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The Relations of Identity Development and Sexual Debut to Unprotected Sex and Mental Health

in Men Who Have Sex With Men

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Abstract

The present analysis measured recent unprotected anal intercourse (UAI), depression, and suicidality in young men who have sex with men (YMSM) to determine if these outcomes were predicted by early identity development, sexual debut, or race/ethnicity. Retrospective semi-structured interviews and self-report computer surveys were used to collect data from 598 racially diverse YMSM between the ages of 18-19 living in the New York City area. Non-parametric Spearman's correlations showed experiencing early sexual awareness was correlated with a greater number of recent UAI acts in the past 30 days. Specifically, first awareness of same-sex attractions correlated with insertive UAI acts, rs (594) = -.068, p = .045, and receptive UAI acts, rs (594) = -.115, p = .005; first realization that same-sex attractions were sexual correlated with insertive UAI acts, rs (594) = -.080), p = .021, and receptive UAI acts, rs (594) = -.106 , p = .002; and first same-sex fantasies correlated with insertive UAI acts, rs (592) = -.079), p = .023, and receptive UAI acts, rs (592) = -.091, p = .008. Additionally, experiencing first mutual masturbation, rs (449) = -.107, p = .024, first oral sex received, rs (566) = -.158, p < .000, and oral sex given, rs (571) = -.114, p = .006, at younger ages was correlated with a greater number of recent insertive UAI acts. Disclosure latency labeling positively correlated with the number of receptive acts in the past 30 days (rs (586) = .122, p = .003). Overall, it was shown that antecedents to sexual risk behaviors develop at a young age (M age of awareness = 10.47). As such, interventions should be developed for pre-adolescent MSM.

The Relations of Identity Development and Sexual Debut to Recent Unprotected Sex and Mental

Health in Men Who Have Sex With Men

As young adults, men who have sex with men (MSM) often encounter discrimination,

rejection, and abuse as a consequence of their sexual minority status (D'Augelli & Hershberger,

1995; D'Augelli, Pilkington, & Hershberger, 2002; Kielwasser & Wolf, 1993). Subsequently,

many adolescent MSM face unique challenges during sexual identity development (Martin,

1982). It is important to consider experiences of MSM during identity development because

these experiences may impact rates of negative mental health and sexual risk behavior, both of

which are more prevalent in the MSM community than in heterosexual communities (Marshal et

al., 2011; O'Donnell, Meyer, & Schwartz, 2011; Remafedi, Farrow, & Deisher, 1991; Safren &

Heimberg, 1999; Garofalo, Wolf, Kessel, Palfrey & DuRant, 1999).

Additionally, negative mental health and sexual risk behaviors are associated with the

transmission of HIV, an epidemic affecting a disproportionate number of MSM compared to the

rest of the U.S population (Meyer & Dean, 1995; CDC, 2011). Young MSM are particularly at

risk for the contraction of HIV due to the prevalence of unprotected anal sex acts within this

group (Valleroy, et al., 2000; Relf, Huang, Campbell, & Catania, 2004). In a 1994 study of 151

Black and Latino MSM, 52% of participants never, rarely, or only sometimes used condoms and

33% of participants never used condoms for receptive anal sex (Rotheram-Borus, Rosario,

Meyer-Bahlburg, Koopman, Dopkins, & Davies), the behavior most likely to lead to the

contraction of HIV (Varghese, Maher, Peterman, Branson, & Steketee, 2002). In order to better

identify antecedents of HIV transmission in young MSM and therefore develop relevant

interventions, early developmental patterns and sexual behaviors were examined in relation to

unprotected anal intercourse (UAI) acts and negative mental health as measured by suicidality

and depression. The role of race and ethnicity in predicting behaviors associated with HIV was also considered, as HIV infection rates are shown to vary across race (Valleroy, et al., 2000). Recently, The Centers for Disease Control and Prevention (2011) found large discrepancies between the rates of new HIV infections in Black MSM as compared to White MSM, specifically attributing over 6,500 new HIV infections in 2009 to Black MSM between the ages of 13-29, whereas only 3,200 new infections were attributed to White MSM in the same age range.

Consequently, the goals of the present analysis were to (a) examine the long term relations between early identity development, sexual debut, and recent sexual risk behavior, (b) determine if disclosure latency, a significant period during identity development, predicts suicidality, depression, and risk-taking sexual behavior, (c) determine if race and ethnicity predict the duration of disclosure latency, and (d) determine if disclosure latency accounts for previous findings that associate ethnic minority status with negative mental health.

It is important to note that the data included for the present analysis was collected as part of a longitudinal study of risk and resiliency among 18-year-old men who have sex with men in New York City. As such, this analysis utilized retrospective data focusing on measures of race and ethnicity, identity development, sexual debut, recent sexual risk behaviors, suicidality, and depression.

Background Information

Sexual debut. Sexual debut, defined as the first sexual interaction with another individual that could lead to orgasm, is often considered a significant developmental event in terms of identity development and predicting future sexual risk behaviors in adolescents (Cohen & Savin-Williams, 1996; Theo, Orr, Hirsch, & Santelli, 2008). In the general adult U.S

population, experiencing sexual debut at a younger age is associated with a number of sexual risk

factors including an increased number of partners and engaging in intercourse while under the

influence of alcohol (Theo, Orr, Hirsch, & Santelli, 2008).

Additionally, sexual debut for MSM often occurs at the onset of puberty and before the

completion of adolescent cognitive development (Savin-Williams & Diamond, 2000). As such,

young MSM may not be fully prepared to foresee the consequences of unsafe sex. This is

supported by previous research showing condom use is typically not consistent until well after

sexual debut (Rosario, Meyer-Bahlburg, Hunter & Gwadz, 1999). It is possible that patterns

formed from early sexual behaviors will be continued into emergent adulthood, leading to the

present hypothesis that experiencing sexual debut at an early age will predict a greater number of

recent unprotected anal sex acts.

