

Body Image Satisfaction in Heterosexual, Gay, and Lesbian Adults

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Received: 12 July 2007 / Revised: 2 March 2008 / Accepted: 2 March 2008 / Published online: 19 August 2008
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Abstract Does the prevalence and degree of body dissatisfaction differ among heterosexual and homosexual men and women? Some theorists have suggested that, compared to their heterosexual peers, gay men are at greater risk for body dissatisfaction and lesbians at lower risk. Past studies examining this issue have generally relied on small samples recruited from gay or lesbian groups. Further, these studies have sometimes produced conflicting results, particularly for comparisons of lesbian and heterosexual women. In the present research, we compared body satisfaction and comfort with one's body during sexual activity among lesbian women, gay men, heterosexual women, and heterosexual men through two large online studies ($N_s = 2,512$ and $54,865$). Compared to all other groups, heterosexual men reported more positive evaluations of their appearance, less preoccupation with their weight, more positive effects of their body image on their quality of life and the quality of their sex life, more comfort wearing a swimsuit in public, and greater willingness to reveal aspects of their body to their partner during sexual activity. Few significant differences were found among gay men, lesbian women, and heterosexual women. Many gay men (42%) reported that their feelings about their body had negative effects on the quality of their sex life, as did some lesbian women (27%), heterosexual women (30%), and heterosexual men (22%). Overall, the findings supported the hypothesis that gay men are at greater risk than heterosexual men for experiencing body dissatisfaction. There

was little evidence that lesbian women experience greater body satisfaction than heterosexual women.

Keywords Body image · Body mass index · Quality of sex life · Sexual orientation

Introduction

The way people feel about their bodies has a powerful effect on their daily lives and their ability to have a fulfilling and pleasurable sex life (Faith & Schare, 1993; Wiedeman, 2000, 2002). Worrying about being too fat or feeling self-conscious about one's stomach or breasts can diminish sexual confidence and enjoyment. Beyond the bedroom, strong feelings of body dissatisfaction can lead to unhealthy dieting; the abuse of laxatives, appetite suppressants, and steroids; and life-threatening eating disorders (e.g., Polivy & Herman, 2002; Stice & Shaw, 2002). Studies have consistently found that heterosexual women are more likely to experience body dissatisfaction than heterosexual men (Feingold & Mazzella, 1998; Frederick, Forbes, Grigorian, & Jarcho, 2007). Much less research has examined the experiences of lesbians and gay men.

Two important issues about body dissatisfaction merit further research. First, how are sexual orientation and gender associated with body dissatisfaction? Are possible group differences moderated by body weight (i.e., by body mass index [BMI])? Second, what is the impact of body dissatisfaction on overall quality of life and comfort with one's body during sexual activity? To answer these questions, we first summarize available research on the association of sexual orientation and gender to body dissatisfaction. We then use two large Internet samples of heterosexual men, gay men, lesbian women, and heterosexual women to examine group differences in body dissatisfaction and the association of body dissatisfaction to quality of life and sexual activity.

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Sexual Orientation, Gender, and Body Dissatisfaction

Lesbian and Heterosexual Women

Media images portray very slender bodies as the ideal body type for women (e.g., Spitzer, Henderson, & Zivian, 1999), and many women report dissatisfaction with their bodies, particularly their weight (Forbes et al., 2005). It is unclear, however, whether lesbian and heterosexual women are equally likely to experience negative attitudes about their bodies.

Some theorists have proposed that lesbian culture buffers against feelings of body dissatisfaction (Brown, 1987; Herzog, Newman, Yeh, & Warshaw, 1992). By choosing same-sex partners, lesbians challenge a dominant cultural ideal and may also reject cultural messages about how women's bodies should look. A commitment to feminist values may also encourage some lesbians to de-emphasize physical appearance. As a result, lesbian communities may promote an acceptance and celebration of women of all shapes and sizes (Pitman, 1999). In contrast, others have proposed that lesbians, like heterosexual women, feel pressure to conform to the dominant cultural body ideals (e.g., Dworkin, 1988; Rothblum, 1994). In growing up and as adults, both lesbian and heterosexual women are exposed to pervasive media images of idealized female beauty and are judged on their appearance. As a result, lesbian women may experience the same degree of body dissatisfaction as heterosexual women.

Available research provides only limited support for the hypothesis that lesbians experience less body satisfaction than heterosexual women. A recent meta-analysis examined 16 studies comparing the body dissatisfaction of lesbian and heterosexual women (Morrison, Morrison, & Sager, 2004). These studies included a total of 1,448 lesbians or an average of 91 lesbians per study, and a total of 1,391 heterosexual women or an average of 87 per study. The meta-analysis found that lesbian women reported significantly higher body satisfaction than heterosexual women but the effect size for this difference was very small (Cohen's $d = .12$). In a subset of studies where lesbian and heterosexual women were equivalent in their body mass index score, the effect size for the difference was larger ($d = .22$) but still small. Thus, existing research finds lesbians to be slightly more satisfied with their bodies than heterosexual women. Additional research with larger and more diverse samples would be valuable.

Gay and Heterosexual Men

For men, media images portray fit and muscular bodies as most valued (e.g., Frederick, Fessler, & Haselton, 2005). Are gay and heterosexual men equally likely to be satisfied with their bodies? It has been suggested that the general cultural emphasis on male physical attractiveness, especially thinness and muscularity, is heightened in gay communities (Silberstein, Mishkind,

Striegel-Moore, Timko, & Rodin, 1989; Yelland & Tiggemann, 2003). Gay men may feel pressure to appear fit and muscular in order to combat stereotypes depicting gay men as feminine and to signal health during the continuing AIDS epidemic (Drummond, 2005; Shernoff, 2002). Further, research on mate preferences finds that heterosexual and gay men both consider physical attractiveness to be more important in a partner than do heterosexual and lesbian women (Bailey, Gaulin, Agyei, & Gladue, 1994). One consequence may be that gay men, who are attracted to relatively more appearance-discriminating men, perceive greater pressure from potential partners to possess an ideal body type than do heterosexual men, who are attracted to less appearance-discriminating women.

