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## The Association between Penis Size and Sexual Health among Men Who Have Sex with Men

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### Abstract

Larger penis size has been equated with a symbol of power, stamina, masculinity, and social status. Yet, there has been little research among men who have sex with men assessing the association between penis size and social-sexual health. Survey data from a diverse sample of 1,065 men who have sex with men were used to explore the association between perceived penis size and a variety of psychosocial outcomes. Seven percent of men felt their penis was “below average,” 53.9% “average,” and 35.5% “above average.” Penis size was positively related to satisfaction with size and inversely related to lying about penis size (all  $p < .01$ ). Size was unrelated to condom use, frequency of sex partners, HIV status, or recent diagnoses of HBV, HCV, gonorrhea/Chlamydia/urinary tract infections, and syphilis. Men with above average penises were more likely to report HPV and HSV-2 (Fisher’s exact  $p \leq .05$ ). Men with below average penises were significantly more likely to identify as “bottoms” (anal receptive) and men with above average penises were significantly more likely to identify as tops (anal insertive). Finally, men with below average penises fared significantly worse than other men on three measures of psychosocial adjustment. Though most men felt their penis size was average, many fell outside this “norm.” The disproportionate number of viral skin-to-skin STIs (HSV-2 and HPV) suggest size may play a role in condom slippage/breakage. Further, size played a significant role in sexual positioning and psychosocial adjustment. These data highlight the need to better understand the real individual-level consequences of living in a penis-centered society.

### Keywords

penis size; penis satisfaction; condom use; sexually transmitted infections; men who have sex with men (MSM); gay and bisexual men

### INTRODUCTION

Though it is well known that men’s penises come in many shapes and sizes, larger penis size has been equated with a symbol of power, fertility, stamina, masculinity, and social status

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(Bogaert & Hershberger, 1999; Bordo, 1999; Connell, 1987, 1995; Drummond & Filiault, 2007; Lehman, 1998; Paley, 2000; Pope, Phillips, & Olivardia, 2000; Stulhofer, 2006). It is no surprise that researchers have found most men are unsatisfied with their penis size, wishing it were larger (Lever, Frederick, & Peplau, 2006). Others have found that many men seek penile augmentation surgery despite the fact that they have normal penis sizes (Dotson, 1999; Mondaini et al., 2002; Pope et al., 2000). Using data from the Body Image Survey, Lever et al. (2006) reported on 25,594 heterosexual men and 26,437 heterosexual women on attitudes and perceptions of penis size. They found even though 66% of men rated their penis size as average, 46% of these same men desired a larger penis and 45% of all men desired a larger penis. Further, less than one percent of men desired a smaller penis.

In addition, Lever et al. (2006) also found men's penis size was significantly related to satisfaction with other body traits, including one's face, overall physical attractiveness, and comfort in a swimsuit. Despite the fact that many men were unsatisfied with their penises, Lever et al. reported that 84% of women were very satisfied with the size of their partner's penis size, and similar findings have been documented elsewhere (Stulhofer, 2006). While researchers have attempted to assess the average penis size for various groups of men (Bogaert & Hershberger, 1999; Ponchietti et al., 2001; Spyropoulos et al., 2002), there remains little research on how penis size effects an individual's sense of satisfaction, self, and other sociosexual outcomes (Drummond & Filiault, 2007).

