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Who's On Top? The Mental Health of Men Who Have Sex with Men

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Abstract

Despite most men who have sex with men (MSM) expressing intercourse position preference (e.g., “top”, “versatile”, or “bottom”), there is little information regarding sexual behavior and mental health sequelae. From the perspective of gender schema theory, the current study examined how position preference related to gender roles, internalized homophobia, and mental health. A total of 70 MSM (U.S. residents, M age = 28.89 years, 68.6% White) were recruited for an online study and grouped according to position preference. Groups were mostly similar across demographic variables, although bottoms had fewer sexual partners and lower condom use than tops and versatiles. In terms of gender roles, tops and versatiles were significantly higher in both masculine and feminine traits than bottoms. Tops were significantly more likely to report internalized homophobia than versatiles and bottoms. After controlling for masculinity, versatiles had the highest mental health. Results suggest further study of different sub-populations of MSM is warranted.

Keywords: *anal sex, gender roles, homophobia, mental health*

As tolerance toward homosexuality has increased in the U.S., so too has research regarding the health and mental health of homosexual populations. One of the most researched areas regarding the health of homosexual populations, particularly in men who have sex with men (MSM), is sexual disease risk. There is a wealth of research on the habits, behaviors, and mental health of MSM afflicted with human immunodeficiency virus (HIV) or acquired immune deficiency syndrome (AIDS) (Baggaley, White, & Boily, 2010; Koblin et al., 2006; Mustanski, Newcomb, Du Bois, Garcia, & Grov, 2011; Safren, Reisner, Herrick, Mimiaga, & Stall, 2010). Much of the research has focused on the sexual behaviors (e.g., penetrative anal sex without the use of a condom) that increase the risk of transmission of sexually transmitted infections (STI), especially HIV (Jin et al., 2009; Koblin et al., 2006; Thomas et al., 2009; Van Druten, Van Griensven, & Hendriks, 1992).

Two behaviors that have been examined in relation to HIV and sexually transmitted infection (STI) risk consist of engaging in either receptive or insertive anal intercourse (Jin et al., 2009; Thomas et

al., 2009; Van Druten et al., 1992). Those who engage primarily in insertive anal intercourse are referred to as adopting an active, top, or insertive role; those who engage in receptive anal intercourse are often referred to as adopting a passive, bottom, or receptive role. Some men engage in just one anal sex role (receptive or insertive), while others are more versatile in their behavior (Patterson & D'Augelli, 2013). Nearly 90% of MSM identify with a self-label of “top,” “bottom,” or “versatile” (Hart et al., 2003; Wei & Raymond, 2011). Prevalence rates are approximately 35% top, 25% bottom, and 40% versatile (Grov, Parsons, & Bimbi, 2010; Wei & Raymond, 2011). HIV and other STI risks are increased by adhering to a bottom anal sex role during intercourse (Wegesin & Meyer Bahlburg, 2000). A meta-analysis found that per-partner risk of HIV infection during unprotected sex was 40.4% for bottoms while risk was only 21.7% for tops (Baggaley et al., 2010).

In addition to sexual disease risk, some researchers have examined whether anal sexual preferences are associated with specific gender roles. For example, preferring a bottom role is often associated with being passive or feminine, while preferring a top

role is associated with being aggressive and masculine (Wei & Raymond, 2011). Weinrich, Grant, Jacobson, Robinson, and McCutchan (1992) found that preference for bottom roles in 102 MSM residing in a large west coast city was associated with childhood feminine gender expression. Kippax and Smith (2001) examined power relationships and conceptualization of MSM's intercourse position preference and relationships, finding bottom preference is associated with being passive, weak, and feminine, while top preference is associated with being active, strong, and masculine.

In many relationships among MSM, masculinity is often viewed as ideal, whereas femininity is considered undesirable (Lanzieri & Hildebrandt, 2011; Patterson & D'Augelli, 2013). This mirrors the general societal preference for masculinity over femininity in Western cultures (Connell, 2005). For example, Bailey, Kim, Hills, and Linsenmeier (1997) investigated MSM's romantic partner preferences by examining characteristics of ideal partners that men listed on a prominent dating website. In this investigation, masculinity was the most commonly listed desirable trait in a potential partner. Furthermore, no single profile listed masculinity as an undesirable trait. Feminine traits, however, were commonly listed as undesirable. Because masculinity is a valued trait in men and femininity often is not, and because bottom preference is associated with femininity, it is possible that men who prefer bottom roles and who are considered not very masculine may be at risk for depression or other mental health problems. Indeed, Rieger and Savin-Williams (2012) demonstrated gender nonconformity (i.e., high femininity and low masculinity) was negatively related to psychological well-being in 475 high school boys.

According to gender schema theory, people learn about how to be "men" and "women" from a complex socialization process that includes parenting, schooling, mass media, and peer group interactions (Bem, 1981). However, individuals differ in how much they conform to society's typical "masculine" or "feminine" gender roles. People can be categorized according to gender conformity types. For example, "masculine" men and "feminine" women are defined as *sex-typed*. "Feminine" men and "masculine" women are defined as *cross-sex-typed*. Men and women who are high on both feminine and masculine

traits are considered *androgynous*. Finally, men and women who are low on both feminine and masculine traits are considered *undifferentiated*.