Identity development. Sexual identity development in MSM is a unique process because

MSM are typically immersed in a heterosexist society when they become aware of initial same-

sex attractions (Martin, 1982). For this reason, much research has focused on creating constructs

of identity development that apply to young MSM.

The majority these constructs are stage models that represent identity development as a

series of commonly experienced developmental events (Cass, 1984; Milton & MacDonald, 1984,

Cohen & Savin-Williams, 1996, Troiden, 1988; Bilodeau & Benn, 2005). While some models

focus on linear development and others emphasize individual differences, most view identity

development as involving both *coming out to self* and *coming out to others* (Rosario, Hunter,

Maguen, Gwadz, & Smith, 2001; Cass, 1984; Cohen & Savin-Williams, 1996). Coming out to

self typically involves awareness of individual same-sex cognitions followed by the internal

restructuring of self-schemas (Cohen & Savin-Williams, 1996). Coming out to others often

involves matching self-schemas to socially defined labels and integrating same-sex behaviors in a social context (Milton & MacDonald, 1984; Rosario et al., 2001; Cohen & Savin-Williams, 1996). The developmental model for the present analysis was constructed from an amalgam of commonly cited developmental events related to both coming out to self and coming out to others that included (1) awareness of same-sex attractions, even if attractions are not sexual in nature, (2) realization that same-sex attractions are sexual, (3) experiencing same-sex fantasies, (4) self-labeling as non-heterosexual, and (5) disclosure of self-label to others.

Identity development predicts a variety of psychosocial outcomes in young MSM, with early developers more likely to report negative outcomes and difficult experiences compared to late developers (Friedman, Marshall, Stall, Cheong & Wright, 2008). For example, early developers often experience alienation, shame, loneliness, and guilt at an age when they have not yet developed the skills to deal with emotionally challenging experiences (Cohen & Savin-Williams, 1996). These negative events have the potential to lower self-esteem and may lead to the compartmentalization of sexual feelings (Cohen & Savin-Williams, 1996). Lower self-esteem has shown previous relations to unprotected anal sex through an increase of anxiety (Rosario, Hunter, Maguen, Gwadz, & Smith, 2001). This may affect future sexual behaviors, specifically in the context of discussing safe sex with partners, which has been associated with unprotected intercourse (Remafedi, 1994). Furthermore, in a qualitative study from 2010, focus groups comprised of 18- to 60-year-old MSM reported that experiencing gay-related stigma was related to feelings of lowered masculinity, and in turn, negative self-image. This negative self-image was related to sexual risk behavior, with participants citing that engaging in unprotected sex was a way to increase feelings of masculinity (Rhodes et al., 2010).

Additionally, Friedman, Marshall, Stall, Cheong, and Wright (2008) found that early developers were more likely than late developers to experience gay-related harassment during adolescence and forced sex during adolescence. It is possible that experiencing development at an early age prolongs the time period for which young MSM are most at risk for victimization. Additionally, early developers reported more gay related victimization as adults, depression as adults, and suicide attempts as adults, and were 213% more likely than late developers to contract HIV (Friedman, Marshall, Stall, Cheong & Wright, 2008).

Furthermore, identity development often occurs at the onset of puberty (Savin-Williams, 1995; Cohen & Savin-Williams, 1996). Previous research on pubertal development shows early onset of puberty is associated with engaging in unprotected sex (Downing & Bellis, 2009). Based on this research, it was hypothesized that experiencing identity development at earlier ages would predict a greater number of recent unprotected sex acts.

Self-Disclosure. In many models of identity development, self-disclosure is seen as a fundamental milestone because it marks the end of a period of concealment and has lasting social and personal consequences (Cohen & Savin-Williams, 1996). For this reason, the present analysis focused on disclosure latency and its relation to mental health and unprotected sex acts. It was hypothesized that the duration of identity concealment would produce lasting effects on future sexual risk behaviors and cognitions involving depression and suicidality.

The self-disclosure process is necessary for LGB adolescents because sexual orientation is an important part of personal identity that is not directly observable (Herek, 1996). Individuals vary in how and when they choose to disclose their sexual orientation to others (Floyd & Stein, 2002). Decisions regarding disclosure are often based on the potential for negative reactions in the form of discrimination, harassment, and abuse (Cohen & Savin-Williams, 1996). The present

analysis viewed disclosure latency as a period of active identity concealment. Therefore, hypotheses were based on current research regarding the psychological effects of concealing a stigmatized identity.

Disclosure latency. The time spent between awareness and labeling of sexual orientation and disclosure of sexual orientation to others can be especially difficult for MSM because they must lead a "double-life" while hiding their identities from family and friends (Ponse, 1976). Stigma concealment requires constant deception and limited closeness to others, hindering the formation of supportive relationships and often causing feelings of shame, guilt, and awkwardness in regards to interpersonal relationships (Herek, 1996; Savin-Williams & Choen, 1996). Moreover, those who do not disclose are unable to join Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) and affirming communities, isolating them from like-minded peers and role models (Pacankis, 2007). It is not surprising then that stigma concealment has been positively correlated with alienation, loneliness, and depression (Franzoi & Davis, 1985; Frost, Parsons, & Nanin, 2007).