Research on the effectiveness of condoms to prevent HIV/STI transmission is vast (Davis & Weller, 1999; Holmes, Levine, & Weaver, 2004; Steiner & Cates, 2006, 2008; Steiner, Cates, & Warner, 1999), and there is a large body of research highlighting the roles that both substance use and condom use skills can play in condom efficacy (De Graaf, Vanwesenbeeck, Van Zessen, Straver, & Visser, 1995; Leigh, Ames, & Stacy, 2008; Leigh, Morrison, Hoppe, Beadnell, & Gillmore, 2008; Munoz-Silva, Sanchez-Garcia, Nunes, & Martins, 2007). Building from these findings, some researchers have argued penis size too can impact correct and consistent condom use and HIV/STI transmission (Reece et al., 2007; 2008). Herbenick and Reece (2006) have highlighted how there are only a limited range of condom sizes available, with a majority of manufacturers producing condoms to fit an "average" penis (Garside, 2004). Researchers have suggested that experiences with the fit and feel of condoms (Crosby, Yarber, Sanders, & Graham, 2005; Grady, Klepinger, Billy, & Tanfer, 1993; Grady, Klepinger, & Nelson-Wally, 1999; Jadack, Fresia, Rompalo, & Zenilman, 1997) and condom breakage and slippage (Crosby, DiClemente, Yarber, Snow, & Troutman, 2008; Crosby, Salazar et al., 2008; Crosby et al., 2007; Herbenick & Reece, 2006; Richters, Donovan, & Gerofi, 1993; Richters, Gerofi, & Donovan, 1995; Rosenberg & Waugh, 1997) reduce consistent use by some men. As a result, this has been hypothesized to inadvertently lead to greater incidence of HIV and STIs (Herbenick & Reece, 2006; Reece et al., 2007; 2008).

With few exceptions (Bergling, 2007; Drummond & Filiault, 2007), there has been surprisingly little research among men who have sex with men (MSM) assessing the association between penis size and social-sexual health. Drummond and Filiault (2007) argued, "Penis size may be of increased importance to some gay men due to the erotic nature of the body in many gay cultures and the 'double presence' of the penis in a gay relationship or sexual encounter" (p. 122). In addition, they proposed that the importance of penis size may be "exacerbated by the overall importance of the body in dominant gay male culture" (p. 122).

As such, MSM may be a particularly well-positioned group, compared with heterosexual men, for such inquiry, as they have had greater and more intimate exposure to other men's penises (via sexual partners and erotica) during the course of their lifetimes, and thus have potentially had more opportunities to compare their penises to those of others. As a result, they may have a more accurate assessment of what "average" may be. Furthermore, because U.S. MSM

continue to comprise a disproportionate number of new HIV transmissions (Osmond, Pollack, Paul, & Catania, 2007; Schwarcz et al., 2007), active HIV/AIDS cases (Hall, Byers, Ling, & Espinoza, 2007; Malebranche, 2003), and STI incidence (Palefsky, 2007; Samuel et al., 2003), and because penis size has been related to correct and consistent condom use, MSM may be a particularly vital group in which to closely assess the relationship between penis size and condom use.

In assessing the association between condom use and penis size among gay and bisexual men, yet another layer to consider is the potential role that penis size may play in men's sexual positioning with their partners (i.e., anal insertive "top" versus receptive "bottom") (Groves et al., 2007; Parsons et al., 2005). Because of the "value" placed on larger penis size, are men with larger penises more likely to assume the anal insertive role? In contrast, a larger penis size may make penetrative anal sex more difficult and uncomfortable. In this case, are men with larger penises less likely to assume the insertive role? To our knowledge, no researchers have investigated this, though this connection may play a considerable role in condom use, condom breakage/slippage, and the transmission of HIV and STIs.

### Current Study

Drawing from a diverse sample of MSM, these analyses sought to explore four questions. First, to what extent is perceived penis size associated with penis size satisfaction? Second, understanding that condoms are often limited to a narrow range of available sizes, to what extent is perceived penis size associated with condom use, HIV, and STIs? Third, to what extent is perceived penis size associated with men's sexual positioning (anal insertive vs. receptive)? Finally, to what extent is perceived penis size associated with psychosocial outcomes (e.g., adjustment in the GLBT community)? Though the term "sexual health" encompasses a diverse range of physical, spiritual, social, and psychological constructs as they relate to sexuality (World Association for Sexual Health, 2008), this analysis used the term "sexual health" in operationalizing its broad exploration the four aforementioned research questions. Certainly, this analysis did not address all aspects of sexual health, however its themes were intimately concerned with the associations between perceived penis size and a variety of health-related outcomes, thus we believe our manuscript captures the spirit of "sexual health."