Many studies have pointed to the benefits of a masculine gender role orientation and the relatively detrimental effects of a feminine orientation for the mental health of both men and women (e.g., Bassoff & Glass, 1982; Cella, Iannaccone, & Cotrufo, 2013; Taylor & Hall, 1982). Alternatively, there is a sizeable literature suggesting people who are more androgynous in their gender roles, endorsing *both* masculine and feminine traits, have the best mental health of all (e.g., Cheng, 2005; Coleman, Kaplan, & Casey, 2011; Lefkowitz & Zeldow, 2006; Prakash et al., 2010; Woodhill & Samuels, 2003). In part this may be because such individuals have greater psychological flexibility and are able to be either more assertive or more cooperative, depending on the demands of specific situations. It may also be that in patriarchal societies that value masculinity over femininity, people (but especially men) who fail to embody valued masculine traits are subject to more discrimination than people who display high masculinity. Indeed, Gordon and Meyer (2007) found that gender nonconformity, above and beyond sexual orientation, was associated with experiences of discrimination in gay, lesbian, and bisexual participants. In addition, Sandfort, Melendez, and Diaz (2007) found experiences of discrimination mediated the association between gender nonconformity and poor mental health in a large sample of Latino gay and bisexual men.

In addition to the potentially negative mental health effects of gender nonconformity (in the form of high femininity and low masculinity), some MSM may also have high levels of internalized homophobia (Williamson, 2000). Studies have found that gay men with higher rates of internalized homophobia report lower relationship satisfaction and duration, decreased openness about sexual orientation (Ross & Rosser, 1996), increased psychological problems such as substance abuse, increased self-injurious behaviors (Williamson, 2000), and higher depression (Herek, Cogan, Gillis, & Glunt, 1998) than gay men with little or no internalized homophobia.

In sum, the research to date demonstrates a bottom anal sex role preference in MSM is associated with increased sexual health risk and increased gender

nonconformity compared to top sex role preference. Also, studies find both gender nonconformity and internalized homophobia are negatively associated with mental health in MSM. However, much of the research with MSM has focused on HIV risk or HIV-positive samples, limiting generalizability. In addition, studies have not focused much attention on top or versatile intercourse position preferences in MSM as they relate to mental health, perhaps because so much of the work has been focused on sexual health risk and the risk of HIV transmission is lower in this group. Finally, the constructs of anal sex role preference, gender role orientation, internalized homophobia, and their mental health sequelae have not been investigated together in a single sample of men.

Purpose

The first exploratory aim of this research was to determine demographic characteristics associated with anal intercourse position preference. The second aim was to examine how position preference related to internalized homophobia and gender roles, and how these in turn related to mental health. Consistent with gender role schema theory, we anticipated that gender congruence (i.e., masculinity) would be highest in men who identified as “top” or “versatile” (Hypothesis 1), while non-congruence (i.e., femininity) would be higher in men who identified as “bottom” (Hypothesis 2). We further anticipated both versatile and bottom position preferences would be associated with lower internalized homophobia, compared to a top preference (Hypothesis 3). Finally, we expected a gender non-congruent orientation (i.e., higher femininity; Hypothesis 4) and higher internalized homophobia (Hypothesis 5) would be associated with lower global mental health, while gender typical (sex-typed) and androgynous gender roles would be associated with greater global mental health.

Method

Participants

A total of 105 individuals were recruited for participation in this study. Of these, 27 were excluded due to lack of completion or for not meeting requisite demographic criteria (i.e., having had a sexual experience with another man, male gender, age > 17 years, and resident of the United States). Of the 78 who completed the survey, eight participants consistently selected “I do not use labels” on questions assessing anal intercourse position preference. Given this was the primary grouping variable used in the study, these

participants were also excluded from analyses. Thus, the final sample size used in the statistical analyses and comparisons consisted of 70 men.

The average age of the final sample was 29.89 years ($SD = 8.43$, range 20-55). In terms of race, 68.6% of the sample self-reported being White. A total of 47.1% of the sample reported adhering to a religion. The average educational level was 4.69 ($SD = 1.56$), ranging between 4 (*some college*) and 5 (*undergraduate degree*). Fifty-seven percent of participants were employed full-time, with an average annual income between \$25,000 and \$49,999. About 57% of participants reported being in a relationship, with an average duration of 3.32 years ($SD = 4.63$, range one month – 20 years).

Procedures

A majority (86%) of participants were recruited via MechanicalTurk, an internet-based recruitment and participant payment service. The recruitment message informed participants that they were going to complete a survey concerning the sexual behavior of MSM. As per MechanicalTurk's policy, the recruitment message specified that the content of the survey was appropriate for adults only and filters were put in place that required participants to have already verified their age and willingness to see survey requests such as this; individuals younger than 18 were not able to see the recruitment message. Participants were also informed they would receive a modest monetary compensation for completing the survey.

In addition to being MSM, aged 18 and over, and living in the United States, participants also had to meet MechanicalTurk criteria as “Master Workers”. This elite status indicated that the participants in the study had a high degree of accuracy and completion of work and a high approval rate from recruiters on other MechanicalTurk tasks. After meeting all of the criteria, the recruited participants were provided with a short memorandum about the study and a link to the SurveyMonkey questionnaire itself. At the end of the study, participants were given a code that enabled them to receive payment via MechanicalTurk. In order to enhance recruitment, we increased the amount of compensation from the initial \$1 to \$2, \$3, and finally \$4. Thirty-two participants received \$4, 5 received \$3, 3 received \$2, and 27 received \$1.

Fourteen percent of participants were recruited via snowball sampling. In particular, the researcher and his advisor contacted acquaintances who met

criteria and asked if they would participate and recruit others who met criteria to also take the survey. Because they were not affiliated with Mechanical Turk, none of the participants recruited in this method were compensated.

Once all participants accessed the questionnaire, they were first provided with information about the study and indicated their consent by clicking on a button. Next, participants were presented with a series of questions (provided below). Once participants completed the questions, a debriefing page was presented. Participants were given additional information regarding the purpose of the study and they were thanked for their participation. All study procedures were approved by the University of Arkansas Institutional Review Board.