A recent meta-analysis examined 20 studies comparing the body satisfaction of gay and heterosexual men (Morrison et al., 2004). The research included 984 gay men, or an average of 49 gay men per study, and 1,397 heterosexual men, or an average of 70 per study. The meta-analysis found that gay men had significantly worse body image than heterosexual men, but the effect size for the difference was relatively small ($d = .29$). The difference between gay men and heterosexual men was larger in studies where the groups were equivalent in BMI scores ($d = .33$) than in studies where gay men had lower BMI scores than heterosexual men ($d = .18$). In six studies that employed the widely used Body Dissatisfaction Subscale of the Eating Disorder Inventory to assess body dissatisfaction, the effect size ($d = .40$) was moderate, with gay men feeling more dissatisfied than heterosexual men. Thus existing research provides reasonable evidence that more gay men than heterosexual men report dissatisfaction with their bodies.

Limitations of Past Research

Sampling Issues

Available research comparing the body satisfaction of heterosexual and homosexual men and women is limited by reliance on small, non-representative samples of gay men and lesbians, often drawn from gay and lesbian interest and community groups. This makes it difficult to assess whether lesbian or gay individuals generally differ from heterosexuals in body dissatisfaction. For example, if participation in the gay male culture is a risk factor for increased body dissatisfaction, then recruiting gay participants primarily from gay community groups may oversample gay men who are particularly likely to be dissatisfied with their bodies.

Further, the potentially important role of BMI on body satisfaction has not been carefully scrutinized. Relatively few studies of sexual orientation and body image have included a measure of BMI. When BMI has been assessed, small sample size has limited the analyses that can be conducted. In particular, if gay male culture emphasizes the importance of being

lean and muscular, then overweight gay men may be particularly dissatisfied with their bodies compared to overweight heterosexual men. In parallel, if the lesbian community provides protection against the thin ideal popular in heterosexual media, then overweight lesbians may be less dissatisfied with their bodies than overweight heterosexual women. Research that assesses both body satisfaction and BMI among larger samples of lesbians and gay men recruited from a more diverse array of sources would be informative.

Quality of Life and Sexuality

Heterosexual adults who report greater body dissatisfaction and more unhealthy eating behaviors also report lower life satisfaction (e.g., Greeno, Jackson, Williams, & Fortman, 1998; McCreary & Sadava, 2001). Further, many heterosexual individuals report that their feelings about their bodies have a negative impact on their overall quality of life (Cash & Fleming, 2002). Unfortunately, the extent to which body dissatisfaction affects life satisfaction for lesbian women and gay men is not known.

The effects of body dissatisfaction may be especially harmful in certain life domains, most notably interactions with a sexual partner. Heterosexual individuals experiencing body dissatisfaction report more distress and anxiety about sex (Berman, Berman, Miles, Pollets, & Powell, 2003), perceive themselves to be less sexually skilled (Holmes, Chamberlin, & Young, 1994), and are less likely to expose their bodies during sex or to experience orgasm (Cash, Maikkula, & Yamamiya, 2004). More research is needed to understand whether the negative impact of body attitudes on sexual enjoyment is widespread or limited to a small percentage of individuals, whether these concerns are more prevalent among heavy individuals, and whether sexual orientation and gender make a difference.

Present Research

The goal of the present research was to compare the degree of body dissatisfaction among heterosexual and homosexual men and women. Comparisons were also made concerning the perceived impact of body dissatisfaction on the individuals' quality of life and sex life. Further, the large size of our second sample enabled us to assess whether differences among these groups were moderated by BMI. For example, are specific subgroups such as overweight gay men at particularly high risk for experiencing body dissatisfaction?

Study 1

This study examined group differences among heterosexual, gay, and lesbian adults on several indicators of body image, including global body satisfaction, preoccupation with weight,

and the perceived impact of one's body image on their overall quality of life. Of particular interest were participants' perceptions about the impact of body concerns on their sex life.

Method

Participants

A brief survey was posted several times between May 2005 and June 2006 on Internet websites created to host research studies (e.g., www.socialpsychology.org), popular classified advertisement websites (e.g., www.craigslist.org), and gay oriented websites (e.g., www.pinksofa.com). We monitored the IP addresses of respondents to check for instances where more than one survey was submitted from a given computer. In addition, the survey asked participants if they had previously responded to the survey, and we eliminated anyone who had done so. The analyzed sample consisted of 2,512 participants who were 18 or older, had not previously participated in the survey, and answered all critical questions about body image and demographic characteristics. Most participants were in their 20s–40s. The sample included 646 heterosexual men (M age = 28.38 yrs, SD = 9.55), 130 gay men (M age = 34.98 yrs, SD = 10.39), 1,619 heterosexual women (M age = 27.05 yrs, SD = 8.85), and 117 lesbian women (M age = 29.59 yrs, SD = 9.62).

Measures

Body Mass Index (BMI) BMI is a standard measure used to estimate an individual's level of body fat, although it can be influenced by other factors including muscularity. BMI is calculated by dividing a person's weight in kilograms by their squared height in meters. The U.S. National Institutes of Health (1998) recommended that BMI scores be interpreted as indicating whether an individual is Underweight (<18.5), Healthy Weight (18.5–24.99), Overweight (25–29.99), or Obese (≥ 30). In our sample, the mean BMI scores were in the slightly overweight range of 25–27. Heterosexual men (M = 26.19, SD = 5.71) and gay men (M = 25.93, SD = 5.34) had similar mean BMI scores. Heterosexual women (M = 25.10, SD = 6.48) had lower BMI scores than lesbian women (M = 27.02, SD = 7.19).

Appearance Evaluation Scale Body satisfaction was assessed by the 7-item Appearance Evaluation Scale from the Multi-dimensional Body-Self Relations Questionnaire (Cash, 2000). It includes such items as "I like my looks just the way they are" and "I like the way I look without my clothes on." Participants responded on a 5-point Likert scale (1 = Definitely Disagree to 5 = Definitely Agree). Scores on each item were averaged to create a mean scale score. Higher scores indicated

better appearance evaluation. The overall Cronbach alpha was high (.90), and the alphas for each group all exceeded .85. In some analyses, we also examined the percentage of individuals whose appearance evaluation scale scores were Low (1.00–2.74), Neutral (2.75–3.25), or High (3.26–5.00).

Overweight Preoccupation Scale The Overweight Preoccupation Scale from the Multidimensional Body-Self Relations Questionnaire (Cash, 2000) contains four items such as “I constantly worry about being or becoming fat” and “I am very conscious of even small changes in my weight.” Participants responded on a 5-point scale (1 = Definitely Disagree to 5 = Definitely Agree), and item scores were averaged to create a mean scale score. Higher scores indicated more preoccupation with weight. The overall Cronbach alpha was high (.84), and the alphas for each group exceeded .79. In some analyses, we examined the percentage of individuals whose overweight preoccupation scale scores were Low (1.00–2.74), Neutral (2.75–3.25), or High (3.26–5.00).