## METHOD

### Participants and Procedure

A cross-sectional, street-intercept method (Miller, Wilder, Stillman, & Becker, 1997) was adapted to survey 1,065 gay and bisexual men at a series of gay, lesbian, and bisexual (GLB) community events in New York City in the fall of 2006 through the Sex and Love Study, version 5.0. This approach to collecting data has been used in numerous studies (Carey, Braaten, Jaworski, Durant, & Forsyth, 1999; Chen, Kodagoda, Lawrence, & Kerndt, 2002; Kalichman & Simbaya, 2004; Rotheram-Borus et al., 2001), including those focused on GLB persons (Benotsch, Kalichman, & Cage, 2002; Kalichman et al., 2001) and has been shown to provide data that are comparable to those obtained from other more methodologically rigorous approaches (Halkitis & Parsons, 2002), such as time-space sampling.

At both two-day long community events, the research team hosted a booth, and a member of the research team actively approached each person who passed the booth. Potential participants were provided with information about the project and offered the opportunity to participate. The response rate was high, with 83.0% of those approached consenting. The survey required 15–20 minutes to complete, and—to promote confidentiality—participants were handed the survey on a clipboard so that they could step away from others to complete the questionnaire privately. Upon completion, participants deposited their own survey into a secure box at the

booth. As an incentive, those who completed the survey were given a voucher for free admission to a movie. Survey data were entered into an SPSS database and checked/verified by project staff for accuracy.

Table I reports characteristics of the sample. The sample was diverse with ages ranging from 18 to 90 ( $M = 37.9$ ,  $SD = 12.5$ ), and 42% being persons of color. Most men (89.2%) identified as gay, 9.4% as bisexual, and the remainder as queer (1.1%) or “straight” (but reported having sex with men; 0.3%). Most men (74.6%) were HIV negative, 12.5% were HIV positive, and 9.9% of men were never tested.

## Measures

**Demographics**—Participants were asked to indicate their age (in years), sexual identity, education (in ordinal categories), and race and ethnicity (by checking all that applied to them). Response categories to race and ethnicity included “African American,” “Asian/Pacific Islander,” “European/White,” “Hispanic/Latino,” and “Other, specify.” Men also indicated their HIV status.

**Perceived Penis Size and Satisfaction**—In evaluating the association between perceived penis size and variables such as penis satisfaction, Lever et al.’s (2006) operationalization of penis size was adapted. Men were asked, “Do you consider your penis size to be?” with response categories “below average,” “average,” “above average,” and “way above average.” For this analysis, men indicating “above average” ( $n = 341$ , 32.0%) and “way above average” ( $n = 37$ , 3.5%) were collapsed into a single category as to preserve statistical power and limit the use of degrees of freedom in  $\chi^2$  analyses. Men also indicated how often they lied to others about their penis size (never, rarely, sometimes, often, most or all of the time), and how satisfied they were with their penis (wish it were smaller, I’m satisfied, wish it were bigger),

**Sexuality and Sexual Health**—Participants indicated if they had experienced a variety of STIs ever in their lives and in the last year (anal/genital warts HPV; anal/genital herpes HSV-2; crabs/scabies/lice; gonorrhea, Chlamydia or other urinary tract infection; Hepatitis B [HBV]; Hepatitis C [HCV]; and syphilis). In addition, men indicated if they had recently (< 90 days) engaged in anal sex without condoms with non-main sex partners, separately for partners of the same HIV status and partners whose status was discordant (or unknown/undisclosed). Response choices were dichotomous (yes/no). Men also indicated the number of non-main HIV seroconcordant and serodiscordant male partners they had sex with in the last 90 days. Finally, men indicated their preferred sexual positioning/role (Top 100%; Mostly top; Versatile 50/50; Mostly bottom; Bottom 100%). This was trichotomized for the purposes of this analysis (Top and Mostly top were coded “top,” Versatile remained “versatile,” and Bottom and Mostly Bottom were coded “bottom”).