Additionally, for LGB adolescents, anxiety about being "outed" by others or having their deception revealed leads to an enduring state of psychological stress due to a heightened sense of vigilance (Herek, 1996). This psychological vigilance can be considered a proximal stressor because it often leads to negative physiological effects (Meyer, 2007). The effects of stigma concealment on physical health are exemplified by the study of Cole, Margaret, Shelly, and Visscher (1996) showing those who conceal their sexual orientation from others are more likely to be diagnosed with cancer ($OR = 3.18$), and the infectious diseases of pneumonia, bronchitis, sinusitis, and tuberculosis ($OR = 2.91$).

By eliminating the stress of concealment, self-disclosure may increase overall wellbeing. Pennebaker (1995) found that self-disclosure in general is related to better mental and physical health, and other studies show that coming out is related to lower suicidality, less mental distress, and higher self-esteem in sexual minorities (Morris, Waldo, & Rothblum, 2001; Rosario, Hunter, Maguen, Gwadz, & Smith, 2001).

Unfortunately, when deciding whether to self-disclose, LGB individuals must weigh positive aspects of coming out against negative reactions from family members and peers. Common negative reactions towards LGB individuals following disclosure include victimization and rejection. Both parental verbal abuse and physical abuse from peers is directed more often towards LGB youth who disclose than to non-disclosers (D'Augelli, 1998; D'Augelli et al., 2002). D'Augelli, Hershberger, and Pilkington (1998) found that 27% of LGB youth who had disclosed while in high school reported physical abuse from peers, compared to 0% of those who did not disclose. They also discovered that 19% of fathers, 21% of brothers, 12% of sisters, and 28% of mothers were verbally abusive to LGB family members following disclosure (D'Augelli, 1998). Additionally, 48% of disclosing youth lost friends due to their sexual orientation (D'Augelli, 1998). Loss of friends has been associated with increased risk of suicide among LGB adolescents, and victimization overall is related to poor mental health and depression (D'Augelli et al., 2002; Hershberger, Pilkington, & D'Augelli, 1997). Clearly, self-disclosure can be both a negative and positive force in the lives of LGB adolescents. For this reason, the present study sought to further explore the relations between disclosure and mental health by investigating suicidality and depression as it relates to the duration of stigma concealment. Additionally, disclosure latency was analyzed in relation to recent risk-taking sexual behaviors in order to better understand if disclosure latency is a reliable predictor of future HIV risk.

Disclosure latency and depression/suicidality. The present study focused on suicidality and depression as indicators of mental health because they are considered reliable predictors of future suicide attempts (Lewinshon, Rohde, & Seeley, 1994; Pinto, McCoy, & Whisman, 1997). Furthermore, it is theorized that mental health burden is a major contributor to the HIV epidemic (Meyer & Dean, 1995), which affects MSM at a rate of more than 44 times that of other men (CDC, 2011).

Of additional importance, lesbian, gay, and bisexual youths score higher on measures of suicidality and depression than their heterosexual peers (Marshal et al., 2011; O'Donnell et al., 2011; Remafedi et al., 1991; Safren & Heimberg 1999). Constructs of suicidality often include indicators of suicidal ideation, future suicide risk, and the prevalence and severity of past attempts. Recent studies have found that suicidality among LGB youth ranges from 28% to 30% (Marshal et al., 2011; Remafedi et al., 1991; Safren, 1999). Additionally, 54% of suicide attempts completed by LGB youth are high to moderate risk, and many require hospitalization (Remafedi et al., 1991; Marshal et al., 2011). Heterosexual youth display much lower rates of suicidality, ranging from 12% to 17%, and are less likely to make high-risk attempts than LGB youth (Marshal et al., 2011; O'Donnell et al., 2011; Remafedi et al., 1991; Safren, 1999). When past suicide attempts are measured in isolation from more inclusive constructions of suicidality, discrepancies continue to exist between LGB and heterosexual adolescents. For example, Safren and Heimberg (1999) found that 30% of lesbian, bisexual, and gay participants in their sample reported at least one suicide attempt, compared to 13% of heterosexual participants.

Overall, it was predicted that participants experiencing longer periods of disclosure latency would score higher on measures of depression and report more instances of suicidal ideations, suicide attempts, and suicide attempts resulting in injury.

Disclosure latency and race/ethnicity. Furthermore, the present study examined the relations between disclosure, suicidality, and depression by focusing on race and ethnicity as predictor variables. This was done because Black and Latino adolescents tend to take longer to become comfortable with self-disclosure and often disclose to fewer people than White adolescents (Kennamer, Honnold, Bradford, & Hendricks, 2000; Rosario, Schrimshaw, & Hunter, 2004). This holds true even when controlling for the timing of orientation awareness and other sexual milestones (Rosario et al., 2004). Even as adults, Black gay men are more likely to marry women and identify as heterosexual in order to hide their actual orientation from others (Lewis, 2003). Based on previous research, it was hypothesized that participants from White Non-Latino backgrounds would report spending less time in a period of disclosure latency compared to Black Non-Latino, Latino, Asian/Pacific Islander, mixed race, and other-identified participants.

Race/ethnicity and suicidality/depression. In the general population, White individuals are more likely to attempt suicide and be diagnosed with a mental disorder than members of an ethnic or racial minority (O'Donnell, Myer, & Schwartz, 2011). More specifically, a 2004 study of 8449 individuals 15- to 40-years-old found that White participants had significantly higher rates of major depressive disorder as compared to African American and Mexican American participants (Riolo, Nguyen, Greden, & King, 2004). Among the LGB population, however, previous research suggests this effect is reversed. O'Donnell, Myer, and Schwartz (2011) found that LGB individuals who identify as Black or Latino have a higher suicide risk than LGB individuals who identify as White--an effect that is not explained by substance abuse or the onset of clinical depression. Additionally, 2001 study on a sample of 912 Latino bisexual or gay men living in urban environments found that 80% of participants reported a depressed mood, 44%

reported anxiety, and 17% reported suicidal ideations (Diaz, Ayala, Bein, Henne, Marin, 2001). Because both suicide risk and stigma concealment are unusually high among ethnic minority adolescents, the present study hypothesized that White Non-Latino participants would score lower on measures of depression and suicidality as compared to Black Non-Latino, Latino, Asian/Pacific Islander, mixed race, and other-identified participants. Additionally, it was hypothesized that stigma concealment would account for the relation between race/ethnicity and negative mental health.