Measures

Demographic characteristics. Demographic questions were asked concerning age, ethnicity, religion, religiosity, educational attainment, employment status, annual income, relationship status, sexual orientation, sexual satisfaction, degree of openness regarding sexual orientation, condom use, and pornography use. Age was a free response and was coded continuously. Ethnicity was a multi-select item that was recoded into a dichotomous White/non-White item. Multiple options (single select) were offered for religious denomination; however this variable was recoded into a dichotomous atheist/theist item. Religiosity was coded from 1 (*not at all religious*) to 5 (*extremely religious*). Educational attainment was coded 1 (*no high school*), 2 (*some high school*), 3 (*high school diploma*), 4 (*some college*), 5 (*undergraduate degree*), 6 (*some higher/graduate education*), 7 (*masters level degree*), and 8 (*doctoral level degree*). Employment status responses were recoded into a dichotomous item: employed full-time/not employed full-time. Annual income was coded in \$25,000 increments from 1 (*less than \$25,000 per year*) to 7 (*greater than \$150,000 per year*). Relationship status was recoded into a dichotomous variable: single/partnered. Sexual orientation was measured by self-reported interest in one or both sexes 1 (*sexual interest in women only*) to 5 (*sexual interest in men only*). Sexual satisfaction was coded from 1 (*very dissatisfied*) to 5 (*very satisfied*). Openness with others regarding sexual orientation was recoded into a dichotomous item: closeted/out. Condom use was coded from 1 (*never, 0% of the time*) to 5 (*always,*

100% of the time). Pornography use was coded from 1 (*never*) to 7 (*multiple times per day*).

Anal intercourse position preference. Since all previous studies used a single question to establish anal intercourse position preference (IPP) and this study's primary measure of interest was IPP, we created a six-item questionnaire that assessed IPP. Items on the questionnaire began by asking *In the past 12 months* and inquired about past anal sex behavior (*When I have had sex, I have usually been...*), fantasy (*I have primarily fantasized about being...* and *If I could have any sort of anal sex I wanted, I would want to...*), self-labelling (*I think of myself as a...* and *I use the self-label of...*), and others' labelling of the participant (*People I know or have had sexual encounters with know me as a...*). The response options for the six questions were: (1) *top* (inserter, pitcher, penetrator), (2) *versatile top* (usually "top," but occasionally bottom), (3) *versatile* ("vers", flip flop, doing both in nearly equal amounts), (4) *versatile bottom* (usually "bottom," but occasionally top), and (5) *bottom* (receiver, catcher, penetrated). These response choices included multiple terms of reference (slang, etc.) for the IPP labels so that a participant's personal label of choice would likely be listed within one of the five choices. Participants were also given the options of indicating "*these labels don't apply to me,*" and "*other (please specify).*"

Inter-item correlations between the six items ranged from $r = .665$ to $.981$, and all were significant at $p < .001$. Cronbach alpha for the six-item scale was $.96$. Given the high internal consistency, an average IPP score was calculated for each participant. Scores ranged from 1 (*top*) to 5 (*bottom*). The mean score was then recoded into three groups. Scores ranging from 1 to 1.99 were recoded as *top*, scores from 2.00 to 3.99 became *versatile*, and scores of 4.00 to 5 became *bottom*.

Gender roles. The Bem Sex Role Inventory (Bem, 1974; Hoffman & Borders, 2001) was administered to assess participants' gender roles. The Bem contains 60 adjectives (1/3 of which are typically associated with masculinity, 1/3 of which are typically associated with femininity, and 1/3 of which are typically not associated with one gender or the other). Sample traits on the masculinity subscale include *self-reliant* and *aggressive*, while sample traits on the femininity subscale include *sensitive* and *compassionate*. Two subscale scores, femininity and

Table 1. *Demographic characteristics of the sample by intercourse position preference group.*

Variable	Top (<i>n</i> = 30)	Versatile (<i>n</i> = 28)	Bottom (<i>n</i> = 12)	<i>F</i> or χ^2 statistic
	<i>M</i> (SD) or <i>N</i> (%)	<i>M</i> (SD) or <i>N</i> (%)	<i>M</i> (SD) or <i>N</i> (%)	
Age	31.70 (7.56)	28.07 (8.48)	29.58 (10.08)	$F(2, 67) = 1.36$, $p = .263$
White race	18 (62%)	22 (79%)	5 (42%)	$\chi^2(2) = 5.26$, $p = .072$
Atheist	13 (43%)	14 (50%)	10 (83%)	$\chi^2(2) = 5.66$, $p = .059$
Religiosity ¹	2.10 (1.27)	1.79 (0.92)	1.67 (1.23)	$F(2, 67) = 0.86$, $p = .426$
Educational attainment ²	4.77 (1.63)	4.57 (1.57)	4.75 (1.42)	$F(2, 67) = 0.12$, $p = .884$
Employed full time	19 (65%)	11 (41%)	10 (83%)	$\chi^2(2) = 7.16$, $p = .028$
Annual income ³	2.37 (1.45)	2.46 (1.69)	2.25 (1.14)	$F(2, 67) = 0.09$, $p = .915$
Sexual orientation ⁴	2.77 ^a (1.22)	3.50 ^b (1.43)	4.75 ^c (0.45)	$F(2, 67) =$ 11.38 $p < .001$
Single (not in a relationship)	11 (37%)	17 (61%)	2 (17%)	$\chi^2(2) = 7.48$, $p = .024$
Number of sexual partners (past year) ⁵	3.10 (1.16) ^a	3.14 (1.27) ^a	2.08 (0.67) ^b	$F(2, 67) = 5.36$, $p = .020$
Sexual satisfaction ⁶	3.77 (1.25)	3.89 (0.97)	4.17 (1.34)	$F(2, 66) = 0.51$, $p = .606$
Condom use ⁷	3.60 ^a (1.43)	3.69 ^a (1.44)	2.08 ^b (1.51)	$F(2, 65) = 5.79$, $p = .005$
Pornography use ⁸	5.03 (1.16)	4.57 (1.10)	4.83 (1.70)	$F(2, 67) = 1.00$, $p = .373$

Note. Means sharing a letter in their superscript are not significantly different at the .05 level on Fisher LSD post-hoc tests.

masculinity, were calculated by averaging the 20 items assessing femininity and masculinity, respectively. Higher scores indicated greater endorsement of those gendered traits. Studies have shown the Bem's internal reliability is good, with Cronbach alpha values typically between .75 and .90 (reviewed in Hoffman & Borders,

2001). Recent evidence of content validity was demonstrated in a study, with men being significantly more likely to be categorized as having a male sex-typed gender role and women being significantly more likely to be categorized as having a female sex-typed gender role (Marrs, Sigler, & Bramer, 2012). In the current study, internal consistency values were .93 for the masculinity subscale and .89 for the femininity subscale.