**Psychosocial well being and adjustment**—Psychosocial well being and adjustment were operationalized using three scales. The Prevention/Promotion Scale (Lockwood, Jordan, & Kunda, 2002) was adapted from the original 18-item measure to a 16-item five point Likert type scale (1 = not true at all 5 = very true). The two excluded items were ones pertaining to school. The Prevention/Promotion Scale has two subscales. The 8-items that comprise the prevention aspects of the scale measured the extent individuals were focused on preventing negative events from happening in their lives,  $\alpha = .75$  (e.g., “I am anxious that I will fall short of my responsibilities and obligations,” “I often think about the person I am afraid I might become in the future”). The 8-items that comprise the promotion aspects of the scale measured the extent individuals were focused on positive aspects of their future,  $\alpha = .84$  (e.g., “I frequently

imagine how I will achieve my hopes and aspirations,” “In general, I am focused on achieving positive outcomes in my life”).

The Gay-related Stigma Scale (Frost, Parsons, & Nanín, 2007) is a 10-item Likert-type scale (1 = strongly disagree, 4 = strongly agree) assessing stigma and negative consequences resulting from disclosure of one’s sexual identity,  $\alpha = .90$  (e.g., “People who know I’m gay/bi tend to ignore my good points,” “I have lost friends by telling them I’m gay/bi,” “People I care about stopped calling after learning that I’m gay/bi”). Frost et al. adapted the gay-related stigma scale from the HIV stigma scale (Berger, Ferrans, & Lashley, 2001).

Finally, the Gay Life Satisfaction Scale (Bimbi & Parsons, 2004; Bimbi, Parsons, & Nanín, 2005) was derived from an adapted version of the Life Satisfaction Index (Lawrence & Liang, 1988). This measure consisted of eight items, five of which were positively worded (e.g., “In most ways, my life as a gay/bi person is fulfilling”) and three items that were negatively phrased (e.g., “Being gay/bi is a difficult life experience”). Participants were instructed to respond to the items on a 4-point Likert scale (1 = strongly agree, 4 = strongly disagree) and the negatively phrased items were reverse scored,  $\alpha = .75$ . See Appendix 1.

### Analytic Plan

Where appropriate, chi-square and ANOVA *F* tests were conducted. To supplement chi-square tests and facilitate interpretation in cases involving two ordinal variables, Goodman-Kruskal Gamma ( $\gamma$ ) tests were performed. As a posthoc for ANOVA, Bonferroni tests were used for group comparisons. As cell sizes were too small for traditional chi-square analyses, Fisher’s exact *p* tests were used to assess group differences in the prevalence of STIs (i.e., infrequently occurring variables).

## RESULTS

### Perceived Penis Size in Relation to Penis Satisfaction

Table I reports univariate characteristics of the sample. In total, 6.9% ( $n = 73$ ) of men felt their penis was “below average,” 53.9% ( $n = 574$ ) felt their penis was “average,” and 35.5% ( $n = 378$ ) felt their penis was “above average.” Perceived penis size was positively related to penis size satisfaction such that 79.2% ( $n = 57$ ) of men with below average penises wished their penis were larger, compared to 40.5% ( $n = 230$ ) of men with average penises, and 14.7% ( $n = 55$ ) of men with above average penises,  $\chi^2(2) = 138, p < .001, \gamma = .66$ . In addition, perceived penis size was inversely related to lying about penis size such that 45.2% ( $n = 33$ ) of men with below average penises had lied to others about their size, compared to 38.6% ( $n = 219$ ) of men with average penises, and 30.1% ( $n = 113$ ) of men with above average penises,  $\chi^2(2) = 9.99, p < .01, \gamma = -.19$ . Further, lying about penis size was inversely related with size satisfaction, such that 48.2% ( $n = 164$ ) of men who wished their penis was bigger had lied to others about its size, compared to 28.8% ( $n = 193$ ) of men who did not wish their penis was bigger but had lied to others about its size,  $\chi^2(1) = 37.3, p < .001, \gamma = -.39$ .