Body Image Quality of Life Inventory This 19-item measure assesses participants’ beliefs about how their bodies affect their lives (Cash & Fleming, 2002). Participants indicated whether their feelings about their bodies had positive, negative, or no effects on various aspects of their lives, including “My day-to-day emotions,” “How confident I feel in my everyday life,” and “How happy I feel in my everyday life.” Participants responded on a 7-point Likert scale (−3 = Negative Effect to +3 = Positive Effect). Scores on all 19 items were averaged to create a mean scale score. Higher scores indicated more positive effects of one’s body image on quality of life. The overall Cronbach alpha was very high (.95), and the alphas for each group exceeded .90. We also examined the percentage of individuals whose mean scale scores indicated that their body attitudes had Negative Effects (−3.00 to −.51), No Effect (−.50 to +.50), or Positive Effects (+.51 to 3.00) on their lives.

Body Image Quality of Sex Life Items Items 11 and 12 of the Body Image Quality of Life Inventory (Cash & Fleming, 2002) asked participants if they believed that their feelings about their bodies affected their sex lives. Specifically, participants rated whether their feelings about their body had a positive, negative, or no effect on “My feelings of acceptability as a sexual partner” and “My enjoyment of my sex life.” These two items were averaged to create a mean scale score (ranging from −3 to +3). Higher scores indicated more positive effects of one’s body image on the quality of one’s sex life. The overall Cronbach alpha was high (.91), and the alphas for each group exceeded .89. We also examined the percentage of individuals whose quality of sex life scores indicated that their body attitudes had Negative Effects (−3.00 to −.51), No Effects (−.50 to +.50), or Positive Effects (+.51 to 3.00) on their sex lives.

Results and Discussion

Before addressing the main goals of this study, we checked for possible differences in BMI scores based on gender or sexual orientation. Previous research (Morrison et al., 2004) demonstrated that group differences in BMI can partially explain differences in body dissatisfaction found between lesbian and heterosexual women and between gay and heterosexual men. We conducted a 2 (Gender) × 2 (Sexual Orientation) between-subjects analysis of variance (ANOVA). Post-hoc tests (LSD) revealed that lesbian women had significantly higher BMI scores than heterosexual women ($M = 27.02$ vs. 25.10 ; $p = .001$; $d = .28$). Heterosexual men had significantly higher BMI scores than heterosexual women ($M = 26.19$ vs. 25.10 ; $p < .001$; $d = .18$). No other comparisons were statistically significant.

To compare body satisfaction and body concerns among heterosexual and homosexual men and women, we conducted a series of 2 (Gender) × 2 (Sexual Orientation) between-subjects ANOVAs. BMI and age were included as covariates to ensure that any differences in body image among the groups could not be attributed to those two factors.¹ These ANOVAs were followed by post-hoc tests (LSD) using $p < .05$ as the criterion for significance. Because of our large samples, even small group differences were statistically significant. Consequently, we report effect sizes for all analyses comparing group means. Cohen (1988) suggested that effect sizes (d) be interpreted as small (.20), medium (.50), and large (.80). Because our goals involved examining differences between specific groups, for example comparing heterosexual and lesbian women, our presentation of results focuses on specific cell means rather than on the omnibus tests.² To facilitate interpretation of the data, we also present the findings in

¹ In these ANOVAs, the df for all main effects and interactions were 1, 2508. The main effects of gender were: Appearance evaluation, $F = 2.1$, ns; Overweight preoccupation, $F = 49.5$, $p < .001$; Body image quality of life, $F = 1.2$, ns. The main effects of sexual orientation were: Appearance evaluation, $F = 2.0$, ns; Overweight preoccupation, $F < 1$; Body image quality of life, $F = 10.6$, $p < .001$. The interactions were: Appearance evaluation, $F = 6.3$, $p = .012$; Overweight preoccupation, $F = 25.9$, $p < .001$; Body image quality of life, $F = 8.8$, $p = .003$.

² Although the primary focus of Study 1 was on group differences in body dissatisfaction, readers may be interested in the intercorrelations among the measures for all four groups (heterosexual and homosexual men and women). Individuals with higher BMIs reported lower appearance evaluation ($r_s = -.38$ to $-.51$), more overweight preoccupation ($r_s = .19$ to $.33$), and more negative impact of body image on quality of life ($r_s = -.27$ to $-.40$) and quality of sex life ($r_s = -.19$ to $-.30$). Participants with higher appearance evaluation scores reported more positive impact of body image on overall quality of life and quality of sex life ($r_s = .59$ to $.68$) and less overweight preoccupation ($r_s = -.40$ to $-.57$). Participants with more overweight preoccupation reported more negative impact of body image on overall quality of life and quality of sex life ($r_s = -.15$ to $-.44$). All correlations were significant at the $p < .05$ level except for the association between BMI and quality of sex life for gay men ($r = -.19$, n.s.).

percentages of individuals experiencing low or negative body image. Because even small differences are statistically significant due to our large sample size, we suggest that differences of 8–10% or greater be interpreted as meaningful.

Comparisons of lesbian and heterosexual women are presented in Table 1. Few significant differences in body satisfaction were found. Lesbian and heterosexual women did not differ significantly in appearance evaluation or in the perceived impact of their body image on their general quality of life. Heterosexual women did, however, report significantly more preoccupation with being overweight; this difference was small to medium in size ($d = .42$). Table 2 presents these comparisons as percentages. Lesbian and heterosexual women were similar in appearance evaluation and in their perceptions of the effects of body image on their general quality of life. However, more heterosexual than lesbian women scored high on overweight preoccupation (40 vs. 26%).

The survey asked women if they believed that their feelings about their body had a positive, neutral or negative effect on their sex life. No significant mean difference was found between lesbian and heterosexual women (Table 1). Nearly half of the women, including 48% of heterosexual women and 47% of lesbian women, reported that their body image had a positive effect on their sex life. Notably, however, over one-fourth of both lesbian women (27%) and heterosexual women (30%) reported that their feelings about their bodies had a negative effect on the quality of their sex lives, indicating that harmful effects of body image on women's sex lives occur in both groups.