Internalized homophobia. The Reactions to Homosexuality Scale, revised (Smolenski, Diamond, Ross, & Rosser, 2010) was used to assess internalized homophobia. This is a seven-item questionnaire assessing three domains of homophobia: personal comfort with a gay identity (3 items), social comfort with gay men (2 items), and public identification as gay (2 items). Sample items include, *Even if I could change my sexual orientation, I wouldn't* and *I feel comfortable being seen in public with an obviously gay person*. Items are answered on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The original scale measures positive reactions to homosexuality, so scores were reverse-coded such that higher scores indicated higher internalized homophobia.

The authors demonstrated adequate internal consistency (Cronbach alpha coefficients ranging from .60 to .76 for the individual subscales) and high subscale correlations (ranging from .40 to .55). Criterion validity was demonstrated by the authors: men who were involved in gay organizations, were not in relationships with other men, and did not discuss their sexual orientation with their primary care physicians scored higher on the subscales of internalized homophobia than men integrated in the gay community, in gay relationships, and who openly discussed their sexual orientation with their physicians (Smolenski et al., 2010). In the current study, internal consistency for the 7-item scale was .77.

Mental health. The Brief Symptom Inventory (BSI) was administered to evaluate psychiatric distress and mental well-being (Derogatis & Melisaratos, 1986). The BSI is a 53-item measure assessing psychiatric symptoms across nine dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Items ask about how often the respondent has been distressed or bothered by the symptoms over the past week and are

scored on a 5-point Likert scale, from 0 (*not at all*) to 4 (*extremely*). Sample items include *feeling no interest in things* and *spells of terror or panic*. The mean of all items was calculated to achieve a global psychiatric distress score. Higher numbers equal higher psychiatric distress (worse mental health, more problems). Internal consistency values for the symptom subscales range from .71 to .85, with global distress total scores showing excellent test-retest reliability over a two-week span ($r_{xx} = .90$). Convergent validity has been demonstrated by positive correlations between BSI subscales and theoretically similar subscales of the Minnesota Multiphasic Personality Inventory. In the current study, internal reliability for the global distress score was .97.

Data from the SurveyMonkey questionnaire were transferred into IBM SPSS Statistics program wherein analyses of variance (ANOVA), chi square tests for independence, and analyses of covariance (ANCOVA) were conducted. Post-hoc tests were run using the Fisher LSD test. For all tests, alpha levels for evaluating statistical significance were set at 0.05.

Results

Part 1: Demographic Correlates

A series of one-way between-groups analyses of variance (ANOVAs) and chi square tests were conducted to explore the relation of intercourse position preference (IPP) to numerous demographic variables, including age, educational attainment, annual income, religiosity, sexual orientation, sexual satisfaction, frequency of condom use, number of sexual partners in the past year, and pornography use. Means and standard deviations are reported in Table 1. The three IPP groups (tops, versatiles, and bottoms) did not differ significantly in average age, race/ethnicity, religious affiliation, religiosity, educational attainment, annual income, sexual satisfaction, or pornography use. Significant differences did emerge for full-time employment status, with bottoms (83%) significantly more likely to report full-time employment than tops (65%) or versatiles (41%) ($p = .028$).

Regarding relationship and sex questions, other differences between the groups emerged. Versatiles (61%) were significantly more likely to be single compared to tops (37%) and bottoms (17%) ($p = .024$). Differences also emerged in self-reported sexual orientation. In particular, utilizing a one-way between-groups ANOVA, we explored the relation between IPP and self-reported sexual orientation.

Significant differences were found between all groups [$F(2, 67) = 11.38, p < .001$]. Post-hoc comparisons using the Fisher LSD test indicated significant differences between all three position preference groups (all p values $< .03$). In particular, bottoms reported the highest levels of homosexuality ($M = 4.75, SD = 0.45$). Versatiles ($M = 3.50, SD = 1.43$) reported less interest in men than bottoms, but more than tops, who reported the highest levels of sexual interest in women ($M = 2.77, SD = 1.22$).

A one-way between-groups ANOVA compared IPP groups on the number of sexual partners in the past year. There was a statistically significant difference among the groups [$F(2, 67) = 4.13, p = .020$]. Post-hoc comparisons using the Fisher LSD test indicated that the mean score for bottoms ($M = 2.08, SD = 0.67$, ~one sexual partner in the past year) was significantly different from tops ($M = 3.10, SD = 1.16$, ~two sexual partners in the past year) and from versatiles ($M = 3.14, SD = 1.27$, ~two sexual partners) ($p = .011$). Tops and versatiles did not significantly differ from each other.

There was also a statistically significant difference in condom use between groups [$F(2, 65) = 5.79, p = .005$]. Bottoms ($M = 2.08, SD = 1.51$) used condoms significantly less often than both tops and versatiles. Tops ($M = 3.60, SD = 1.43$) and versatiles ($M = 3.69, SD = 1.44$) did not significantly differ from each other in terms of condom use.

