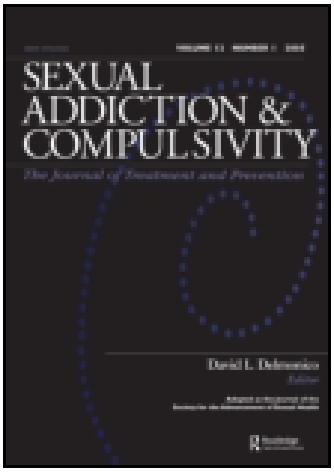

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Examining Coming Out, Loneliness, and Self-esteem as Predictors of Sexual Compulsivity in Gay and Bisexual Men

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Examining Coming Out, Loneliness, and Self-esteem as Predictors of Sexual Compulsivity in Gay and Bisexual Men

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The purpose of this study was to explore the influence of loneliness, self-esteem, disclosure of sexual orientation, and other personal characteristics on sexual compulsivity. Using data from 305 gay and bisexual men, results indicated not coming out to one's mother was significantly associated with higher sexual compulsivity scores. Self-esteem was significantly associated with current HIV serostatus and date of last HIV test. Stepwise regression analyses suggest loneliness, self-esteem, and non-disclosure of sexual orientation to one's mother have the capacity to predict sexual compulsivity among gay and bisexual men. Based on these results, counseling and sexual health practice implications are presented.

Sexual compulsivity has been a topic of considerable interest and debate in professional literature for several decades. In the past, sexually compulsive behavior has also been referred to as sexual addiction (Carnes, 1989, 1991, 2001; Earle & Crowe, 1990; Schneider, 1994), out of control sexual behavior (Bancroft, 2008; Guigliamo, 2006), sexual impulsivity (Barth & Kinder, 1987), and hypersexuality (Brandell & Nol, 1992; Kaplan & Krueger, 2010; Montaldi, 2002). While describing the similarities and differences of these constructs is beyond the scope of this article, the focus of this research is on sexual compulsivity. Although there is no formal diagnostic description for sexual compulsivity within the recently released fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2013), there are several problematic behaviors described in

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professional literature that are indicative of sexually compulsive behavior including: obsession with and excessive time spent thinking about sexual activity (Carnes, 2001; Hagedorn & Juhnke, 2005; Kalichman & Cain, 2004; Schneider, 1994); excessive time spent engaging in and recovering from sexual activities (Carnes, 2001; Hagedorn & Juhnke, 2005; Kalichman & Cain, 2004); participation in risky sexual behavior (Grov, Parsons, & Bimbi, 2010; Gullette & Lyons, 2005; Kalichman & Cain, 2004; Parsons, Grov, & Golub, 2012; Semple, Zians, Grant, & Patterson, 2006); tolerance, as evidenced by a need to engage in increasingly frequent and intense sexual experiences to achieve the same level of satisfaction (Carnes, 2001; Hagedorn & Juhnke, 2005; Parsons, Severino, Grov, Bimbi, & Morgenstern, 2007); continuing behavior despite negative consequences (Carnes, 2001; Hagedorn & Juhnke, 2005; Muench & Parsons, 2004; Schneider, 1994); unsuccessful attempts to stop sexually compulsive behavior (Bancroft & Vukadinovic, 2004; Carnes, 2001; Hagedorn & Juhnke, 2005); and negative affect, including anxiety, when not involved in the behavior (Carnes, 2001; Hagedorn & Juhnke, 2005). Sexually compulsive behavior is often associated with: Problems in important intimate, familial, peer, and vocational relationships, including emotional distancing that can lead to secrecy, feelings of isolation, and loneliness (Kalichman & Cain, 2004; Muench et al., 2007; Muench & Parsons, 2004; Reece & Dodge, 2004; Twohig, Crosby, & Cox, 2009), difficulty at work or at school (Muench et al., 2007; Muench & Parsons, 2004; Twohig et al., 2009), conflicts in spirituality (Twohig et al., 2009), feelings of discomfort regarding compulsive sexual behavior (Kalichman & Cain, 2004), including guilt and shame (Twohig et al., 2009), sexually transmitted infections and other health issues (Kalichman & Cain, 2004; Muench et al., 2007; Parsons et al., 2012; Twohig et al., 2009), and poor self-esteem and respect (Muench et al., 2007; Muench & Parsons, 2004).