### Perceived Penis Size in Relation to Condom Use, HIV, and STIs

Table II reports bivariate associations between perceived penis size and sexually transmitted infections. Perceived penis size was not related to recent condom use (< 90 days) neither with HIV seroconcordant nor HIV serodiscordant (or unknown status) partners. In addition, perceived penis size was not significantly related to men’s frequency of sex partners (HIV seroconcordant or serodiscordant), their HIV status, or diagnoses (recent or lifetime) of hepatitis B, hepatitis C, syphilis, or crabs/scabies/lice. It was, however, related to recent infections/outbreaks of viral skin-to-skin STIs, anal/genital warts (HPV), and anal/genital herpes (HSV-2). Men with above average penises were significantly more likely than men with

average and below average penises to report recent genital warts (HPV). In addition, men with above average penises were significantly more likely than men with average sized penises to report genital herpes (HSV-2), Fisher's exact  $ps \leq .05$ . Finally, men with above average penises were significantly more likely than men with average size penises to report having ever been infected with gonorrhea/Chlamydia/urinary tract infection, Fisher's exact  $p < .001$ .

### Perceived Penis Size and Sexual Positioning

Table III reports the bivariate association between perceived penis size and men's sexual positioning. Perceived penis size was significantly related to sexual positioning. Men with below average penises were more likely to identify as a "bottom" (anal receptive), men with average penises were more likely to identify as "versatile" (receptive or insertive), and men with above average penises were more likely to identify as a "top" (insertive),  $\chi^2(4) = 19.7$ ,  $p < .001$ ,  $\gamma = -.20$ .

### Perceived Penis Size and Psychosocial Outcomes

Table IV reports on the bivariate association between perceived penis size and measures of socio-psychological well being. On all three psychosocial outcomes (the Prevention/Promotion Scales, the Gay-related Stigma Scale, and the Gay Life Satisfaction Scale), men with below average penises fared significantly poorer than other men. Men with below average penises were significantly lower than men with average and above average penises on gay life satisfaction ( $F(2, 1022) = 9.53$ ,  $p < .001$ ). Men with below average penises were significantly lower than men with above average penises on life promotion (promoting good things in one's life;  $F(2, 1022) = 4.57$ ,  $p < .01$ ). In addition, men with below average penises were higher than men with average penises on gay-related stigma ( $F(2, 1022) = 3.19$ ,  $p < .05$ ), and higher than men with average and above average penises on life prevention (i.e., focused on preventing negative outcomes;  $F(2, 1022) = 3.85$ ,  $p < .05$ ).

## DISCUSSION

Historically, the size of one's penis has been equated as symbol of power, masculinity, social status, fertility, and stamina (Bogaert & Hershberger, 1999; Bordo, 1999; Connell, 1987, 1995; Drummond & Filiault, 2007; Lehman, 1998; Paley, 2000; Pope et al., 2000). To date, the penis' connection to masculinity and virility is continually perpetuated throughout popular media (Drummond & Filiault, 2007; Lehman, 1998); thus, it is not surprising researchers have found many men are unsatisfied or feel shame about their penis size (Dotson, 1999; Lever et al., 2006; Mondaini et al., 2002; Pope et al., 2000). To that end, a growing body of research has intimated a link between penis size and social-sexual health outcomes (Reece et al., 2007; 2008), though there has been surprisingly little research with MSM (Drummond & Filiault, 2007).

This analysis explored four research questions, each assessing the connection between perceived penis size and sociosexual health outcomes. Though most of the men indicated their penis sizes were average, many (44%) fell outside this "norm," either indicating a below average or above average perceived penis size. Further, perceived penis size was inversely related to penis satisfaction and positively related to lying to others about the size of one's own penis. These data provide further evidence of the real socially-scripted cultural pressures MSM may feel about their penis size. Comparing these results with a sample of heterosexual men from the Body Image Survey (Lever et al., 2006), fewer men in our sample classified their penises as below average (6.9% versus 12% from the Body Image Survey) or average (53.9% versus 66% from the Body Image Survey). Meanwhile, a larger portion of men from the Sex and Love Study classified their penises as above average (35.5% versus 22% from the Body Image Survey). This is not to suggest MSM may actually have larger penises than other men,