Part 2: Hypothesis Tests

H1: Intercourse position preference (IPP) and masculinity. A one-way between-groups ANOVA was conducted to compare the three IPP groups on masculinity scores, as measured by the relevant subscale of the Bem. Table 2 provides a summary of the results. There was a statistically significant difference in Bem masculinity scores for the three groups [$F(2, 67) = 8.57, p < .001$]. Post-hoc comparisons using the Fisher LSD test indicated that bottoms ($M = 3.48, SD = 1.38$) had significantly lower masculinity scores than did tops ($M = 4.78, SD = 0.98$) and versatiles ($M = 4.63, SD = 0.66$) while tops and versatiles did not differ from each other. Hypothesis 1 was therefore supported.

H2: IPP and femininity. Another one-way between-groups ANOVA was conducted to explore the relation of IPP and femininity as measured by the relevant subscale of the Bem (Table 2). There was a statistically significant difference in scores between the three groups [$F(2, 67) = 6.75, p = .002$]. Post-hoc

Table 2. Study variables by intercourse position preference group.

Variable	Top (<i>n</i> = 30)	Versatile (<i>n</i> = 28)	Bottom (<i>n</i> = 12)	<i>F</i> statistic
	<i>M</i> (<i>SD</i>) or <i>N</i> (%)	<i>M</i> (<i>SD</i>) or <i>N</i> (%)	<i>M</i> (<i>SD</i>) or <i>N</i> (%)	
Internalized homophobia	3.17 ^a (1.46)	2.46 ^b (0.91)	2.37 ^b (0.62)	<i>F</i> (2, 67) = 3.54, <i>p</i> = .034
Bem: Masculinity	4.78 ^a (0.98)	4.63 ^a (0.66)	3.48 ^b (1.38)	<i>F</i> (2, 67) = 8.57, <i>p</i> < .001
Bem: Femininity	4.26 ^a (0.91)	4.67 ^a (0.65)	3.53 ^b (1.30)	<i>F</i> (2, 67) = 6.75, <i>p</i> = .002
Brief Symptom Inventory	0.47 (0.54)	0.38 (0.31)	0.67 (0.48)	<i>F</i> (2, 67) = 1.68, <i>p</i> = .194

Note. Means sharing a letter in their superscript are not significantly different at the .05 level on Fisher LSD post-hoc tests.

comparisons using the Fisher LSD test indicated that the mean femininity scores for bottoms ($M = 3.53$, $SD = 1.30$) was significantly lower than that of tops ($M = 4.26$, $SD = 0.91$) and versatiles ($M = 4.67$, $SD = 3.53$) which did not differ significantly from each other. Hypothesis 2 was therefore not supported.

H3: IPP and internalized homophobia. A one-way between-groups ANOVA was conducted to explore the relation between intercourse position preference (IPP) and internalized homophobia (Table 2). There was a statistically significant difference in mean scores for the three groups [$F(2, 67) = 3.54$, $p = .034$]. Post-hoc comparisons using the Fisher LSD test indicated that tops ($M = 3.17$, $SD = 1.46$) had significantly higher internalized homophobia scores than did versatiles ($M = 2.46$, $SD = 0.91$) and bottoms ($M = 2.37$, $SD = 0.62$). Bottoms and versatiles did not differ significantly from each other. Hypothesis 3 was therefore supported.

H4: Femininity and global mental health. To address the fourth hypothesis, Pearson product-moment correlations were computed between Bem femininity scores and BSI global distress scores. Results are summarized in Table 3. The correlation between Bem femininity scores and BSI was $r = -.106$, $p = .383$. Therefore, Hypothesis 4 was not supported. On the other hand, Bem masculinity scores and the BSI were significantly related, $r = -.431$, $p < .001$, indicating higher endorsement of masculine gender traits was associated with lower psychiatric distress.

Table 3. Bivariate correlations among key study variables

Variable	1 IH	2 Masc.	3 Fem.	4 BSI	5 IPP
1. Internalized homophobia	1.00				
2. Bem masculinity	.192 (<i>p</i> = .112)	1.00			
3. Bem femininity	-.236 (<i>p</i> = .049)	.319 (<i>p</i> = .007)	1.00		
4. BSI	-.067 (<i>p</i> = .581)	-.431 (<i>p</i> < .001)	-.106 (<i>p</i> = .383)	1.00	
5. Position preference ¹	-.257 (<i>p</i> = .032)	-.440 (<i>p</i> < .001)	-.270 (<i>p</i> = .024)	.142 (<i>p</i> = .240)	1.00

Note. ¹ Position preference was left in its continuous form; with lower scores indicating a preference for top.

H5: Internalized homophobia and global mental health. A Pearson product-moment correlation was computed between internalized homophobia, as measured by the Reactions to Homosexuality Scale, and psychiatric distress, as measured by the BSI global score (Table 3). The resulting correlation indicated the two were not significantly related, $r = -.067$, $p = .581$. Furthermore, a one-way between-groups ANOVA comparing the three IPP groups on mean BSI scores was not significant (Table 2). Therefore, Hypothesis 5 was not supported.

Part 3: Post-hoc Analyses

Because of the significant relation found between self-reported masculinity and internalized homophobia, ANCOVAs were conducted to discover if, after controlling for variance due to sex roles and homophobia, IPP would explain some of the variability in scores on the BSI. Table 4 provides a summary of adjusted means by IPP group and specific analyses are described next. A one way between-groups ANCOVA was conducted to determine if psychiatric distress (as measured by mean score on the BSI) was partially explained by IPP, after controlling for internalized homophobia. There was no significant difference between BSI scores [$F(2, 64) = 0.00$, $p = .999$].

Another one way between-groups ANCOVA was conducted to determine if psychiatric distress was related to IPP, after controlling for Bem masculinity scores. There was a significant difference between the three groups [$F(2, 64) = 3.87$, $p = .026$]. The mean

Table 4. Study variables by intercourse position preference group, with adjusted means.