Comparisons of heterosexual and gay men are presented in Table 1. Heterosexual men reported significantly better appearance evaluation, more positive effects of their body image on their quality of life, and less preoccupation with weight than gay men. The effect sizes for these differences were small to medium in size ($ds = .31$ to $.44$). An examination of the percentages of men who reported negative body image shows the same pattern (Table 2).

Regarding sexuality, gay men reported that their feelings about their bodies had a more negative effect on their sex lives than did heterosexual men (Table 1). Nearly twice as many gay men as heterosexual men (42 vs. 22%) reported a negative effect (Table 2). These findings indicate that, compared to heterosexual men, gay men were at heightened risk for experiencing body dissatisfaction that interfered with enjoying their sex life.

A noteworthy finding was that, across measures, heterosexual men generally reported significantly better body image than all other groups including gay men, lesbians, and heterosexual women. Most of these differences were small to moderate in size. This pattern was also apparent when the data were expressed in percentages. Compared to the three other groups, fewer heterosexual men scored low on appearance evaluation, were highly preoccupied with being overweight,

or reported that their body image had negative effects on the quality of their life. Two exceptions to this general pattern were found. Heterosexual men did not differ from lesbian women on either mean appearance evaluation or mean effects of body image on the quality of their sex life.

Finally, we examined whether gay men differed from lesbian women and heterosexual women (Tables 1, 2). On general measures of appearance evaluation and the impact of body image on quality of life, no significant differences were found. On more specific measures, two differences emerged. First, gay men reported significantly less overweight preoccupation than did heterosexual women. Second, gay men reported more negative effects of body image on the quality of their sex life than did lesbian or heterosexual women.

Study 2

Study 2 examined whether findings pertaining to gender and sexual orientation from Study 1 held true in a larger sample recruited primarily from MSNBC.com. By conducting secondary analyses of data collected in a poll on a popular news website, we took advantage of a sample that was less likely to be biased by recruiting participants from gay and lesbian oriented websites. In addition, sample 2 was over twenty times larger than sample 1, which permitted a much closer examination of the impact of BMI on body satisfaction. In Study 1, we demonstrated that controlling for BMI scores did not alter the group differences we found. The much larger number of gay and lesbian participants in Study 2 enabled us to compare heterosexual and homosexual individuals within different BMI categories. In particular, we examined whether heavy gay men were at greater risk for body dissatisfaction than heavy heterosexual men, and whether heavy lesbian women were more satisfied with their bodies than heavy heterosexual women. We also examined whether individuals with greater body dissatisfaction and higher BMI scores were less willing to reveal their body to their partner during sex.

Method

A brief 27-item survey was posted on the *MSNBC.com* and *Elle.com* websites in February 2003. Participants were visitors who volunteered to take a "Sex and Body Image Survey." To prevent one individual from responding to the survey multiple times, a software program prevented multiple responses from any given computer. For more details about the survey and other analyses of the heterosexual sample, see Frederick, Peplau, and Lever (2006).³

³ Analyses reported in Frederick, Peplau, and Lever (2006) did not adjust mean scores for age or BMI.

Table 1 Means, SDs, and effect sizes for indicators of body dissatisfaction in Studies 1 and 2

	Comparisons among men				Comparisons among women				Other comparisons							
	Heterosexual men		Gay men		Lesbian women		Heterosexual women		HM vs. LW		HM vs. HW		GM vs. LW		GM vs. HW	
	<i>M</i> (<i>SD</i>)	<i>d</i>	<i>M</i> (<i>SD</i>)	<i>d</i>	<i>M</i> (<i>SD</i>)	<i>d</i>	<i>M</i> (<i>SD</i>)	<i>d</i>	<i>d</i>	<i>d</i>	<i>d</i>	<i>d</i>	<i>d</i>	<i>d</i>	<i>d</i>	
Study 1: Results																
Appearance evaluation	3.35 (0.79)		3.10 (0.81)	.31*	3.23 (0.80)		3.04 (0.80)		.15	.39*	-.16	.08				
Body image quality of life	0.79 (1.14)		0.28 (1.15)	.44*	0.49 (1.14)		0.41 (1.13)		.26*	.33*	-.18	-.11				
Overweight preoccupation	2.11 (1.04)		2.50 (1.07)	-.37*	2.60 (1.05)		3.04 (1.05)		-.47*	-.89*	-.10	-.51*				
Body image quality of sex life	0.69 (1.73)		-.06 (1.74)	.43*	0.53 (1.72)		0.38 (1.73)		.09	.18*	-.34*	-.25*				
Study 2: Overall results																
Self-rated attractiveness	2.59 (0.80)		2.36 (0.70)	.31*	2.23 (.72)		2.17 (0.66)		.47*	.58*	.18*	.28*				
Comfort in a swimsuit	2.16 (0.64)		1.94 (0.59)	.36*	1.69 (.59)		1.76 (0.66)		.76*	.62*	.42*	.29*				
Study 2: Results by BMI																
Self-rated attractiveness																
Underweight	2.45 (0.83)		2.49 (0.70)	-.05	2.86 (0.68)		2.80 (0.76)		-.53	-.44*	-.53	-.42				
Healthy	2.76 (0.66)		2.62 (0.74)	.20*	2.59 (0.76)		2.52 (0.74)		.24*	.34*	.04	.14*				
Overweight	2.51 (0.73)		2.30 (0.82)	.27*	1.97 (0.78)		1.88 (0.74)		.70*	.86*	.40*	.54*				
Obese	1.93 (0.79)		1.55 (0.73)	.50*	1.50 (0.76)		1.45 (0.65)		.57*	.66*	.07	.14*				
Comfort in a swimsuit																
Underweight	1.95 (0.65)		1.86 (0.60)	.14*	2.25 (0.65)		2.23 (0.66)		-.52	-.43	-.72	-.59*				
Healthy	2.29 (0.61)		2.11 (0.66)	.28*	1.83 (0.61)		1.96 (0.59)		.77*	.55*	.45*	.24*				
Overweight	2.09 (0.60)		1.89 (0.66)	.32*	1.59 (0.59)		1.57 (0.54)		.83*	.91*	.47*	.53*				
Obese	1.72 (0.60)		1.46 (0.58)	.44*	1.32 (0.48)		1.36 (0.50)		.64*	.65*	.23	.18				