It has been estimated that 3% to 8% of Americans meet the criteria for sexual compulsivity (Carnes, 1991; Coleman, 1992; Earle & Crowe, 1990), however there have been few studies conducted on which to base a current and accurate estimate of sexual compulsion within the overall population of the United States (Kaplan & Krueger, 2010). Existing data suggest a higher prevalence of sexual compulsion among men, compared to women (Daneback, Ross, & Månsson, 2006; Dodge, Reece, Cole, & Sandfort, 2004; Gullette & Lyons, 2005; Kalichman & Cain, 2004; Kuzma & Black, 2008; Perera, Reece, Monahan, Billingham, & Finn, 2009; Wetterneck, Burgess, Short, Smith, & Cervantes, 2012). Research findings also suggest that sexual compulsivity is more prevalent among gay and bisexual men, compared to heterosexual men (Cooper, Delmonico, & Burg, 2000; Daneback et al., 2006; Gullette & Lyons, 2005; Missildine, Feldstein, Punzalan, & Parsons, 2005). It has been suggested that the risk for developing a sexual compulsion for gay and bisexual men may be due to increased numbers of sexual outlets, including bathhouses, sex parties, and an increasing number of Internet sites

devoted to helping men find sexual partners (Parsons, 2005; Parsons et al., 2008). Additionally, because gay and bisexual men are increasingly using social networking sites and smart phone applications to make sexual connections, their risk for becoming sexually compulsive might also increase. In a qualitative study, Parsons and colleagues (2008) reported that relational and emotional concerns, such as poor self-esteem and feelings of isolation can contribute to sexual compulsivity in same-sex attracted men. However, more research is needed to thoroughly understand the influence of specific psychosocial characteristics that contribute to the development and maintenance of sexual compulsivity among gay and bisexual men. Of notable interest are the influences of coming out, loneliness, and self-esteem on sexual compulsivity.

Coming Out, Loneliness, and Sexual Compulsivity

The average age an individual discloses his or her sexual orientation to others, or coming out, is approximately 25 years (Rothman, Sullivan, Keyes, & Boehmer, 2012). Research has demonstrated that there are positive consequences associated with coming out to others including higher self-esteem and overall psychological well-being (Jordan & Deluty, 1998). Studies have also illustrated that concealing one's sexual orientation can be detrimental. For example, individuals who do not come out are at increased risk for substance abuse (Rosario, Schrimshaw, & Hunter, 2009) and experiencing anxiety and lower self-esteem (Jordon & Deluty, 1998).

Gay and bisexual men are more likely to come out to their mothers before their fathers (Rothman et al., 2012). This is generally because mothers are more likely to respond to a child's coming out in a supportive way compared to fathers (D'Augelli, Hershberger, & Pilkington, 1998). Further, individuals who have mothers who are supportive of their sexual identities tend to experience less anxiety and are less likely to avoid close relationships in adulthood (Mohr & Fassinger, 2003). On the other hand, a mother's negative reaction to a son's coming out has been shown to lead to anxiety in relational attachments (Carnelley, Hepper, Hicks, & Turner, 2011). Moreover, parents' negative reactions to their child's coming out can lead to depression, substance abuse, and unprotected sex (Padilla, Crisp, & Rew, 2010; Ryan, Huebner, Diaz, & Sanchez, 2009).

