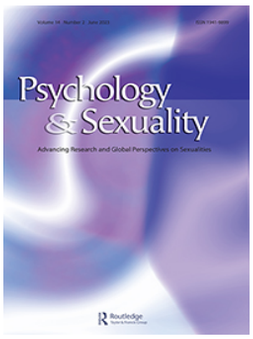

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The Effects of Body Esteem Dimensions on Sexual Esteem in Men

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ABSTRACT

We examined the relationship between men's perceptions of their bodies and how they see themselves sexually. The goals of this study were to explore the following: (1) the relationship between dimensions of body esteem and sexual esteem, (2) the influence of adherence to male gender norms on the relationship between body esteem and sexual esteem, (3) the influence of body-focused anxiety on the relationship between body esteem and sexual esteem. In a convenience sample of 298 male participants (M_{age} = 32.34; SD = 13.34), we found that sexual attractiveness, upper body strength, and physical condition predicted sexual esteem, and that male gender norms and body image anxiety moderated this relationship. Exploratory items of body esteem for the jaw, wrists, height, and nose also significantly predicted sexual esteem. Given our findings of the role of various facets of body esteem in predicting sexual esteem, and the moderating effects of endorsement to male gender norms and body image anxiety on healthy sexual esteem, we maintain the importance of addressing these issues in the development of psychosocial, clinical, and sexual education programmesfor men, particularly in settings where men grapple with body and sexual esteem, and the implications of their masculinity.

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Body image; body image anxiety; gender norms; masculinity; sexual esteem

Body esteem is defined broadly as one's self-evaluation of their body (Frost et al., 2018). Extant research on body esteem has disproportionately focused on women, given the widespread misconception that men do not experience body esteem issues (Burlew & Shurts, 2013; MacNeill et al., 2017). This misconception is particularly concerning given that men now report more pressure to conform to a particular body type than they have in the past. Increasing evidence suggests that men engage in social media comparison similarly to women (Dakanalis et al., 2014; Fiske et al., 2014; McCabe & McGreevy, 2010). Indeed, up to 71% of men are unsatisfied with their body fat level, 90% of U.S. undergraduate men do not feel they are adequately muscular, and up to 60% of men report overall body dissatisfaction (Fiske et al., 2014; Frederick et al., 2007).

Body esteem has been theorised to manifest in three primary dimensions for men, which include sexual attractiveness, upper body strength, and physical condition; these dimensions are interrelated, distinct, and gender specific (Frost et al., 2018). Given these specific dimensions of men's body esteem, it is perhaps unsurprising that low body esteem in men is associated with increased steroid/drug use, excessive exercise, emotional dysregulation, depression, loneliness, eating disorders, and increased comparison to media/social representations of ideal bodies (Brewster et al., 2017; Bucchianeri et al., 2014; Cafri et al., 2002; Chaney, 2008; Cunningham et al., 2016; Dakanalis & Riva,

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2013; Doyle & Engeln, 2014; Hall, 2014; Hobza et al., 2007; Parent & Moradi, 2011; Ralph-Nearman & Filik, 2018).

Sexual Dimensions of Body Esteem

Engagement in sexual activity is associated with heightened body esteem among men, suggesting the importance of sexuality constructs in evaluations of male body esteem (Cash et al., 2004; Frederick et al., 2007; Griffiths et al., 2015; Maas & Lefkowitz, 2015). Within the context of sexual encounters, low body esteem may be related to decreased self-perceived sexual desirability (i.e. *sexual esteem*; Cash et al., 2004), defined as 'positive regard for and confidence in the capacity to experience one's sexuality in a satisfying and enjoyable way' (Snell & Papini, 1989, p. 3). As with body esteem, much existing research on sexual esteem has focused on women (Maas & Lefkowitz, 2015). However, men's sexual esteem may influence their behaviour in important ways. For instance, men with higher sexual esteem often engage in riskier sexual behaviour (e.g. lack of condom or contraception use) than men with lower sexual esteem (Maas & Lefkowitz, 2015).

Given the potential relationship between body esteem and sexual esteem, the present study explored how men's body esteem influences sexual self-perception; specifically, how body esteem may affect sexual esteem in men through the lens of social comparison theory. Though, as noted, some previous research has examined the link between body esteem and sexual esteem (Frost et al., 2018), this relationship has yet to be evaluated when accounting for the potential moderating influence of male gender norm endorsement or body-focused anxiety while simultaneously controlling for the effects of precarious manhood beliefs and engagement in sexual activity (Frost et al., 2018; Maas & Lefkowitz, 2015). Evaluating the relationship between body esteem and sexual esteem under these conditions allows for a more extensive and holistic examination of our current understanding of male body image (e.g. Cafri et al., 2005), including exploration of whether conformity to masculine norms and body image anxiety impact men's evaluation of their bodies in sexual contexts.