Method

Recruitment

Participants included 598 emergent adult men recruited for a larger study on risk and resiliency in emergent adult young men who have sex with men. The present study was funded through a grant from the National Institute on Drug Abuse (NIDA) (R01DA025537).

Men were recruited at both gay and non-gay venues in New York City. In order to be eligible for the larger study participants were pre-screened using a short telephone assessment to ensure participants were between 18 and 19 years of age (M_{age} = 18.23, *Range*: 18 - 19) and perceived themselves as HIV negative at the onset of the study, were biologically male, and had at least one sexual experience with another man in the prior six months. A sexual experience for the purpose of the inclusion criteria was defined as any physical contact that could lead to an orgasm.

Recruitment was accomplished through community-based sampling and respondent-driven sampling. For community-based sampling, researchers went to both MSM and non-MSM venues and recruited participants through direct contact and the use of flyers and other ads. Internet recruitment was also utilized, with information about the study and contact information

posted on sites that targeted MSM, as well as other non-MSM, non-gay identified sites such as

Facebook™. A smaller group of participants was selected to recruit others in return for an

incentive of $10. This method was utilized in order to recruit additional participants while

avoiding snowball sampling. Active recruitment and pre-assessment screenings were used to

ensure a sample with a relatively diverse breakdown of participants identifying with Black,

Latino (any race), White, Mixed Race, Asian Pacific Islander, and Other ethnic backgrounds. A

total of 2,068 individuals were screened for this study. The vast majority of participants who

were ineligible did not meet the strict age criteria.

Sample characteristics. Overall, the sample was racially/ethnically diverse, with an

over-sampling of minority groups in order to account for the overrepresentation of these groups

in the HIV epidemic. Table 1 provides a detailed breakdown of participants by race/ethnicity.

In terms of sexual identity, the majority of participants described themselves as either

exclusively or predominantly homosexual, with 41.5% ($n = 248$) describing themselves as

exclusively homosexual, 29.4% ($n = 176$) describing themselves as predominantly

homosexual/only incidentally heterosexual, 13% ($n = 78$) describing themselves as

predominantly homosexual but more than incidentally heterosexual, 11.7% ($n = 70$) describing

themselves as equally heterosexual and homosexual, 2.5% ($n = 15$) describing themselves as

predominantly heterosexual, but more than incidentally homosexual, and 1.8% ($n = 11$)

describing themselves as predominantly heterosexual and only incidentally homosexual.

Assessments and Measures

Sexual orientation. The Kinsey Scale of Sexual Orientation was used to determine

sexual orientation at the time of assessment. The Kinsey Scale is a bipolar scale with seven

categorical levels of sexual orientation, ranging from 0 - *exclusive heterosexuality* to 6 -

exclusive homosexuality (Kinsey, Pomeroy, & Martin, 1948). The Kinsey Scale assumes a non-dichotomous view of sexuality that is more inclusive than two-factor scales of homosexuality or heterosexuality (Gonsiorik, 1995).

Race and ethnicity. Participants reported the ethnic group with which they most strongly identified. Responses were coded as *Black Non-Latino, White Non-Latino, Latino/Hispanic, Asian/ Pacific Islander (API), Mixed Race,* or *Other*.

Disclosure latency. Two items from the GBT Identity Development Questionnaire (Grossman) were used to determine disclosure latency. Disclosure latency labeling was defined as the length of time, in years, between the age at which participants first considered themselves GBT and age at initial self-disclosure. Disclosure latency awareness was defined as the length of time, in years, between the age at which participants first became aware of same sex attractions and age at initial disclosure.

Identity development. Participants were asked to indicate the ages at which they first experienced various stages of identity development. For the purposes of the present analysis, five questions were adapted from the GBT Identity Questionnaire (Grossman), which included (1) age at first awareness of same-sex attractions even if attractions were not sexual in nature, (2) age at first awareness that same-sex attractions were sexual in nature, (3) age at first same-sex fantasies, (4) age at first self-labeling as gay, bisexual, or transgender, and (5) age at first disclosure.

Depression. Depression was measured with the Beck Depression Inventory (BDI), a 21-item self-report questionnaire measuring the intensity of depression (Beck, Steer & Brown, 1996). The Beck Depression Inventory has shown high internal consistency and the ability to

discriminate well between depression and anxiety, making it an ideal measure for the present study (Beck, Steer, and Carbin, 1998).

Suicidality. Suicidality was examined using three questions constructed from the work of Savin-Williams (2001). The first question was a measure of suicidal ideation, with participants responding *yes* or *no* to the prompt "during the past 12 months, did you ever seriously think about committing suicide?" The second question measured recent suicide attempts, with participants responding to the prompt "in the past 12 months, how many times did you actually attempt suicide?" Lastly, the medical severity of previous attempts was measured with participants responding either *yes* or *no* to the question "did any attempt result in injury, poisoning, or overdose that had to be treated by a doctor or nurse?"