but rather this may be an indication that MSM, because of the intimate nature of exposure they have had with other men's penises via sexual encounters, have a more accurate assessment of how their penis may contrast with other men, and thus more positive feelings about its size. Nevertheless, it is not surprising that far more men rated their penis size as above average compared to below average (both in our data and in the Body Image Survey). Researchers who investigated similar effects about body image (Frederick et al., 2007) have attributed such a bias to positive illusions (Taylor & Brown, 1988). In contrast, this might be an indication that, as a result of increased focus on the body within mainstream gay cultures (Drummond & Filiault, 2007), MSM may feel pressured to inflate their estimates, thus resulting in additional self-reporting of above average penis sizes. In total, these data highlight the need for a comprehensive assessment of the association between perceived penis size and satisfaction in a diverse sample of men that includes MSM and heterosexuals.

In terms of sexual health outcomes, findings were mixed. Perceived penis size was not related to frequency of partners, HIV status, or condom use (i.e., HIV risk-associated behavior). In recent years, condom manufacturers have made concerted efforts to advertise a wider range of condom sizes (ranging from "Magnum" to "Snug" fits) (Herbenick & Reece, 2006). This wider range of available sizes may be impacting condom use such that men who fall above or below the average condom size are more easily able to find condoms they believe will fit them. This may be particularly salient for our sample of men from New York City, where there exists a vast range of retail stores that sell a wide variety of condoms and are open around the clock. Future research might consider such an analysis among rural populations where access there may be reduced access to such a wide range of available condom sizes.

Nevertheless, this does not speak to the issue of condom slippage and breakage. Though our data did not capture experiences of condom slippage and breakage, other researchers have suggested this may play a significant role in the transmission of STIs, particularly for men with above or below average penis sizes (Herbenick & Reece, 2006; Reece et al., 2007; 2008). In the present analysis, men with above average penises reported significantly higher incidence of viral skin-to-skin STIs, specifically HSV-2 and HPV. In essence, although when compared with other men, men with above average penises reported similar rates of condom use, and statistically similar numbers of sex partners, improper condom fit (i.e., not being able to roll the condom all the way down), breakage, or irritation (caused by wearing a condom that may be too tight) may be exposing some men to skin-to-skin STIs. This is striking given that reported rates of condom use were consistent regardless of men's reported penis size. Further, it is unsurprising that penis size was unrelated to non-skin-to-skin viral STIs, such as hepatitis B, hepatitis C, or HIV (which are spread through fluid exchange), or pubic lice/scabies (which can be spread on bedding or contact with pubic hair). Nevertheless, these postulations may not adequately explain the increased incidence of some bacterial STIs (gonorrhea/Chlamydia/urinary tract infections) among men with above average penises, and the non-significant association between syphilis (also a bacterial STI) and perceived penis size. In all, these data support previous research having associated penis size with STI transmission; however, more research is needed before definitive conclusions can be drawn.

Perceived penis size also played a role in sexual positioning, whereby men with smaller penises were more likely to identify as bottoms and men with above average penises were more likely to identify as tops. The direction of this relationship further supports notions of the ingrained social value of having a large penis and the presumed masculine penetrative role these men are socially—and sexually—scripted to enact (Drummond & Filiault, 2007). These data beg the question, "To what extent are men with below average penises being socially-sexually-scripted into anal receptive roles?" Does their having a "smaller" penis devalue these men's sexual potential, socially-coercing them into sexual roles they may not have otherwise assumed? Though our data cannot answer these questions, it is striking that men with below average

penises fared significantly worse on three measures of psychosocial adjustment. Certainly, a variety of factors may also be playing a role in these associations (Connell, 1987, 1995), but the strength and consistent direction of the relationships indicate a need to better understand the individual-level consequences of living in a penis-centered “size matters” society (see also Messner, 1997).