Variable	Top (n = 30)	Versatile (n = 28)	Bottom (n = 12)	F statistic
	M (SD) or N (%)	M (SD) or N (%)	M (SD) or N (%)	
Brief Symptom Inventory (adjusted for internalized homophobia)	0.48	0.38	0.64	$F(2, 64) = 0.00, p = .999$
Brief Symptom Inventory (adjusted for Bem Masculinity)	0.56 ^a	0.38 ^b	0.53 ^a	$F(2, 64) = 3.87, p = .026$
Brief Symptom Inventory (adjusted for Bem Femininity)	0.48	0.42	0.59	$F(2, 64) = 1.73, p = .186$

Note. Means sharing a letter in their superscript are not significantly different at the .05 level on Fisher LSD post-hoc tests.

BSI score for versatiles (0.38) was significantly lower than that of both tops (0.56) and bottoms (0.53). Tops and bottoms did not differ from one another. Finally, an ANCOVA examined if psychiatric distress was related to IPP after controlling for Bem femininity scores. The results were not significant [$F(2, 64) = 1.73, p = .186$].

Discussion

The study was designed to discover if anal intercourse position preference (IPP) for men who have sex with men (MSM) was related to socio-demographic characteristics, gender role orientation, and internalized homophobia, and whether gender role orientation and internalized homophobia were, in turn, related to psychiatric distress. In the first set of analyses, we noted few demographic differences among IPP groups. Bottoms were the least likely to be single, reported the fewest number of sexual partners in the last year (average of one), and had the lowest rates of condom use. It may be that, because they were in stable long-term relationships, bottoms reported lower condom use. Tops and versatiles were very similar in terms of frequency of condom use and number of past-year sexual partners (average of two). Other than those differences, groupings based on intercourse position preference had few statistical associations with demographic characteristics; sexual satisfaction, education level, annual income, alcohol use, and pornography use were not statistically significantly related to IPP. Taken together, it appears that IPP is not associated with most

psychosocial variables. In fact, the only differences that emerged suggest bottoms report more stable, long-term relationships than tops and versatiles.

In our second set of analyses, we tested specific hypotheses about how IPP related to gender roles and psychological well-being. The first hypothesis (H1), which predicted tops and versatiles would endorse higher masculine traits than bottoms, received full statistical support. Indeed, in MSM, being the “penetrator” in a sexual encounter is associated with other self-described masculine characteristics, such as being a leader, an aggressor, and confident. This suggests that one way in which masculinity may be expressed by men is through their sexual behaviors.

However, our second hypothesis (H2), which predicted that versatiles and bottoms would endorse more feminine traits compared to tops, was rejected. Instead, both tops and versatiles endorsed high levels of femininity, while bottoms had lower levels of femininity. Overall, it appears that bottoms reported low endorsement of both masculine and feminine traits—seeing themselves as neither powerful or self-reliant nor compassionate or loyal. This may suggest bottoms have lower self-esteem than tops and versatiles, reporting fewer positive personality traits of any gender type. It is also possible that the Bem Sex Role Inventory’s items no longer adequately capture the domains of masculinity and femininity. As Hoffman & Borders (2001) suggest, it is possible that many of the gender-specific traits of 40 years ago are now seen as positive for everyone, regardless of gender. For instance, it may be that people are equally likely to see men and women as strong and independent, loyal and sensitive to others’ needs.

Our next set of analyses examined whether there were significant differences among the IPP groups on internalized homophobia and psychiatric distress. Hypothesis three (H3) predicted that internalized homophobia would be lower in versatiles and bottoms compared to tops; this hypothesis was fully supported. Given that being the “penetrator” in sexual relations is a behavior consistent with a masculine self-identity, it is not surprising that men who were less comfortable with their sexual orientation or felt less affiliation with the gay community also endorsed greater interest in and history of insertive anal sex. This is consistent with other work in MSM showing men who posted online advertisements seeking sexual encounters with non-gay-identified men were more likely to be looking

for a “masculine” partner who would penetrate them (i.e., a masculine top) (Downing & Schrimshaw, 2014). Presumably, these advertisements suggest that bottoms who desire a top partner recognize the ideal partner may have some internalized homophobia.

Finally, consistent with gender schema theory, we expected that both femininity (H4) and internalized homophobia (H5) would relate significantly to psychiatric distress. However, neither of these hypotheses was statistically supported. On the other hand, we found masculinity was significantly related to lower psychiatric distress. The findings of H4 and H5, when viewed in the context of hegemonic masculinity and patriarchy (see Connell, 2005), suggest that masculinity may serve as a protective factor against psychiatric distress in MSM. This is consistent with a large body of literature demonstrating the benefits of a more masculine gender role in both men and women (Bassoff & Glass, 1982; Cella et al., 2013; Cheng, 2005; Lefkowitz & Zeldow, 2006; Prakash et al., 2010; Taylor & Hall, 1982; Woodhill & Samuels, 2003). In particular, while having sex with other men may place a person’s masculinity in question, other traits can compensate for this. For example, MSM who are masculine in ways other than their sexual behavior (such as being aggressive, strong leaders, and analytical) can still reap many of the benefits of being perceived as a member of the powerful in-group of men. A more direct assessment of the potential discrimination faced by MSM who are more feminine and less masculine in their traits may help clarify the relations between gender roles and psychiatric distress we observed in the current study. In fact, one prior study suggested discrimination experiences mediate the relation between gender non-conformity and psychiatric distress (Sandfort et al., 2007).

We had originally anticipated IPP would relate to gender role orientation and internalized homophobia directly, and indirectly to psychiatric distress. Once we failed to find statistically significant associations between gender roles or homophobia and psychiatric distress, we explored whether IPP was directly related to psychiatric distress. Of note, the only analysis that found a relationship between these two variables was a post-hoc ANCOVA that controlled for masculinity. Findings suggest that versatile had the best mental health of all groups, with tops and bottoms reporting similar (albeit low) psychiatric distress.