Unprotected Sex. Unprotected sex acts were measured using the Timeline Follow-Back (TLFB) procedure, a semi-structured, face-to-face interview used to create a personalized, retrospective calendar of all sex and drug acts within the 30 days preceding the assessment (Sobell & Sobell, 1992). During the interview, researchers recorded critical life events and other details in order to elicit responses regarding drug use and sexual behavior. In previous research, the TLFB has shown convergent validity and test-retest reliability (Fals-Stewart et al., 2000). The present analysis utilized data for the number of unprotected anal insertive acts in the past 30 days and the number of unprotected anal receptive acts in the past 30 days, which were then analyzed as separate variables.

Sexual Debut. Participants were asked to indicate the age at which they first engaged in cyber/phone sex, mutual masturbation, oral sex given, oral sex received, insertive anal sex, and receptive anal sex.

Procedure

Measures were administered to participants as part of a comprehensive, hour-long assessment that included additional measures and an HIV test. Participants were seated in a private room for the entirety of the assessment. After providing informed consent, participants completed the GBT Identity Development Scale and Timeline Follow-Back Questionnaire as part of a face-to-face semi-structured interview with a researcher. For the remaining self-report measures, participants completed a computerized survey using audio-computer assisted self-administered interviewing (ACASI) software. The audio component of the survey eliminated the effect of reading ability on internal validity (Gribble, Miller, Rogers, & Turner, 1999). Additionally, previous research shows a larger percentage of participants report drug use and sexual behaviors when using self-administered computerized surveys compared to other data collection methods (Turner, Rogers, Lindberg, & Pleck, 1998; Tourangeau & Smith, 1996). At the end of the assessment, participants were issued a compensation of $35 and given an appointment to come in for their follow-up assessment in 6 months.

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Results

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Sample

Figure 1. reports mean ages at initial stages of identity development and sexual debut for the present sample. The mean age for first awareness of sexual attractions was 10.47, followed by age at first same sex fantasies (M = 12.80), first awareness that same-sex attractions were sexual (M = 12.84), first self-labeling (M = 14.51), first oral sex given (M = 14.80), first mutual masturbation (M = 14.87), first oral sex received (M = 14.93), first self-disclosure (M = 15.18), first cyber/phone sex (M = 15.50), first anal sex receptive (M = 15.86), and lastly first anal sex insertive (M = 16.23).

The mean score on the Beck Depression Inventory (BDI) for all participants was 11.22, with a possible range of 0 to 63 for the measure overall, and an obtained range of 0 to 46 for the present sample (Median = 9.0, *SD* = 9.5). The standardized skewness coefficient, 12.28, and the standardized kurtosis coefficient, 6.28, both indicated departures from normality based on commonly accepted standards (Onwuegbuzie & Daniel, 2002). As such, correlational data was analyzed using non-parametric procedures.

When measuring disclosure latency awareness, cases were excluded in which disclosure occurred before awareness of attraction or in which there were no responses indicated. For the remaining sample (*n* = 584), the mean number of years between awareness and disclosure was 4.76. (*Median* = 4.00, *SD* = 3.19, *Range* = 0 - 15).

Additionally, when measuring disclosure latency labeling, cases were excluded in which disclosure occurred before labeling or in which there was no response indicated. For the remaining sample (*n* = 532), the mean number of years between self-labeling and disclosure was .88 (*Median* = .00, *SD* = 1.30, *Range* = 0 - 9).

Unprotected Insertive Anal Intercourse Acts

The mean number of unprotected insertive anal intercourse acts in the past 30 days was .41, with a range of 0-30 acts (*Median* = .00, *SD* = 2.05). In light of the non-normality of this distribution, correlational data was analyzed using non-parametric procedures.

Spearman's rho procedures were utilized to investigate the relations between insertive acts and ages at sexual debut, with statistically significant negative correlations observed between the number of insertive acts in the past 30 days and ages at first mutual masturbation, *rs* (449) = -.107, *p* = .024, first oral sex given, *rs* (571) = -.114, *p* = .006, and first oral sex received, *rs* (566) = -.158, *p* < .000.

Unprotected insertive anal acts were analyzed in relation to ages at identity development and were only very weakly correlated with age at initial same-sex fantasies, *rs* (592) = -.079, *p* = .023, age at awareness same-sex feelings are sexual, *rs* (594) = -.080, *p* = .021, and age of awareness of attraction to members of the same sex, *rs* (594) = -.081, *p* = .047.

No significant relations were found between the number of insertive acts and race, age at first cyber/phone sex, age at first anal intercourse, age at first self-labeling, age at first disclosure, or the duration of disclosure latency.

Unprotected Insertive Anal Intercourse Acts

The mean number of unprotected receptive anal intercourse acts in the past 30 days was .53 (*Median* = .00, *SD* = 2.29, *Range* = 0 - 30). Non-parametric correlational procedures were utilized to account for the non-normal distribution of responses.

Spearman's rho procedures showed age at awareness of same-sex attractions, *rs* (594) = -.115, *p* = .005, and age at realization that same-sex attractions are sexual, *rs* (594) = -.106, *p* = .002, both negatively correlated with the number of receptive acts. Only a weak correlation was found between receptive acts and age at first same-sex fantasy, *rs* (592) = -.091, *p* = .008. Additionally, disclosure latency labeling correlated with the number of receptive acts in the past 30 days (*rs* (586) = .122, *p* = .003), suggesting those with longer periods of disclosure latency tended to have a greater number of receptive acts in the past 30 days.

Non-significant results were obtained between receptive acts and race, ages at sexual debut, self-labeling, self-disclosure, and the duration of disclosure latency awareness.