Flowers and Buston (2001) found that many gay men reported feeling a sense of isolation due to their sexual orientation and felt a need to keep their orientations a secret, particularly during adolescence and early adulthood, for fear of rejection if they disclosed their identities to others. Among gay and bisexual men, it appears that individuals who have not disclosed their orientations to others are at particular risk of isolation and loneliness because they may not feel completely a part of any community (Chaney &

Dew, 2003; Guigliamo, 2006). These feelings of being isolated and lonely might put some men at particular risk for engaging in compulsive sexual behavior to regulate the feelings of isolation and loneliness. Interviews conducted with sexually compulsive heterosexual and non-heterosexual men revealed that isolation and secrecy were experienced by individuals who engaged in sexually compulsive behavior (Guigliamo, 2006; Parsons et al., 2008). Research has shown that, in general, sexually compulsive individuals often try to hide their behaviors from significant others, promoting secrecy that is damaging to those relationships, potentially resulting in isolation and loneliness (Reece & Dodge, 2004). At the same time, studies suggest loneliness may lead an individual to engage in sexually compulsive behavior in order to create connections with other individuals, even if the relationships are only fleeting (Guigliamo, 2006; Parsons et al., 2008; Chaney & Dew, 2003). Indeed, Guigliamo (2006) found that nearly 36% of the heterosexual and non-heterosexual men he interviewed used sexually compulsive behavior to try to feel connected to other people. In the same study, about half of the men reported an inability to form and sustain emotionally intimate relationships.

What is underrepresented in professional literature are quantitative studies that examined a direct relationship between loneliness and sexual compulsivity. Bridging a relationship between loneliness and sexual compulsivity via specific behaviors associated with sexual compulsivity allows us to consider that a relationship may exist. For example, it has been well-documented, particularly among men who have sex with men, that high-risk sexual behaviors (e.g., unprotected sexual activities, multiple partners, etc.) have been associated with sexual compulsivity (see Starks, Grov, & Parsons, 2013). There are several studies that have investigated the relationship between loneliness and unprotected sexual intercourse. Muñoz-Laboy, Hirsch, and Quispe-Lazaro (2009) found that heterosexual men who reported increased feelings of loneliness were more likely to engage in unprotected intercourse compared to men with lower levels of loneliness. Among gay and bisexual men, results were similar. HIV seropositive men who engaged in unprotected anal intercourse (UAI) scored significantly higher on loneliness and impulsivity compared to men who did not engage in UAI (Semple, Patterson, & Grant, 2000), and loneliness has functioned as a predictor of UAI (Martin & Knox, 1997). Given that UAI is a high risk factor for contracting HIV, especially among MSM, understanding potential interconnections between psychosocial constructs such as loneliness, HIV serostatus, and sexual compulsivity is crucial. HIV risk sexual behaviors such as UAI have been found to be associated with sexual compulsivity (Grov et al., 2010; O'Leary et al., 2005; Smolenski, Ross, Risser, & Rosser, 2009). In addition, relationships have been found between HIV seropositivity and sexual compulsivity (Coleman et al., 2010; Parsons et al., 2012). While the aforementioned studies contribute greatly to what we know about loneliness and HIV-risk behaviors

associated with sexual compulsivity among MSM, quantitative research directly examining how these factors influence sexual compulsivity among gay and bisexual men continues to be underrepresented in professional literature.

Self-Esteem and Sexual Compulsivity

It appears that poor self-esteem is potentially related to sexual compulsivity among same-sex attracted men (Parsons et al., 2008). Because many gay and bisexual men do not feel valued by others related to their same-sex attractions, and because internalized heterosexism might lead to shame and guilt, self-esteem is often damaged (Chaney & Chang, 2005; Flowers & Buston, 2001; Guigliamo, 2006; Parsons et al., 2008). Past research suggested that sexual compulsivity is related to lower self-esteem (Guigliamo, 2006; Parsons, Bimbi, & Halkitis, 2001; Semple et al., 2006). Furthermore, Semple and colleagues (2006) indicated that sexually compulsive behavior might lead to shame and guilt, which often lowers self-esteem. Low self-esteem can lead to sexually compulsive behavior as an attempt to counteract the experience of diminished self-esteem (Parsons et al., 2008; Semple et al., 2006). It seems that sexually compulsive behavior leads to a brief and short-lived increase of self-esteem and provides escape from negative thoughts and affect (Chaney & Dew, 2003; Parsons et al., 2008). Guigliamo (2006) found that 64% of the sexually compulsive heterosexual and non-heterosexual men whom he interviewed experienced low self-esteem and reported utilizing sexual behavior as a way to escape or counteract that experience. Additionally, Semple and colleagues (2006) found that low self-esteem was correlated to sexually compulsive behavior among a sample of drug using, HIV-positive, gay and bisexual men. While research suggests that there is a relationship between self-esteem and sexual compulsivity among gay and bisexual men, additional research is needed to more fully understand the dynamic nature of that relationship. To our knowledge, studies exploring the potential combined contributions self-esteem, loneliness, sexual orientation disclosure, and HIV status make to sexual compulsivity among gay and bisexual men have not been conducted. Moreover, the present study answers Martin and Knox' (1997) recommendation that research examining loneliness in gay men should also include a measure of self-esteem.