Note. Higher means indicate better body image for all measures except overweight preoccupation. Response scales were as follows: Appearance Evaluation and Overweight Preoccupation (1 = Definitely Disagree to 5 = Definitely Agree), Body Image Quality of Life and Quality of Sex Life (-3 = Very Negative Effect to +3 = Very Positive Effect), Self-Rated Attractiveness (1 = Unattractive to 4 = Great), and Comfort in a Swimsuit (1 = Uncomfortable to 3 = Good). The means for Study 1 and overall means for Study 2 were adjusted for age and BMI. The means for Study 2 reported within BMI categories were adjusted for age. Effect sizes (Cohen's *d*) are presented for post hoc comparisons. Asterisks indicate statistical significance at $p < .05$ for Study 1 and $p < .001$ for Study 2

Table 2 Percentage of participants reporting indicators of body dissatisfaction in Study 1

	Heterosexual men %	Gay men %	Lesbian women %	Heterosexual women %
Low appearance evaluation	24	32	35	38
High overweight preoccupation	12	25	26	40
Negative effects of body image on quality of life	13	24	24	25
Negative effects of body image on sex life	22	42	27	30

Note. The mean cut-offs for categorizing individuals were: Low Appearance Evaluation (1.00–2.74 on 5-point scale), High Overweight Preoccupation (3.26–5.00 on 5-point scale), and Negative Body Image Quality of Life and Negative Body Image Sex Life (–3.00 to –.51 on scale from –3 to +3)

Participants

A total of 54,865 individuals responded to the online survey and met the eligibility criterion of reporting their age as 18 or older. This sample included 25,714 heterosexual men, 26,963 heterosexual women, 1,523 gay men, and 665 lesbian women between the ages of 18–65. On average, participants were in their mid-30s: Heterosexual men (M age = 36.9 yrs, SD = 11.8), gay men (M = 34.8 yrs, SD = 10.2), heterosexual women (M = 33.5 yrs, SD = 11.1), and lesbian women (M = 32.9 yrs, SD = 11.1). Virtually all participants completed the survey through the *MSNBC.com* website (98%); only 2% used the *Elle.com* website.

Measures

Body Mass Index (BMI) A BMI score was computed for each respondent. Heterosexual men reported the highest BMI (M = 26.6, SD = 4.1) and heterosexual women reported the lowest BMI (M = 24.2, SD = 4.8). Gay men (M = 25.4, SD = 4.2) and lesbian women (M = 25.4, SD = 5.4) fell in between. For some analyses, participants were divided into four BMI categories: Underweight (<18.5), Healthy Weight (18.5–24.99), Overweight (25–29.99), and Obese (\geq 30). The percentages of heterosexual men, gay men, heterosexual women, and lesbian women in each category, respectively, were: Underweight (1, 2, 6, 5%), Healthy (37, 52, 60, 51%), Overweight (43, 32, 21, 22%), and Obese (18, 14, 13, 21%).

Self-Rated Attractiveness Body image was assessed with the item, “How do you feel about your body?” Response options ranged from “I have a great body” = 4 to “I find my body unattractive” = 1. This one-item measure of body image was strongly correlated with the widely-used 7-item Appearance Evaluation scale (Cash, 2000) for both men (r = .75) and women (r = .75) in a sample of 153 college men and 313 college women (Frederick et al., 2006). These strong correlations provided increased confidence in this item as a measure of body satisfaction.

Comfort in a Swimsuit Body image satisfaction was also assessed with the item, “How do you think you look in a

swimsuit?” Response options ranged from “Good; I’m proud/not at all embarrassed to be seen in a swimsuit” = 3 to “So uncomfortable that I avoid wearing one in public” = 1. The correlation between the Appearance Evaluation scale and this item was r = .62 for men and r = .58 for women in the aforementioned study (Frederick et al., 2006), providing increased confidence in this item as a measure of body satisfaction.

Satisfaction with Weight Body fat concern was assessed with the item, “Are you self-conscious about your weight?” Response options were “Yes, I’m too thin,” “Yes, I’m too heavy,” and “No.” The percentages of heterosexual men, gay men, heterosexual women, and lesbian women in each category, respectively, were: Too Thin (7, 12, 2, 3%), Too Heavy (41, 43, 61, 63%), and No (52, 45, 37, 34%). To simplify data presentation, the Too Thin and Too Heavy categories were combined to create a “Dissatisfied with Weight” category.

Body Concealment During Sex Concern with exposing different parts of the body during sexual activity was measured with the item “Do you ever try to hide a least favorite physical feature(s) during sex? Select all that apply.” Response options included Breasts/Chest (“yes, my breasts/chest”), Stomach (“yes, my stomach/spare tire”), Butt/Thighs (“yes, my butt/thighs”), Genitals (“yes, my genitals”), Other (“yes, other”), and “No.” The number of body parts hidden was calculated for each participant.

Results and Discussion

Our analyses focused on comparisons of specific cell means. These comparisons were conducted with a series of between-subject ANOVAs followed by post-hoc tests (LSD).⁴ As in

⁴ In Study 2, we first conducted 2 (male vs. female) \times 2 (heterosexual vs. homosexual) ANOVAs with age and BMI as covariates to compare the groups on self-rated attractiveness and comfort in a swimsuit. All main effects and interactions were significant at p < .001 (F s = 23.0–543.6), and post-hoc (LSD) comparisons were conducted to compare the cell means. Next, we conducted 2 (male vs. female) \times 2 (heterosexual vs. homosexual) \times 4 (underweight, healthy weight, overweight, obese) ANOVAs to examine the possible moderating role that BMI has on gender and sexual orientation differences in self-rated attractiveness

Study 1, lesbians had higher BMI scores than heterosexual women (25.4 vs. 24.2, $p < .001$, $d = .23$). Gay men had lower BMI scores than heterosexual men (25.4 vs. 26.6, $p < .001$, $d = .29$). Consequently, both BMI and age were included as covariates to ensure that any differences in body image among the groups could not be attributed to those two factors. Because our very large sample size provided the power to detect even minuscule effects, we set $p < .001$ as the criterion for statistical significance. Further, we report effect sizes for comparisons of interest. We do not report statistical significance or effect sizes for results presented in percentages because we report many percentages. Because even small differences (e.g., 1–2%) are statistically significant, we suggest that differences of 8–10% or greater be interpreted as meaningful.