As a word of caution, several limitations should be addressed. Clearly, these data do not generalize to all MSM, as this sample was limited to those who attended large-scale GLB events in New York City. Furthermore, as these analyses drew from cross-sectional data, causality between variables should not be inferred, nor do these analyses rule out the potential for confounding effects from other variables not assessed. This sample does, however, give a very comprehensive picture about the types of individuals that attend large scale GLB events, and comprise a considerable (and accessible) portion of the gay, bisexual, and MSM communities in New York City. Although efforts were taken to ensure confidentiality, there was potential for biased responses due to social desirability in the reporting of sensitive information. As with all social research, these factors must be considered when evaluating the findings.

The survey instrument used for this analysis assessed a broad range of variables related to social-psychological and sexual health. Such an instrument helps provide a general perspective about a variety of characteristics; however, it has its limitations. Consistent with the brief street-intercept survey method (Miller et al., 1997), many of the questions on this survey were quantitative and close-ended. Additional qualitative research is necessary to better capture the full range of experiences. Although a wide range of STIs were assessed in this analysis, gonorrhea, Chlamydia, and urinary tract infections were captured using a single indicator. Our analysis found men with above average penises were more likely to report having been diagnosed with gonorrhea/Chlamydia/urinary tract infections, yet we are unable to disentangle which of the three, if any, might have been more common. Finally, in an effort to increase response rates for questions on penis size, men were not asked to report a numeric measurement (i.e., in inches), but rather select from a nuanced range of values (i.e., average, above average, etc.). Our use of a non-metric scale to capture penis size reduces some precision; however, a numeric measure (i.e., inches) is still subject to self-report biases, as not all men have actually measured their penis, and those who have may not use identical levels of precision.

Though it may not be a topic well explored in academic literature, perceptions of one’s penis size were clearly and consistently associated with a variety of psychosocial and sexual health outcomes among the men sampled for this analysis. These data highlight the need to provide comprehensive sexual health education that is inclusive of the varying physical and psychosocial needs that men with differing sized penises may require. If indeed MSM with above average penises are more likely to assume the anal insertive role, then it is important for them to wear sized-to-fit condoms and use sufficient amounts of lubricant as not to injure their partners nor increase their risk of HIV or STI transmission. Thus, it is essential to improve access to (and education about) sized-to-fit condoms. In contrast, if MSM who perceive themselves to have below average penises are more likely to assume the anal receptive role and to fare significantly worse on psychosocial measures, then it is essential to develop health education programs that dualistically address the HIV, STI, and other health risks that accompany anal receptive sex (e.g., encouraging routine checks for anal STIs), and that also focus on improving psychosocial well being. Finally, these data highlight the need to challenge the culturally ingrained notion that “bigger is better,” as the social consequences of these messages may have lasting negative psychosocial and sexual health effects on the individuals receiving them.



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## Appendix 1. The Gay Life Satisfaction Scale, $\alpha = .75$

Coded: 1 Strongly Disagree

2 Disagree

3 Agree

4 Strongly Agree

About being gay/bisexual ...

In most ways, my life as a gay/bi person is fulfilling

I think as a gay/bi person I worry about being alone in the future (Reverse coded)

The conditions of my life as a gay/bi person are just as good as any one else's

Being gay/bi is a difficult life experience (Reverse coded)

I will be able to get all the important things I want in my life as a gay/bi person

My life as a gay/bi person could be happier (Reverse coded)

I am satisfied with my life as a gay/bi person

**Table I**

## Sample characteristics (N = 1065)

	N	%
Age		
18–29	325	30.5
30–39	300	28.2
40–49	257	24.1
50+	183	17.2
Race and Ethnicity		
White/Caucasian	618	58.0
African American	152	14.3
Latino	177	16.6
Asian/Pacific Islander	62	5.8
Multiracial and “other”	56	5.3
Education		
Some college or less	265	24.9
College degree	438	41.1
Graduate school	298	28.0
HIV status		
Positive	133	12.5
Negative	794	74.6
Untested	105	9.9
Refused	33	3.1
Sexual identity		
Gay	950	89.2
Bisexual	100	9.4
Straight, has sex with men	3	0.3
Queer, has sex with men	12	1.1
Sexual Role, Positioning		
Top (anal insertive)	354	33.2
Versatile (insertive, receptive)	397	37.3
Bottom (anal receptive)	270	25.4
Refused	44	4.1
Perceived penis size		
Below average	73	7.1
Average	574	56.0
Above or way above average	378	36.9
Lied about penis size		
Never	654	64.1
Rarely	238	23.3
Sometimes, often, most/all of the time	128	12.5
Satisfaction with penis size		
Wish it were smaller	14	1.4