Thus, our primary goal for this research project was to explore the influences of sexual compulsivity and other psychosocial constructs on the lives of gay and bisexual men. To reach this goal, the following research questions were investigated:

RQ_1: Are loneliness, self-esteem, and sexual compulsivity significantly associated with select demographic characteristics, disclosure of sexual orientation to parent(s), HIV status, and date of last HIV test?

RQ_2: Are specific demographic variables and scores on measures of loneliness and self-esteem predictive of sexual compulsivity among gay and bisexual men?

METHOD

Participants

A total of 314 adult male participants were recruited to participate in the current study. Nine surveys were excluded from analysis because six were incomplete, and three participants reported that their sexual and/or affectional attractions were heterosexual. This resulted in a total of 305 completed surveys. The average age of men in this study was 34.31 years (SD = 7.99) and they ranged in age from 18–63 years (median = 34 years). Men reported that their sexual and/or affectional attractions were predominantly toward the same gender (gay; N = 291; 95.4%) or predominantly toward both the same and opposite genders (bisexual; N = 14; 4.6%). The majority of men identified as White (N = 258; 84.6%). Other participants identified as African-American (N = 20; 6.6%), Hispanic (N = 12; 3.9%), American Indian/Native American (N = 3; 1.0%), Asian-American (N = 2; 0.7%), or Other (N = 6; 2.0%). Additional relevant demographic variables are listed in Table 1.

Procedure

Participants were recruited at two separate locations in a large, southeastern metropolitan city. A table was set up outside a very busy local gay bar on a Friday and Saturday evening, for three hours each night. Men were invited to complete the paper and pencil survey prior to entering the bar. At this location, 71 complete surveys were gathered. The remaining participants were recruited at the city's lesbian, gay, bisexual, transgender, queer pride event. Over a 2-day period, I invited male attendees to complete a survey related to the sexual behavior of gay and bisexual men. Men who agreed to participate were given the paper questionnaires attached to a clipboard, and were directed to a nearby tabled seating area, in a booth, where they could complete the questionnaires in private. Regardless of which location participants were recruited, an informed consent form served as the cover page to the questionnaires. All men gave written consent before taking part in this study, and no incentives for participation were provided. Men were told that they could withdraw from the study at any point. Participants were treated ethically according to the ethical standards of the American Psychological Association and the American Counseling Association. An Institutional Review Board approved all procedures and the research design.

TABLE 1 Demographic Characteristics (N = 305)

	n	%
Education		
Trade School	6	2.0
High school/GED	61	20.0
Associates Degree	44	14.4
Bachelors Degree	117	38.4
Masters Degree	48	15.7
Doctorate	17	5.6
Other	12	3.9
Income		
<$20,000	22	7.2
$20,001–$40,000	90	29.5
$40,001–$60,000	85	27.9
$60,001–$80,000	46	15.1
$80,001–$100,000	19	6.2
>$100,000	36	11.8
Income not reported	7	2.3
Out to Mother		
Yes	244	80.0
No	60	19.7
Not Reported	1	0.3
Out to Father		
Yes	198	64.9
No	105	34.4
Not Reported	2	0.7
HIV Status		
Negative	252	82.6
Positive	38	12.5
Unknown Status	14	4.6
Status Not Reported	1	0.3
Last HIV Test		
<6 months ago	102	33.4
6–12 months ago	87	28.5
1–4 years ago	64	20.9
>5 years ago	28	9.2
Never Been Tested	17	5.6
Date Not Reported	7	2.3