Lesbian and heterosexual women did not differ significantly on measures of body satisfaction, replicating the pattern found in Study 1. Lesbian and heterosexual women were similar in mean self-rated attractiveness and comfort in a swimsuit, both overall and within the four BMI categories (Table 1). The one exception was that healthy weight lesbians scored significantly lower than healthy weight heterosexual women on comfort in a swimsuit. As shown in Table 3, discomfort was reported by 28% of healthy weight lesbians compared to 20% of healthy weight heterosexual women. Given the lack of differences on other body image measures, it is not clear whether the swimsuit question tapped general body satisfaction or other concerns such as lesbians' discomfort at being observed by men while in a swimsuit. We also investigated whether heavier-weight lesbians were less dissatisfied with their bodies than heavier heterosexual women, a finding that would be consistent with the hypothesis that lesbian culture buffers women's body image. As shown in Tables 1, 3, there were no differences in self-rated attractiveness, comfort in a swimsuit, or overall dissatisfaction between lesbian and heterosexual women in the overweight and obese categories.

Finally, we examined women's concerns about exposing their bodies to partners during sex. As shown in Table 3, there was a small tendency for more heterosexual women than lesbian women to report hiding at least one aspect of their bodies during sex (52 vs. 44%), especially their stomach. Lesbian women who were overweight or obese were

less likely to hide their stomach during sex compared to overweight and obese heterosexual women. This moderating effect of BMI, however, was not evident for any other measure of concern with body exposure during sex. Thus, neither measures of body satisfaction nor concern with body exposure during sex provided consistent evidence that heavier lesbian women experienced greater body satisfaction than heavier heterosexual women.

Gay men reported more body dissatisfaction than did heterosexual men, consistent with the findings in Study 1. The mean differences between gay and heterosexual men in self-rated attractiveness ($d = .31$) and comfort in a swimsuit ($d = .36$) were small to medium in size (Table 1). As shown in the percentages in Table 3, gay men were more likely than heterosexual men to report feeling unattractive (18 vs. 11%) and uncomfortable wearing a swimsuit in public (26 vs. 16%).

Were heavier gay men especially likely to be dissatisfied with their bodies relative to heavier heterosexual men? As shown in Table 1, mean differences in satisfaction between gay and heterosexual men increased with higher BMI scores. Among underweight men, there were no significant differences. Among healthy and overweight men, the differences were significant but small in effect size. Among obese individuals, the differences were significant and medium in size. Compared to heterosexual men, greater percentages of gay men reported being unattractive, uncomfortable wearing a swimsuit in public, and dissatisfied with their weight (Table 3). For both self-rated attractiveness and comfort in a swimsuit, the difference in the percentage of gay and heterosexual men was generally small in the lower BMI categories and larger in the higher BMI categories. For the measure of dissatisfaction with weight, the gay-heterosexual differences also increased from the lower BMI categories to the overweight categories. However, in the obese category, the difference was smaller, probably reflecting ceiling effects since the large majority of both heterosexual and gay men were dissatisfied.

Turning to sexuality, gay men were twice as likely as heterosexual men to report hiding at least one aspect of their body during sex (39 vs. 20%, Table 3). Men's tendency to hide a body part increased markedly across weight categories but the difference between gay and heterosexual men was found at every weight level. The body part that men were most likely to hide during sex was their stomach, particularly for obese gay men (40%) and obese heterosexual men (24%).

Consistent with Study 1, heterosexual men scored higher than all other groups on both self-rated attractiveness and comfort in a swimsuit (Table 1). This pattern also emerged when comparing the percentage of individuals who felt unattractive, uncomfortable wearing a swimsuit in public, dissatisfied with their weight, and who hid any body parts and/or their stomach during sex (Table 3). This pattern was generally consistent across the healthy weight, overweight, and obese groups. Two exceptions were found. First, under-

Footnote 4 continued

and comfort in a swimsuit. Age was included as a covariate. In the analyses of self-rated attractiveness, all main effects and interactions were significant at $p < .001$ (F s = 19.5–675.5) except for the main effect of sexual orientation ($F = 3.9$, $p = .049$), the interaction of sexual orientation and BMI ($F = 3.2$, $p = .022$), and the three-way interaction among gender, sexual orientation, and BMI ($F = 2.5$, $p = .056$). For comfort in a swimsuit, all main effects and interactions were significant at $p < .001$ (F s = 12.2–336), except for the interaction of sexual orientation and BMI ($F = 1.7$, ns), and the three-way interaction among gender, sexual orientation, and BMI ($F = 3.0$, $p = .028$). Post-hoc tests (LSD) were conducted to compare individual cells.

Table 3 Percentage of participants reporting indicators of body dissatisfaction within BMI categories in Study 2

	Heterosexual men %	Gay men %	Lesbian women %	Heterosexual women %
Unattractive				
Underweight	13	9	3	6
Healthy	3	7	8	9
Overweight	8	18	30	34
Obese	33	58	62	63
Total sample	11	18	25	21
Uncomfortable in swimsuit				
Underweight	24	26	11	13
Healthy	8	17	28	20
Overweight	14	28	46	45
Obese	36	59	65	68
Total sample	16	26	40	31
Dissatisfied with weight				
Underweight	62	71	39	33
Healthy	28	38	47	49
Overweight	50	67	90	87
Obese	83	91	94	96
Total sample	48	55	66	63
Hides body part during sex				
Underweight	18	34	31	42
Healthy	16	34	42	48
Overweight	21	44	43	60
Obese	29	50	54	63
Total sample	20	39	44	52
Hides stomach during sex				
Underweight	4	3	6	10
Healthy	2	5	14	15
Overweight	16	37	33	47
Obese	24	40	40	54
Total sample	14	28	27	34
Hides butt/thighs during sex				
Underweight	4	3	16	10
Healthy	2	5	14	15
Overweight	1	3	12	16
Obese	2	7	16	16
Total sample	2	5	13	15
Hides breast/chest during sex				
Underweight	3	14	11	17
Healthy	1	3	7	10
Overweight	1	3	7	5
Obese	2	8	6	5
Total sample	1	4	7	9
Hides genitals during sex				
Underweight	6	6	6	8
Healthy	4	5	6	4
Overweight	3	3	4	3
Obese	4	10	6	3
Total sample	4	5	6	4

Note. Very small differences (1–2%) are statistically significant because of our very large sample size. We suggest that group differences of 8–10% be considered potentially meaningful. Individuals were defined as feeling “unattractive” if they marked “I find my body unattractive” on the self-rated attractiveness variable. They were defined as “uncomfortable in a swimsuit” if they marked “So uncomfortable that I avoid wearing one in public” on the comfort in a swimsuit variable. They were defined as dissatisfied with their weight if they checked either “too thin” or “too heavy”

weight heterosexual men, who likely do not exhibit the muscular ideal prized in men, reported lower body satisfaction than underweight women, who approximate the popular slender ideal. Second, there were no differences among the groups in hiding genitals during sex.