	<i>N</i>	%
I'm satisfied	664	65.1
Wish it were bigger	342	33.5

**Table II**

Perceived penis size and sexually transmitted infections\*

	Perceived penis size								Fisher's exact <i>p</i>	Difference
	Below average (A)		Average (B)		Above average (C)					
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Anal/genital warts (HPV)										
Ever, <i>n</i> = 157	10	14.1	82	14.8	65	17.9		17.9	ns	--
Last year, <i>n</i> = 38	1	10.0	15	20.3	22	36.1		36.1	<.05	C > A, B
Anal/genital herpes (HSV-2)										
Ever, <i>n</i> = 61	5	7.0	37	6.7	19	5.3		5.3	ns	--
Last year, <i>n</i> = 20	2	40.0	8	25.0	10	62.5		62.5	<.05	C > B
Crabs, scabies, lice										
Ever, <i>n</i> = 374	23	31.9	201	36.0	150	40.9		40.9	ns	--
Last year, <i>n</i> = 43	0	0.0	24	12.8	19	13.6		13.6	ns	--
Gonorrhea/Chlamydia/UTI										
Ever, <i>n</i> = 208	13	18.1	100	17.9	95	26.2		26.2	<.001	C > B
Last year, <i>n</i> = 36	0	0.0	16	17.2	20	22.5		22.5	ns	--
Hepatitis B										
Ever, <i>n</i> = 72	7	9.9	38	6.8	27	7.5		7.5	ns	--
Last year, <i>n</i> = 9	0	0.0	6	17.1	3	12.0		12.0	ns	--
Hepatitis C										
Ever, <i>n</i> = 32	2	2.8	20	3.6	10	2.8		2.8	ns	--
Last year, <i>n</i> = 13	0	0.0	8	28.6	5	17.9		17.9	ns	--
Syphilis										
Ever, <i>n</i> = 92	6	8.2	45	8.1	41	11.3		11.3	ns	--
Last year, <i>n</i> = 17	0	0.0	7	17.5	10	27.0		27.0	ns	--

\* Percents reported for infections in the last year are nested among those having ever experienced that STI

**Table III**

Perceived penis size and sexual positioning

	Perceived penis size					
	Below average		Average		Above average	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Top (anal insertive)	21	29.2	174	30.7	155	41.6
Versatile (anal insertive and receptive)	23	31.9	229	40.5	141	37.8
Bottom (anal receptive)	28	38.9	163	28.8	77	20.6
Total	72	100	566	100	373	100

$\chi^2(4) = 19.7, p < .001, \gamma = -.20$



**Table IV**

Perceived penis size and socio-psychological well being.

	Perceived penis size											Bonferroni post hoc	
	Scale properties, full sample, <i>N</i> = 1065			Below average (A)			Average (B)			Above average (C)			<i>F</i> (2, 1022)
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Prevention scale	25.1	5.88	9 to 40	27.0	5.84	25.0	5.99	25.0	5.69	25.0	5.69	3.85*	A > B, C
Promotion scale	31.3	5.82	9 to 40	29.9	5.85	31.2	5.84	31.9	5.50	31.9	5.50	4.57**	A < C
Gay-related stigma scale	18.3	6.97	10 to 40	20.1	7.88	18.0	6.89	18.2	6.68	18.2	6.68	3.19*	A > B
Gay life satisfaction scale	23.0	4.62	8 to 32	20.8	4.68	23.1	4.68	23.4	4.47	23.4	4.47	9.53***	A < B, C

\* *p* < .05,

\*\* *p* < .01,

\*\*\* *p* < .001