Measures

Sexual Compulsivity Scale

The Sexual Compulsivity Scale (SCS) is a 10-item instrument that assesses obsessive sexual thoughts and out of control sexual behaviors (Kalichman et al., 1994). Using a 4-point Likert scale format, participants' response to items range from 1 (*Not at all like me*) to 4 (*Very much like me*). Scores range from 10–40 with high total scores reflecting increased sexual compulsivity. Representative items include "My desires to have sex have disrupted my daily life" and "I have to struggle to control my sexual thoughts and behaviors." The SCS has been found to be internally consistent (α ranging from .86 to

.92), and has demonstrated 3-month test-retest reliability with an alpha level of .80 (Kalichman & Rompa, 1995; Semple et al., 2006). Convergent and divergent validity of the SCS has been established (Kalichman & Rompa, 2001). Internal consistency for the SCS in the current study was good (α = .85).

Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (RSES) is a 10-item measure of an individual's feelings of self-worth and global self-esteem (Rosenberg, 1965). Participants respond to a 4-point Likert scale, ranging from *strongly disagree* to *strongly agree*. Scores range from 10–40 with higher scores reflecting increased self-esteem. The RSES is made up of an equal number of positively worded (I take a positive attitude toward myself) and negatively phrased (I certainly feel useless at times) items. The RSES has demonstrated 3-month test-retest reliability (Kalichman & Rompa, 1995). Construct validity has been demonstrated by the measure's relationship with other facets of self-esteem (Rosenberg, 1965). Internal consistency in the current study was good (α = .88).

UCLA Loneliness Scale

The UCLA Loneliness Scale (ULS, version 3) is 20-item measure of feelings of loneliness and satisfaction with social relationships (Russell, 1996). The ULS uses a 4-point Likert scale ranging from 1 (*never*) to 4 (*always*). There are 11 negatively worded (How often do you feel alone?) and nine positively worded items (How often do you feel that there are people you can talk to?). Higher total scores on the ULS suggest increased degrees of loneliness. High reliability (α = .89) and test-retest reliability over a 1-year period (α = .73) has been demonstrated with the ULS (Russell, 1996). In addition, convergent and construct validity has been established for the ULS. Among the current sample, internal consistency was high (α = .92).

Analyses

To explore information regarding demographic characteristics including sexual orientation, ethnicity, education, income, self-disclosure of sexual orientation to mother and/or father, HIV status, and date of last HIV test, means and percentages were determined. Analysis of variance was used to investigate whether participants' scores on measures of loneliness, self-esteem, and sexual compulsivity differed significantly based on select demographic variables. To explore the predictive values of loneliness, self-esteem, and select

personal characteristics on sexual compulsivity, regression analysis was performed. Data were organized and analyzed using SPSS statistical software.

RESULTS

Our first research question sought to examine if significant differences exist among participants' loneliness, self-esteem, and sexual compulsivity scores in relation to eight demographic characteristics. To control for type I error due to alpha inflation associated with multiple comparisons, the Bonferroni adjustment technique was implemented. The adjusted level of significance is .006. Analysis of variance (ANOVA) indicated statistically significant differences among participants' sexual compulsivity scores in relation to self-disclosure of sexual orientation to the mother, $F(1, 302) = 7.82$, $p \leq .006$; $\eta_p^2 = .03$. According to Huck (2012), this indicates a small to medium effect size. Based on this finding, gay and bisexual men who reported not disclosing their sexual orientations to their mothers reported significantly higher sexual compulsivity scores ($M = 18.98$, SD = 6.95) than participants who had disclosed their sexual orientations to their mothers ($M = 16.68$, SD = 5.34). There were no statistically significant differences on sexual compulsivity scores in relation to sexual orientation, ethnicity, education, income, disclosure of sexual orientation to father, HIV status, or date of last HIV test.