While the findings are preliminary, we think

they warrant further investigation. For instance, perhaps versatile sexual behavior is comparable to an androgynous gender role orientation in that it allows for an expanded behavioral repertoire and flexibility in partnering decisions, where decisions about relationships can be made based on factors other than sexual compatibility. It may also be that a versatile identity is associated with other psychological variables, such as openness to experiences, which relate to positive mental health (Zoeterman & Wright, 2014).

Limitations and Future Directions

This study was novel in bringing together variables that had only been studied in relative isolation: anal intercourse position preference, internalized homophobia, gender roles, and psychiatric distress. The results largely conformed to expectations and revealed a possible benefit to being versatile in IPP for MSM, much as an androgynous gender role confers benefits on individuals (Prakash et al., 2010; Woodhill & Samuel, 2003).

However, the study’s strengths must be considered within the context of its limitations. Specifically, this study was limited by small sample size ($n = 70$) and being an internet-only self-report questionnaire study. In addition, the sample size was limiting in terms of IPP diversity. Furthermore, the compensation structure for participants changed as the study progressed because of difficulties obtaining participants. Although the number of bottoms in the study (19%) was close to established percentages in the other studies (21%) of MSM (Wei & Raymond, 2011), there were only 12 participants who were categorized as bottoms, limiting statistical power and sensitivity of analyses and generalizability of results.

In addition to addressing these methodological concerns, future research should explore potential variables that may explain the relations observed in this study. For instance, studies examining how discrimination experiences may mediate the relation between low masculinity and high psychiatric distress are warranted, as are studies that include assessment of personality characteristics that may relate to both sexual behavior (IPP) and mental health, such as openness to experience. One variable not well explored by this study was outness. Researchers (e.g., Scrimshaw et al., 2013) have found a relationship between being “out” versus “in the closet” and mental health, with outness associated with more positive

mental health. Furthermore, it may be that IPP changes as a function of outness. The major life changes that accompany the coming-out process (e.g., acceptance versus stigmatization, a change in social group) would be expected to have psychological impact. If IPP is a proxy for outness, it could be outness and its sequelae explain the relation between IPP and mental health. Future studies could also explore IPP in cultures outside of the United States and with larger samples of diverse racial and ethnic groups within the United States to determine if similar findings would occur in more diverse populations of MSM.

References

- Baggaley, R., White, R., & Boily, M. (2010). HIV transmission risk through anal intercourse: Systematic review, meta-analysis and implications for HIV prevention. *International Journal of Epidemiology*, *39*, 1048-1063. doi:10.1093/ije/dyq057
- Bailey, J. M., Kim, P.Y., Hills, A., & Linsenmeier, J. (1997). Butch, femme, or straight acting? Partner preferences of gay men and lesbians. *Journal of Personality and Social Psychology*, *73*, 960-973.
- Bassoff, E. S., & Glass, G. V. (1982). The relationship between sex roles and mental health: A meta-analysis of twenty-six studies. *Counseling Psychologist*, *10*, 105-112.
- Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, *42*, 155-162.
- Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review*, *88*, 354-364.
- Cella, S., Iannaccone, M., & Cotrufo, P. (2013). Influence of gender role orientation (masculinity versus femininity) on body satisfaction and eating attitudes in homosexuals, heterosexuals and transsexuals. *Eating and Weight Disorders*, *18*, 115-124. doi: 10.1007/s40519-013-0017-z
- Cheng, C. (2005). Process underlying gender role flexibility: Do androgynous individuals know more or know how to cope? *Journal of Personality*, *73*, 645-673. doi: 10.1111/j.1467-6494.2005.00324.x
- Coleman, D., Kaplan, M. S., & Casey, J. T. (2011). The social nature of male suicide: A new analytic model. *International Journal of Men's Health*, *10*, 240-252. doi: 10.3149/jmh.1003.240
- Connell, R. W. (2005). *Masculinities* (2nd ed.). Berkeley, CA: University of California Press.
- Derogatis, L. R., & Melisaratos, N. (1986). The Brief Symptom Inventory: An introductory report. *Psychological Medicine*, *13*, 595-605.
- Downing Jr., M. J., & Schrimshaw, E. W. (2014). Self-presentation, desired partner characteristics, and sexual behavior preferences in online personal advertisements of men seeking non-gay-identified men. *Psychology of Sexual Orientation and Gender Diversity*, *1*, 30-39.
- Gordon, A. R., & Meyer, I. H. (2007). Gender nonconformity as a target of prejudice, discrimination, and violence against LGB individuals. *Journal of LGBT Health Research*, *3*, 55-71. doi: 10.1080.15574090802093562
- Grov, C., Parsons, J. T., & Bimbi, D. S. (2010). Sexual compulsivity and sexual risk in gay and bisexual men. *Archives of Sexual Behavior*, *39*, 940-949. doi:10.1007/s10508-009-9483-9
- Hart, T. A., Wolitski, R. J., Purcell, D. W., Gómez, C., & Halkitis, P. (2003). Sexual behavior among HIV-positive men who have sex with men: What's in a label? *Journal of Sex Research*, *40*, 179-188.
- Herek, G. M., Cogan, J. C., Gillis, J., & Glunt, E. K. (1998). Correlates of internalized homophobia in a community sample of lesbians and gay men. *Journal of the Gay & Lesbian Medical Association*, *2*, 17-25.
- Hoffman, R., & Borders, L. (2001). Twenty-five years after the Bem Sex-Role Inventory: A reassessment and new issues regarding classification variability. *Measurement & Evaluation in Counseling & Development*, *34*, 39.
- Jin, F., Crawford, J., Prestage, G. P., Zablotska, I., Imrie, J., Kippax, S. C., ... & Grulich, A. E. (2009). Unprotected anal intercourse, risk reduction behaviours, and subsequent