Identity Development and Sexual Debut

Spearman's rho procedures were run between ages at stages of identity development and ages at sexual debut. All five stages of identity development were significantly positively

correlated with each age of sexual debut, suggesting they occurred simultaneously. Table 2 provides a correlation matrix with a summary of significant results.

Disclosure Latency and Suicide/Depression

Spearman's rho procedures found non-significant relations between disclosure latency (labeling and awareness) and depression. Non-significant results were also found between disclosure latency and the number of suicide attempts in the past year. Additionally, Kruskal-Wallis procedures found non-significant results between disclosure latency and suicidal ideations and the severity of suicide attempts.

Disclosure Latency and Race/Ethnicity

Independent Samples Kruskal-Wallis tests showed non-significant results for the relations between disclosure latency and race/ethnicity.

Race/Ethnicity and Depression

Results from an Independent-Samples Kruskal-Wallis Test showed mean BDI scores did not significantly vary across categories of race. Figure 2. shows mean scores on the BDI as a function of race/ethnicity.

Race/Ethnicity and Suicidality

Separate Pearson Chi-Square procedures showed no difference in responses for suicidal ideation or the severity of suicide attempts across categories of race/ethnicity. Furthermore, an Independent-Samples Kruskal-Wallis Test was utilized to examine the relation between race and the number of recent suicide attempts, the results of which were non-significant.

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Discussion

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In light of the aforementioned results, a number of conclusions can be made about the present sample. Overall, it appears as if sexual identity development and sexual debut show

multiple relations with recent unprotected sex. In contrast, race/ethnicity did not predict differences in unprotected anal intercourse, disclosure latency, depression, and suicidality. Similarly, disclosure latency did not predict differences in depression/suicidality.

Participants experiencing early debut of non-intercourse acts involving direct stimulation (mutual masturbation, oral sex received, and oral sex performed) tended to report a greater number of unprotected insertive anal sex acts than late developers. Although this finding supports the hypothesis that early sexual debut predicts a greater number of recent unprotected sex acts, it is notable that this relation was only found between sexual debut and insertive anal sex, not receptive anal sex, a riskier form of sexual behavior. These results suggest experiencing sexual debut at an earlier age predicts the likelihood that one will place their partner in a relatively unsafe sexual situation. The present results also highlight the differences between insertive anal sex and receptive anal sex and point to the need for both constructs to be measured and analyzed separately in future studies regarding sexual risk behaviors.

Secondly, primary stages of identity development were also predictive of the number of sex acts, although the effects were much stronger in relation to unprotected receptive anal sex as compared to unprotected insertive anal sex. Age at awareness of same-sex feelings, age at awareness that feelings are sexual, and age at first same-sex fantasy can all be considered dimensions of identity development related to experiencing internal cognitive changes or "coming out to self." In this way, coming out to self at an earlier age predicts a greater number of unprotected anal receptive acts and weakly predicts a greater number of unprotected anal insertive acts. It is significant that although self-disclosure and self-labeling on their own did not predict the number of unprotected sex acts, a longer duration of the time between self-labeling and self-disclosure did predict a greater number of unprotected receptive anal sex acts. This

finding supports the hypothesis that disclosure latency is related to sexual risk behaviors, although the exact mechanism cannot be deduced from the present analysis alone. Further research is needed to explore variables that may mediate the relation between disclosure latency and risk behaviors.

Also notable is the finding that depression does not vary across categories of race/ethnicity. One possible explanation for this is that rates of depression were high for the sample overall. A previous study found mean scores on the BDI in a diverse sample of 228 adolescent men to be 7.96, and a more recent study showed mean scores for a diverse sample of 2,583 adult males to be 6.0 (Teri, 1982; Aalto, Elovaino, Kivimaki, Uutela, & Pirkola, 2011). In contrast, mean scores for the current sample ranged from 9.14 to 15.41 Additionally, the mean scores on the BDI for Black Non-Latino, Latino/Hispanic, and other-identified participants matched the criteria for mild depression (Beck, Steer, & Garbin, 1988). Furthermore, previous research shows that in the general population White individuals show significantly higher rates of depression than Black and Latino/Hispanic individuals (Riolo, Nguyen, Greden, & King, 2005). For the present sample, however, White participants showed an overall mean BDI score (M = 10.49) that was lower than Black (M = 11.31) and Latino (M = 11.81) participants, although not to a point of statistical significance. These results hint that patterns of depression in sexual minorities may be different than patterns of depression in the overall population, although further research is certainly necessary in order to make a conclusion regarding these differences. Additionally, the BDI may not be the most accurate or comprehensive tool in terms of measuring negative mental health in the present sample. It would also be worth looking at longitudinal data to account for the situational nature of depression, which may fluctuate over time.

The non-significant results found for the relation between ethnicity/race and disclosure latency are similarly interesting because they suggest that minority participants do not vary in terms of waiting to come out to others. Previous research, however, does suggest MSM vary in terms of to whom they disclose, and this may account for true differences in disclosure patterns between participants from various ethnic backgrounds.

Lastly, the non-significant results between disclosure latency and depression and suicidality suggest stigma concealment does not produce lasting effects on these constructs of mental health. It may be that disclosure latency only produces short-term effects on mental health or that MSM avoid the effects of both stigma concealment and public rejection by only coming out to people that support their actions or thoughts. It is also possible that significant results exist when one compares the people to whom MSM disclose, rather than when MSM disclose, as disclosure can be a life-long process that varies according to situational contexts. Additionally, findings from the present analysis showing that disclosure latency labeling is positively correlated with sexual risk behaviors suggest disclosure latency may predict other psychosocial health outcomes worth investigating.