Analyses also revealed significant differences in participants' self-esteem scores in relation to HIV status [$F(2, 301) = 4.22$, $p < .001$; $\eta_p^2 = .03$], and date of last HIV test [$F(6, 291) = 3.33$, $p < .006$; $\eta_p^2 = .06$]. Huck (2012) suggested that a η_p^2 equal to .06 represents a medium effect size. *Post hoc* analyses revealed that men who reported their HIV status to be "unknown" reported significantly lower self-esteem [$M = 19.80$, 95% CI (17.10, 22.51), $p < .05$] than men who reported their status to be "negative" [$M = 23.47$, 95% CI (22.83, 24.10)]. *Post hoc* analyses also showed men in this study who had never been tested for HIV reported significantly lower self-esteem [$M = 19.33$, 95% CI (16.42, 22.24)] than participants who had been tested within the past 6 months [$M = 24.36$, 95% CI (23.52, 25.19), $p = .003$] and men who were tested from 6 months to 1 year ago [$M = 23.30$, 95% CI (22.14, 24.46), $p < .05$]. No other differences were found in self-esteem scores related to the other demographic characteristics. No statistically significant differences were found in loneliness scores in relation to the any of the demographic variables.

Multiple regression analysis was conducted to investigate the second research question. To explore the influences of loneliness, self-esteem, and demographic variables (sexual orientation, disclosure to mother, disclosure to father, HIV status, last HIV test date, income bracket, and education level) on sexual compulsivity, stepwise regression analysis was performed. A significant model emerged comprised of loneliness, self-esteem, and

TABLE 2 Significant Variables in Stepwise Regression Analysis

Predictor Variable	*B*	SE (*B*)	*β*	R^2_{adj}
Model 1				.101
Loneliness	.179	.031	.323*	
Model 2				.125
Loneliness	.119	.036	.214*	
Self-esteem	−.214	.071	−.197**	
Model 3				.144
Loneliness	.114	.036	.207**	
Self-esteem	−.210	.071	−.193**	
Disclosure to Mom	2.056	.760	.147**	

Note. $^{*}p \leq .001$, $^{**}p < .01$

non-disclosure of sexual orientation to mother, Adjusted $R^2 = .144$; $F_{3, 288} = 17.30$, $p < .01$. On its own, loneliness accounted for 10% of the variance in sexual compulsivity scores (Adjusted $R^2 = 0.101$). In the next step, the inclusion of self-esteem into a model resulted in 13% of the variance explained (R^2 change = .027). The final model also included non-disclosure of sexual orientation to one's mother, and this model accounted for 14% of the variance in sexual compulsivity scores (Adjusted $R^2 = .144$). See Table 2, which includes all significant variables. Sexual orientation, disclosure to father, HIV status, date of last HIV test, income level, and education were not significant predictors in this model.

DISCUSSION

Our findings indicate that some gay and bisexual men who had not disclosed their sexual orientations to their mothers reported significantly higher sexual compulsivity scores than men who reported having come out to their mothers. However, a significant relationship between sexual compulsivity and disclosure of sexual orientation to fathers was not found. This discrepancy is not surprising because past research has suggested that it is not uncommon for many gay or bisexual sons to have especially close relationships to their mothers (Miller & Boon, 2000). Due to these unique relationships, it may be less threatening for these men to come out to their mothers before their fathers (Savin-Williams & Ream, 2003). A possible explanation for the relationship between not being out to mom and higher sexual compulsivity scores could be related to internalized heterosexism. Previous studies have demonstrated that men who experience high levels of internalized heterosexism are less likely to have disclosed their same-gender attractions to parents (Dew, Myers, & Wightman, 2005) and more like to struggle with sexually compulsive behavior (Dew & Chaney, 2005) compared to males who report lower levels of internalized heterosexism. To self-regulate the

emotional consequences associated with internalized heterosexism, some men might engage in maladaptive coping strategies such as compulsive sexual behavior.