- HIV infection in a cohort of homosexual men. *AIDS*, 23, 243-252. doi:10.1097/QAD.0b013e32831fb51a
- Kippax, S., & Smith, G. (2001). Anal intercourse and power in sex between men. *Sexualities*, 4, 413-436.
- Koblin, B., Husnik, M., Colfax, G., Huang, Y., Madison, M., Mayer, K., ... & Buchbinder, S. (2006). Risk factors for HIV infection among men who have sex with men. *AIDS*, 20, 731-739.
- Lanzieri, N., & Hildebrandt, T. (2011). Using hegemonic masculinity to explain gay male attraction to muscular and athletic men. *Journal of Homosexuality*, 58, 275-293. doi:10.1080/00918369.2011.540184
- Lefkowitz, E. S., & Zeldow, P. B. (2006). Masculinity and femininity predict optimal mental health: A belated androgyny hypothesis. *Journal of Personality Assessment*, 87, 95-101. doi:10.1207/s15327752jpa8701_08
- Marrs, H., Sigler, E. A., & Brammer, R. D. (2012). Gender, masculinity, femininity and help seeking in college. *Masculinities and Social Change*, 1, 67-292. doi: 10.4471/MCS.2012.16
- Mustanski, B. S., Newcomb, M. E., Du Bois, S. N., Garcia, S. C., & Grov, C. (2011). HIV in young men who have sex with men: A review of epidemiology, risk and protective factors, and interventions. *Journal of Sex Research*, 48, 218-253. doi: 10.1080/00224499.2011.558645
- Prakash, J., Kotwal, A., Ryali, V., Srivastava, K., Bhat, P., & Shashikumar, R. (2010). Does androgyny have psychoprotective attributes? A cross-sectional community-based study. *Industrial Psychiatry Journal*, 19, 119-124. doi:10.4103/0972-6748.90343
- Rieger, G., & Savin-Williams, R. (2012). Gender nonconformity, sexual orientation, and psychological well-being. *Archives of Sexual Behavior*, 41, 611-621. doi:10.1007/s10508-011-9738-0
- Ross, M., & Rosser, B. (1996). Measurement and correlates of internalized homophobia: A factor analytic study. *Journal of Clinical Psychology*, 52, 15-21.
- Safren, S. A., Reisner, S. L., Herrick, A., Mimiaga, M. J., & Stall, R. D. (2010). Mental health and HIV risk in men who have sex with men. *Journal of Acquired Immune Deficiency Syndrome*, 55, S74-77. doi: 10.1097/QA1.0b013e3181fbc939
- Sandfort, T. G. M., Melendez, R. M., & Diaz, R. M. (2007). Gender nonconformity, homophobia, and mental distress in Latino gay and bisexual men. *Journal of Sex Research*, 44, 181-189. doi: 10.1080/00224490701263819
- Schrimshaw, E., Siegel, K., Downing, M., & Parsons, J. (2013). Disclosure and concealment of sexual orientation and the mental health of non-gay-identified, behaviorally bisexual men. *Journal of Consulting and Clinical Psychology*, 81, 141-153. doi:10.1037/a0031272
- Smolenski, D. J., Diamond, P. M., Ross, M. W., & Rosser, B. R. S. (2010). Revision, criterion validity, and multi-group assessment of the Reactions to Homosexuality Scale. *Journal of Personality Assessment*, 92, 568-576. doi: 10.1080/00223891.2010.513300
- Taylor, M. C., & Hall, J. A. (1982). Psychological androgyny: Theories, methods, and conclusions. *Psychological Bulletin*, 92, 347-366. doi: 10.1037/0033-2909.92.2.347
- Thomas, B., Mimiaga, M. J., Menon, S., Chandrasekaran, V. V., Murugesan, P. P., Swaminathan, S., ... & Safren, S. A. (2009). Unseen and unheard: Predictors of sexual risk behavior and HIV infection among men who have sex with men in Chennai, India. *AIDS Education and Prevention*, 21, 372-383. doi:10.1521/aeap.2009.21.4.372
- Van Druten, H., Van Griensven, F., & Hendriks, J. (1992). Homoanal sex role separation: Implications for analyzing and modeling the spread of HIV. *Journal of Sex Research*, 29, 477-499.
- Wegesin, D. J., & Meyer-Bahlburg, H. L. (2000). Top/bottom self-label, anal sex practices, HIV risk and gender role identity in gay men in New York City. *Journal of Psychology & Human Sexuality*, 12, 43-62. doi:10.1300/J056v12n03_03
- Wei, C., & Raymond, H. (2011). Preference for and maintenance of anal sex roles among men

who have sex with men: Sociodemographic and behavioral correlates. *Archives of Sexual Behavior*, 40, 829-834. doi:10.1007/s10508-010-9623-2

Weinrich, J. D., Grant, I., Jacobson, D. L., Robinson, S., & McCutchan, J. (1992). Effects of recalled childhood gender nonconformity on adult genitoerotic role and AIDS exposure. *Archives of Sexual Behavior*, 21, 559-585. doi:10.1007/BF01542256

Williamson, I. (2000). Internalized homophobia and health issues affecting lesbians and gay men. *Health Education Research*, 15, 97-107.

Woodhill, B., & Samuels, C. A. (2003). Positive and negative androgyny and their relationship with psychological health and well-being. *Sex Roles*, 48, 555-565.

Zoeterman, S. E., & Wright, A. J. (2014). The role of openness to experience and sexual identity formation in LGB individuals: Implications for mental health. *Journal of Homosexuality*, 61, 334-353. doi:10.1080/00918369.2013.839919