Limitations

Overall, the present analysis presents a number of limitations. As with any study on MSM, the present sample is limited in diversity, presenting problems in regards to the generalizability of the present analysis. Individuals raised in rural populations may report very different experiences than individuals raised in urban populations, and the same can be said of different age cohorts and cultures. Additionally, participants for the present sample were all comfortable completing a study on MSM, which creates a self-selection bias towards individuals with a relative degree of self-disclosure. Further research is warranted across varying populations

in order to reduce these biases. Additionally, the present study relied on self-report and retrospective data, which may produce problems in terms of the veracity of the present measures. The longitudinal nature of the larger study from which the present data was collected provides further opportunities for data analysis. Many of the measures, such as the TLFB, may provide more accurate results as participants learn to remember behaviors over time. Non-retrospective modes of data collection, such as daily diary completion, could also be utilized as a method of data collection. Furthermore, there may be a number of mediating effects in the present sample that should be accounted for. Additional studies should be undertaken in order to explore the mediating effects of puberty between identity development and psychosocial health outcomes.

Conclusion

In conclusion, a number of implications arise when considering relevant interventions geared towards the prevention of behaviors that lead to the transmission of HIV in young MSM. For example, the present data shows that predictors of unprotected sex are present as young as 10 − 11 years old (age at first awareness of same-sex attractions, $M = 10.47$). It is clear that interventions must be implemented at a very young age, well before typical safe-sex or MSM-related education is offered. Additionally, these interventions must be tailored specifically for pre-adolescents. In a 2010 study, focus groups comprised of diverse MSM suggested numerous interventions for HIV prevention, including creating safe spaces for dialogue, teaching skills for coping strategies and managing behavioral triggers, and fostering a sense of community and belonging (Rhodes et al., 2010). All of these interventions have the potential to be modified for young audiences. The present analysis also suggests early developers should be given extra support and consideration, as they may face particular difficulties.

Overall, it is clear that young MSM experience a great number of challenges during adolescence and early development that may relate to psychosocial health outcomes during emergent adulthood. In order to prevent these outcomes, and therefore reduce the rate of new HIV infections in MSM, researchers must continue to study identity development and produce interventions that are feasible and relevant for adolescent MSM.

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Table 1
Summary of Participant Race/Ethnicity.

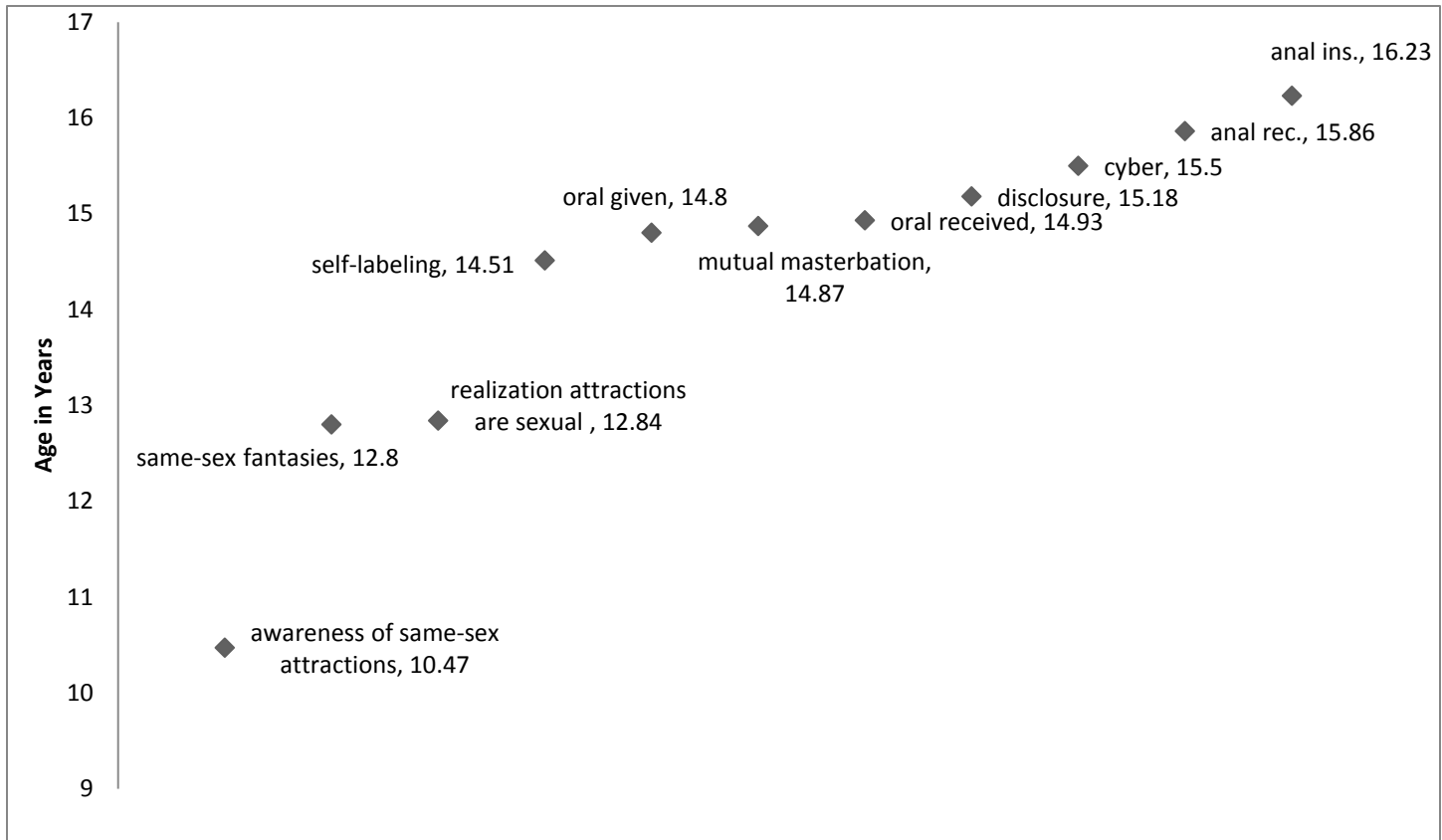| Race	*n*	%
Hispanic/Latino	229	38.3
Black Non-Latino	89	14.9
API	29	4.8
Mixed Race	56	9.4
Other	22	3.7
White Non-Latino	173	28.9