Contrary to previous research that has established a link between sexual compulsivity and HIV status (Parsons et al., 2012), in this study, a similar link was not found, possibly due to methodological limitations. However, our findings indicate that self-esteem is related to HIV serostatus and date of last HIV test. Men who reported that they did not know their HIV status reported lower self-esteem than men who reported their HIV status to be negative. This is an interesting finding because past research has found that HIV serostatus did not predict differences in self-esteem in a group of gay and bisexual men (Moskowitz & Seal, 2011). There are a couple of possible explanations for this discrepancy. First, Moskowitz and Seal (2011) only included men who reported their HIV statuses to be negative or positive in their analyses, whereas they excluded the men who reported their statuses to be unknown. Second, to measure self-esteem, we used the Rosenberg Self-esteem Scale; they used a self-liking subscale. It is possible that distinct psychometric characteristics of the two measures influenced the relationships between self-esteem and HIV serostatus. A third explanation is that awareness of current serostatus does in fact influence an individual's self-esteem.

We are not aware of other studies that have explored the relationship between self-esteem and date of last HIV test. Our results indicated that gay and bisexual men who have never been tested for HIV reported lower levels of self-esteem than men who had been tested within the past 6 months and men who reported being tested from 6 months to 1 year ago. It is possible that men who have high self-esteem may be more likely to take increased responsibility for and care of their overall health generally, and sexual health specifically, by being aware of their current HIV status.

One of the primary reasons for conducting this research was to develop a model comprised of factors (loneliness, self-esteem, sexual orientation, out to mother, out to father, HIV status, last HIV test, income bracket, education level) that are potentially predictive of sexual compulsivity among gay and bisexual men. When examined via stepwise regression analysis, the three best predictors (in order) of sexual compulsivity included in the final model were loneliness, self-esteem (inverse relationship), and non-disclosure of sexual orientation to mother. It is interesting that loneliness was shown to significantly predict sexual compulsivity among gay and bisexual men because past researchers (Parsons et al., 2007) did not find a link between loneliness and sexual compulsivity. However, Torres and Gore-Felton (2007) conceptualized feelings of loneliness may lead to compulsive behavior and sexual risk-taking among men who have sex with men. It is not surprising that low self-esteem predicted sexual compulsivity because previous studies have generated similar results (Kalichman et al., 1994; Perera et al., 2009; Semple et al., 2006). Another interesting finding is that not disclosing same-sex

attractions to one's mother significantly predicted higher sexual compulsivity scores among this sample of gay and bisexual men. Although being out to mother only contributed slightly to the final model by accounting for a small amount of variance in sexual compulsivity scores, to our knowledge, this is the first study to demonstrate this significant link. Although we cannot say that individually or in combination, feelings of loneliness, low self-esteem, or not being out to one's mother causes sexual compulsivity among gay and bisexual men, based on the findings in our study, we theorize the relationships in the following way.

Individuals who experience loneliness might engage in maladaptive behaviors (i.e., compulsive sexual behavior) to self-regulate the negative feelings. As a person's sexual behavior becomes increasingly compulsive, social and intimate relationships become impaired or dissolve leading to even greater feelings of loneliness, which the person attempts to escape via compulsive sexual behavior (Chaney & Dew, 2003; Parsons et al., 2008). Similarly, individuals who exhibit low self-esteem might attempt to alleviate low self-worth by engaging in sexually compulsive behavior (Semple et al., 2006). For some gay and bisexual men, this manifests itself as engaging in high-risk sexual activities with multiple partners (Grov et al., 2010). Not only do these behaviors give sexually compulsive individuals a distorted perception of being wanted and desired, which then provides a maladaptive sense of worth, but having multiple partners may also serve to temporarily minimize feelings of loneliness.