Finally, we investigated whether gay men differed from lesbian and heterosexual women in body concerns. In Study 2, this depended on the specific body image measure and the men's body fat level (see Table 1). Overall, gay men reported significantly better self-rated attractiveness and comfort in a swimsuit than did heterosexual and lesbian women, with effect sizes ranging from .18 to .42. However, analyses within BMI groups showed a more complex pattern. Among overweight and obese individuals, gay men scored significantly higher on self-rated attractiveness than did heterosexual and lesbian women. A similar pattern was found for comfort in a swimsuit, although only the comparison of overweight gay men versus lesbians reached statistical significance. Among healthy weight individuals, the groups were similar in self-rated attractiveness. Healthy weight gay men reported more comfort in a swimsuit than lesbian and heterosexual women, although the difference was small and significant only for lesbians. Data on underweight individuals must be viewed with caution because this sample included only 35 underweight gay men and 36 underweight lesbians. As shown in Table 1, underweight men (both gay and heterosexual) reported lower self-rated attractiveness than underweight women (both lesbian and heterosexual). This is a reversal of the general pattern for men to report greater body satisfaction than women. A similar pattern occurred for comfort in a swimsuit, although it did not reach statistical significance. These data highlight the importance of taking weight into consideration when examining the role of gender and sexual orientation in body image.

General Discussion

The goals of this research were to assess gender, sexual orientation, and BMI differences in body dissatisfaction and the perceived impact of body attitudes on an individual's quality of life and sex life. Overall, substantial numbers of heterosexual and homosexual men and women reported body dissatisfaction. Nonetheless, our findings highlight important differences and similarities in the body image concerns of heterosexual men, gay men, lesbian women, and heterosexual women. Before turning to a discussion of our major findings, we consider both the limitations and strengths of this research.

Limitations and Strengths

These two studies provided a rare opportunity to examine correlates of body image dissatisfaction among large samples

of heterosexual and homosexual men and women. Limitations of the study, however, should be mentioned. To increase participation rates, the surveys were necessarily short. Study 2 was based on secondary analyses of an existing data set. Although the sample size was large, the survey was limited in scope; it included only single-item measures of key variables and did not access factors that may explain differences among heterosexual and homosexual women and men. Possible recruitment bias should also be mentioned. In Study 1, some individuals were recruited from gay-oriented websites, which may have led to an oversampling of individuals who were strongly affiliated with the gay or lesbian community and more open about their sexual orientation. If true, this should have made it easier to find support for hypotheses about the impact of gay and lesbian cultural values on body image. In fact, Study 1 did not support the hypothesis that lesbians are at reduced risk for body dissatisfaction, but did find that gay men are at heightened risk. Sampling bias was unlikely to be a limitation of Study 2, however, where gay and lesbian participants were recruited from one of the country's most popular news websites and were not necessarily part of a gay community. Despite differences in items and recruitment, findings from Study 2 replicated the pattern found in Study 1, adding confidence to our conclusions about sexual orientation and body satisfaction.

Although our samples were large, they were not nationally representative. For example, people with higher socioeconomic status (SES) tend to be somewhat overrepresented in Internet research, although the SES distributions in online studies are reasonably bell-shaped and include participants from a broad range of backgrounds and geographic locations (Gosling, Vazire, Srivastava, & John, 2004). Further, differences between the demographics of Internet users and non-users have been diminishing over time as Internet use becomes more widespread, and the percentage of women, minorities, and older individuals using the Internet increases (Pew, 2005).

Several strengths of the current research are noteworthy. Both studies recruited samples that were substantially larger and more heterogeneous than previous studies of body image, which have typically relied on small convenience or college student samples. When small minority groups such as lesbians and gay men are the focus of inquiry, the enormous reach and popularity of web surveys can yield a significant advantage over scientific sampling. For example, the landmark National Health and Social Life Survey (NHSL; Laumann, Gagnon, Michael, & Michaels, 1994) of sexual behavior included only 16 self-identified lesbians (out of 1,732 women) and only 28 self-identified gay men (out of 1,401 men). In our Study 2, four percent of respondents self-identified as gay or lesbian, only slightly larger than the NHSL proportion. But in our sample, this yielded over 2,000 homosexual respondents. Recruiting this unusually large gay and lesbian sample permitted detailed examinations of the effects of gender, sexual orientation, and BMI on body satisfaction.

Collecting personal information via the Internet, in contrast to face-to-face and telephone interview protocols, provided considerable protection of anonymity and allowed individuals to participate from the privacy of their home or work place. It has been shown that respondents are more willing to reveal sensitive and highly personal information on a computer than in face-to-face interviews or even traditional pen-and-paper surveys (Cooper, Scherer, Boies, & Gordon, 1999; Ross, 2005). This is especially important when conducting research with participants from stigmatized groups: closeted gay men and lesbian women may be more willing to participate in anonymous online studies than in research requiring interaction with research staff. Consequently, our samples may include a wider range of gay and lesbian individuals than studies based on conventional methodology.

Are Lesbians at Reduced Risk for Body Dissatisfaction?

A central question guiding this research was whether lesbians are less likely than heterosexual women to be unhappy with their bodies. It has been suggested that lesbians may be protected from pervasive cultural messages about the ideal female body by lesbian cultural values, feminist ideology, and not needing to attract male partners (e.g., Brown, 1987; Pitman, 1999; Rothblum, 1994). A recent meta-analysis of available research on this issue found a small but significant difference, with lesbians reporting higher body satisfaction than heterosexual women. This difference was somewhat larger in studies controlling for BMI. Due to limitations of available studies, however, most notably reliance on small convenience samples, additional research was warranted.

The current research used substantially larger samples and included a widely used measure of weight (BMI). We found little support for the hypothesis that lesbian women are more satisfied with their bodies than are heterosexual women when controlling for BMI. In Study 1, lesbian and heterosexual women did not differ in their self-assessment of their appearance or their beliefs about how their body image affected their general quality of life. Nor did lesbian and heterosexual women differ in the perceived effects of body image on the quality of their sex life. Only one significant difference was found: a strong preoccupation with weight was more common among heterosexual women (40%) than among lesbian women (26%).