Figure 1. Mean ages, in years, at stages of identity development and at stages of sexual debut. In

order from lowest to highest, mean ages are included for age at awareness of same-sex

attractions, age at first same-sex fantasy, age at the realization that attractions are sexual, age at

self-labeling as GBT, age at first oral sex given, age at first mutual masturbation, age at first oral

sex received, age at first self-disclosure as GBT, age at first cyber/phone sex, age at first anal sex

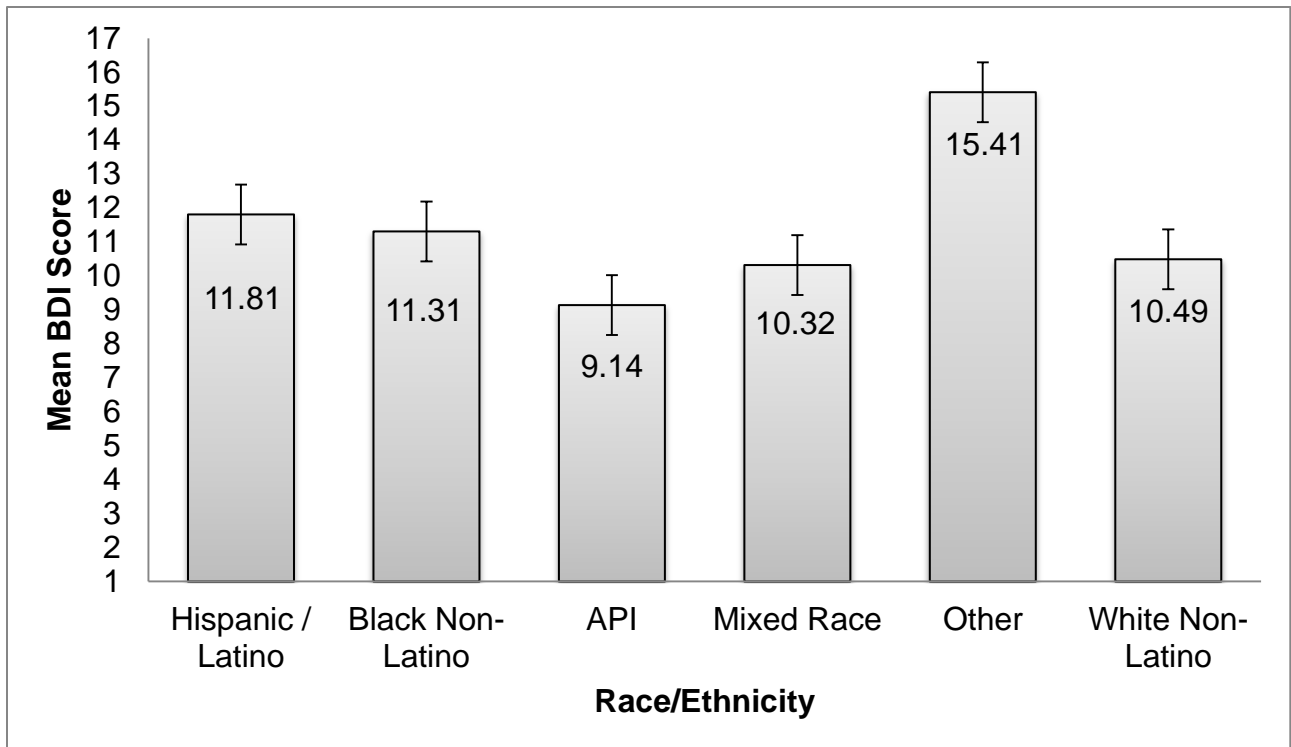received, and age at first anal sex insertive

Figure 2. Mean scores on the Beck Depression Inventory separated as a function of

Race/Ethnicity. A one-way ANOVA found no significant difference between the means across

categories of Race/Ethnicity (F (5, 592) p = .151). Lines indicate standard error.

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Table 2

Summary of Correlation Coefficients Between Ages at Identity Development and Ages at Sexual Debut

Identity Development	Cyber/Phone	Masturbation	Oral Given	Oral Received	Anal Insertive	Anal Receptive
Awareness of Attractions	.195 (434)***	.113 (47)*	.162(569)***	.126 (564)**	.115 (435)**	.162 (458)*
Attractions are sexual	.248 (434)***	.220 (447)***	.212 (569)***	.196 (564)***	.147 (435)***	.216 (458)***
Same Sex Fantasies	.241 (432)***	.230 (447)***	.226 (567)***	.222 (563)***	.164 (434)***	.240 (457)***
Self-Labeling as GBT	.241 (432)***	.230 (447)***	.226 (567)***	.222 (563)***	.164 (434)***	.240 (457)***
Self-Disclosure	.316 (429)***	.211 (442)***	.281 (563)***	.260 (453)***	.252 (431)***	.443 (453)***

Note. Confidence interval set at 95% throughout. Spearman's rho procedures used throughout.

Degrees of freedom provided in parentheses.

* p < .05, ** p <.01, *** p < .000, two-tailed.