The fact that not being out to mothers adds to the predictive capacity of the final model is interesting. Because sexual identity development progresses when individuals come out to parents or other significant people (Willoughby, Malik, & Lindahl, 2006), it is possible that not disclosing same-sex attractions to a mother exemplifies being in early stages of gay or bisexual identity development, a time when many men are not yet comfortable tackling this developmental milestone. The distress experienced by some men who have not disclosed their sexual orientations to their mothers tends to increase over time (Miller & Boon, 2000). In order to anesthetize these intense feelings, some gay and bisexual men might engage in sexually compulsive behaviors. It is also possible that the link between not being out to mom and sexual compulsivity is more closely related to internalized heterosexism.

Limitations, Implications, and Future Directions

Although the results of this study contribute new information to what we know about sexual compulsivity among gay and bisexual men and have implications for clinicians who work with this population, there are a couple of limitations that should be considered. The first issue pertains to generalizability of the results of this study. Because this study used a convenience

sample of men who predominantly identified as gay (just over 95%), white (approximately 85%), and the majority of men were out to their mothers and/or fathers, results may not be applicable to all men who comprise these communities. Relatedly, the venues in which participants were recruited may have influenced study outcomes. Because many men who attend gay bars and/or gay pride events are more likely than not to have some level of comfort about their sexual identities, they may have responded to survey questions in a qualitatively different manner than men who are less comfortable with their sexual identities. Lastly, because some questions relied on self-report from participants, responses may be influenced by social desirability. For example, just over 82% of the current sample self-reported being HIV-negative, but it is unknown if this is based on actual HIV tests or participants' assumptions about their HIV statuses.

Despite these limitations, the results of this study have implications for clinicians who work with sexually compulsive gay and bisexual men and sexual health practice. A primary task in the treatment of sexual compulsivity is to get a better understanding of the rationale and purpose for a client's compulsive sexual behaviors (Southern, 2008). Thus, clinicians should assess clients' feelings of loneliness and levels of self-esteem. It is important to explore any changes in loneliness or self-esteem over the course of clients' development in relation to compulsive sexual behavior. One way to do this is to have a client construct a timeline on which he identifies distinct periods or milestones in his life or age ranges. For each period or life event, he then rates levels of loneliness and self-esteem. On the same timeline, clients may be instructed to mark down sexual behaviors and activities engaged in, and to what extent the behavior was compulsive. This may require some insight on the part of the client. Clinicians should work with clients highlighting patterns or themes on the timeline. To help minimize current feelings of loneliness, assisting clients to get involved in support groups focused on the treatment of sexual compulsivity can be beneficial. When working with gay and bisexual male clients, it is especially crucial for clinicians to assess where they are in terms of their sexual identity development (e.g., to what extent have clients disclosed to family and friends?), levels of internalized heterosexism, and experiences of oppression. Providers should explore potential connections between these experiences and the client's compulsive sexual behavior and subjective feelings of loneliness and self-worth.

The results of this study also have implications for sexual health practice. Service providers must educate clients about links among HIV infection, high-risk sexual activities, and sexually compulsive behaviors. For clients who have never been tested for HIV or who are unaware of their current serostatus, clinicians should help clients understand the link between awareness of current HIV status and regular testing and self-esteem. Future studies should continue to explore the interrelationship between self-esteem and HIV status in order to develop more effective HIV prevention efforts.

Future research also should investigate the influence of loneliness, self-esteem, and sexual compulsivity on gay and bisexual men separately. Because these two groups can differ in a number of ways, investigating the unique characteristics of each group will add a great deal to the body of sexual compulsivity literature. In addition, because previous studies have reported associations between internalized heterosexism and loneliness (DeLonga et al., 2011) and self-esteem (Peterson & Gerrity, 2006), future research should investigate the influence of internalized heterosexism on loneliness and self-esteem in relation to sexual compulsivity. Lastly, when exploring unique factors that contribute to the development and maintenance of sexually compulsive behaviors among MSM, more robust statistical analyses should be use. Though, stepwise regression allows for a general screening of significant variables, statistical methods that reveal more rich results will advance this line of inquiry by providing specific implications for future study and the treatment of sexual compulsive behavior.

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