of sexual practices for homosexual and bisexual men by an order of magnitude” (p. 310). In an era where adolescents between 13 and 21 years of age make up 25% of all newly reported HIV infections in the United States (Office of National AIDS Policy, 1996), achieving a greater understanding of the basic epidemiological and biological facts that facilitate HIV transmission should remain a high priority. Regardless of sexual positioning, however, unprotected anal sex is risky and our data clearly point to potential outbreaks of sexually transmitted infections and most likely HIV in this population.

Despite the limitations to the current study, the findings presented here demonstrate that beyond number of anal sex partners and dating status, impulsivity adds uniquely to the prediction of unprotected anal intercourse in a nonclinical, midwestern sample of YMSM. Our results help to identify those individuals who are at general risk for disease transmission and point to important considerations in designing appropriate prevention and intervention programs for this population. Additionally, our findings demonstrate the utility of extending more general developmental theories to special populations such as YMSM. Specifically, problem behavior theory appears to hold promise for more completely understanding high-risk sex behavior among YMSM.

Certainly, YMSM face complex decisions that stem from an often unaccepting and unsupportive social context that imposes sanctions on the exploration and development of integrated identities and sexualities (Sullivan & Wodarski, 2002; Wright et al., 1998). Successful intervention strategies to help young gay men reduce their level of risk in contracting HIV must therefore incorporate strategies that address both relational and personality variables that are demonstrated to be associated with sexual risk-taking behavior. Our findings highlight the need for future research and prevention efforts that address the multiple influences on sexual decisions in this high-risk population.
REFERENCES