Study 2 used a much larger sample recruited from a popular news website. A unique strength of our large sample size was our ability to conduct systematic comparisons of lesbian and heterosexual women within underweight, healthy weight, overweight and obese subgroups. Few significant differences were found. Overall, lesbian and heterosexual women did not differ in mean self-rated attractiveness or comfort in a swimsuit, and this pattern was found among all but one BMI subgroup. For lesbians as well as heterosexual women, self-rated attractiveness and comfort in a swimsuit

were highest among underweight women and decreased with increasing BMI scores. We found no evidence that overweight lesbians felt better about their bodies than did overweight heterosexual women.

In sum, our data cast serious doubt on the hypothesis that lesbians as a group are at lower risk for body dissatisfaction than heterosexual women. Our findings are consistent with the hypothesis that all women, regardless of sexual orientation, are exposed to powerful cultural messages about ideal physical appearance and may come to adopt these cultural values (Dworkin, 1988). Rothblum (1994) noted that “most lesbians work and socialize with heterosexual people and are influenced by appearance norms in the media” (p. 85). Unfortunately, research actually documenting lesbians’ beliefs about physical appearance and their ideals for beauty is currently lacking. Another avenue for future research would be investigations of possible differences in appearance norms among contemporary lesbian subcultures (e.g., Moore, 2006) and the impact of these norms on women’s body satisfaction. Finally, it is widely assumed that the desire to attract and retain a male partner contributes to body image concerns among heterosexual women. The finding that lesbians (who desire female partners) and heterosexual women (who seek male partners) are similar in body satisfaction raises questions about the relative importance of attracting a mate versus adhering to broader cultural ideals of attractiveness for women’s body satisfaction. Investigations of this issue should examine whether self-identified lesbians who have had more extensive romantic/sexual experiences with men differ from lesbians whose romantic/sexual partners have been primarily or exclusively women.

Are Gay Men at Higher Risk for Body Dissatisfaction?

A second question guiding this research was whether gay men are more likely than their heterosexual peers to experience body dissatisfaction. This difference might occur because of pressures in contemporary gay male communities to be physically fit and attractive (Shernoff, 2002; Silberstein et al., 1989; Yelland & Tiggemann, 2003). It has also been noted that gay men, like heterosexual women, seek to attract male partners who typically value good looks (Bailey et al., 1994). This may increase gay men’s concerns with their physical appearance. A recent meta-analysis of 20 studies comparing gay and heterosexual men’s body satisfaction found support for the hypothesis that gay men experience greater body dissatisfaction.

Our research provided an opportunity to examine this issue in two large samples. Further, the very large sample size in Study 2 permitted us to assess possible differences between gay and heterosexual men across the spectrum of weight categories. In both samples, the majority of men, both heterosexual and gay, reported being satisfied with their bodies. Nonetheless, on virtually all measures of body image, a gre-

ater percentage of gay men than heterosexual men were discontent. In Study 1, gay men evaluated their appearance less favorably, were more preoccupied with weight, and believed that their body image had more negative effects on the quality of their life. In Study 2, gay men had significantly lower mean BMI scores than did heterosexual men. Fewer gay men than heterosexual men had BMI scores in the overweight and obese categories (46 vs. 61%). Nonetheless, gay men rated themselves lower on attractiveness and reported less comfort in a swimsuit. This was true across weight categories, but the size of the gay-heterosexual difference increased at higher BMI levels.

In summary, we found that heterosexual men were the group most likely to feel good about their bodies. Compared to their heterosexual peers, gay men were at higher risk of body dissatisfaction. In future research, it will be informative to expand the measures used to assess men's body satisfaction. In particular, it may be valuable to investigate men's concerns with muscularity, which has been identified as an important aspect of male attractiveness and body image (Frederick et al., 2007; Frederick & Haselton, 2007; Tiggemann, Martins, & Kirkbride, 2007). It will also be important to assess the impact of factors hypothesized to increase gay men's body dissatisfaction including the appearance norms of gay male subcultures, gay men's personal standards for physical attractiveness, and gay men's beliefs about the qualities that other men seek in a romantic or sexual partner.

Body Dissatisfaction and Quality of Sex Life

Body image concerns interfered with sexual enjoyment for many individuals. Substantial proportions of gay men (42%), heterosexual women (30%), lesbian women (27%), and heterosexual men (22%) reported that their feelings about their body had negative effects on the quality of their sex lives. Body image concerns led some individuals to attempt to hide at least one part of their body from their partner during sex—a pattern reported by 52% of heterosexual women, 44% of lesbian women, 39% of gay men, and 20% of heterosexual men. Across all groups, individuals with higher BMIs were more likely to hide at least one aspect of their body during sex, probably reflecting the stigma faced by overweight individuals in the United States. These findings highlight the potentially harmful effects of social pressures to attain cultural ideals for physical attractiveness on sexual well-being.

On a more positive note, a substantial percentage of individuals reported that their feelings about their body had a positive effect on their sex life. This was true for heterosexual men (52%), heterosexual women (48%), lesbian women (47%), and gay men (43%). Further, a majority of heterosexual men (80%) and gay men (61%) did not attempt to conceal any aspects of the body during sex; the same was

true for approximately half of lesbian women (56%) and heterosexual women (48%).

Taken together, these two studies have advanced our knowledge about the significant role of gender, sexual orientation and weight (BMI) in body dissatisfaction. Future research is needed to identify the psychological and social mechanisms that determine body image among heterosexual and homosexual women and men. An important implication of our findings is that body image problems can detract from sexual enjoyment and therefore finding ways to foster appreciation of one's body should be part of efforts to promote a healthy and happy sex life.

Acknowledgements We thank *Elle* magazine for access to the data from the *ELLE/msnbc.com Sex and Body Image Survey* and Carol Edwards, who helped to create the database. We gratefully acknowledge the financial support provided to David Frederick by the UCLA Graduate Division; the Center for Culture, Brain, and Development; the Departments of Psychology and Communication Studies; and National Institute of Health Grant No. 1F31MH072384-01. Thanks to Courtney Borden, Youssef Boroumand, Beth Daniels, Brenda Duarte, Yael Filossof, Adam Fingerhut, Andrew Galperin, Andrea Niles, Danny Osborne, Taylor Rhoades, Kelly Turner, and Proud Usacharoenporn for helpful comments on earlier drafts of this article. We are also grateful for the helpful comments by anonymous reviewers for this journal.

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