Theoretical Model

Both biological and social factors are essential when explaining the emergence of body esteem issues in men. Although we did not integrate biological factors into this study, it is no less important when explaining the theoretical relationship between body esteem and sexual esteem. Biological factors give individuals the body into which they are born, which is evaluated by societal standards. Society not only influences how a man's bodily appearances are regulated (e.g. cultural norms surrounding food intake; Hall, 2014), but also attitudes towards one's body relative to others (e.g. bodily standards influenced by parents, peers, and the media; Cafri et al., 2005). These social factors may be associated with how men use their bodies to fulfill masculine norms, how they perceive their bodies in relation to their sexual experiences, and whether they experience body image anxiety. Men may rely on social comparison to understand the requirements of conforming to masculine norms – that is, conforming to an ideal male body type and achieving a desired sex life (Bucchianeri et al., 2014; Maas & Lefkowitz, 2015). Social body comparison can contribute to body image anxiety, which is associated downstream with lower body esteem (Cafri et al., 2005); lowered body esteem has been associated with lower psychological functioning and lower sexual esteem (Cafri et al., 2005; Frost et al., 2018).

To visualise how biological factors, social factors, sexual activity, precarious manhood beliefs, male gender norms, and body image anxiety interact with body esteem and sexual esteem, we hypothesised a model adapted from Cafri et al. (2005; see, Figure 1).

Social Factors Influencing Body Image

Social comparison theory proposes that people desire a reference when processing their current state of being and often compare themselves with others who are perceived as 'better' than

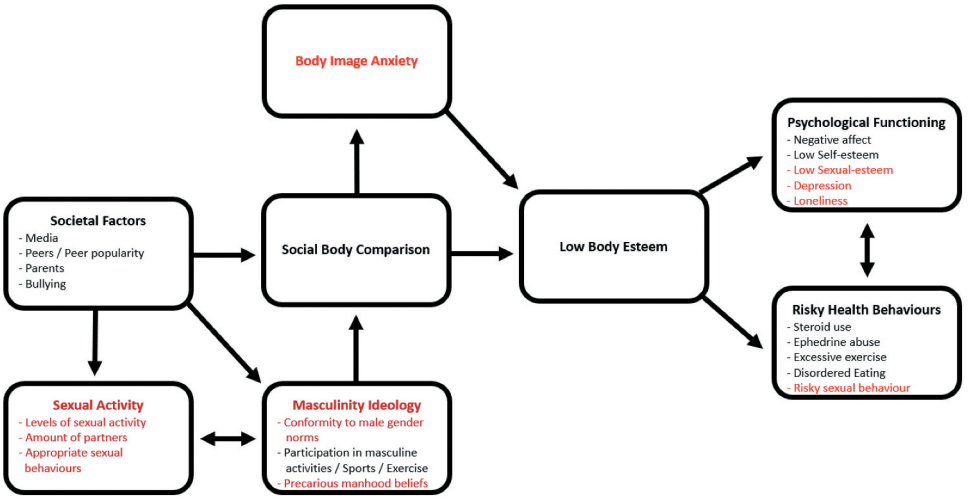

Figure 1. The relationship among the main and interacting variables that influence body esteem and sexual esteem. Note: This model was adapted from Cafri et al., 2005. Red text indicates adaptations made by the current authors.

themselves (Festinger, 1954; Hobza et al., 2007). Men often draw comparisons of their bodies from social factors such as media representation, parents, bullies, and peers (Cafri et al., 2005; Hobza et al., 2007; Smolak et al., 2005). Men may rely on social comparison to understand the requirements of conforming to masculine norms, conforming to an ideal male body type, and achieving a desired sex life. Indeed, findings indicate that men who socially compare report lower body esteem than those who do not (Bucchianeri et al., 2014) and that men who endorse the importance of a muscular body type (i.e. the societally expected body type for men) are more likely to engage in societal comparisons of the body (Alfano et al., 2011; Cafri et al., 2005; Rosenmann & Kaplan, 2014).

Male Gender Norms & the Role of Precarious Manhood

Gender roles place social pressure on individuals to conform to gendered stereotypes and norms (e.g. Cislaghi & Heise, 2020). Traditional male gender norms include themes of dominance, confidence, sexual prowess, and emotional/physical self-control (e.g. Griffiths et al., 2015). Men experience pressure to conform to these norms via media and social comparison (Griffiths et al., 2015; Levant, 2011), yet both conformity and failure to conform to male norms can result in negative outcomes. For example, gay men who do not conform to traditional masculine norms often face psychological distress and are more likely to be sensitive to negative evaluations by others than hegemonically masculine men (Blashill & Hughes, 2009; Blashill & Vander Wal, 2009). Martin (1990) found that adults judge gender atypical boys as being less masculine and more feminine than gender typical boys. Additionally, boys are expected to grow up as less masculine if they expressed gender atypicality (Martin, 1990).

Masculinity norms influence men's bodily esteem. Conformity to masculine norms is associated with an increased desire for muscularity, leanness, excessive physical fitness, and consequently, lower body esteem – indicating an important link between body esteem and masculinity (Frederick et al., 2007; Gattario et al., 2015; see also, Griffiths et al., 2015). Men who adhere to a traditional, muscular body type may be more likely to objectify their bodies to disproportionately represent their masculinity (Filiault & Drummond, 2010; Rosenmann & Kaplan, 2014; Smolak & Murnen, 2008). Relatedly, the recent rise of metrosexual masculinity brings forth the appeal of the aesthetic body type (Hall, 2014), which focuses on the cosmetic and lean appearance of the body, rather than the muscular and functional appearance of the body (Elliott & Elliott, 2005; Hall, 2014; Rosenmann &

Kaplan, 2014). However, while men who do not adhere to masculine or lean body expectations may be less likely to focus on their body to represent their masculinity, they may still experience desire for a body which is seen by society as masculine (e.g. Hall, 2014).

Further, the theory of precarious manhood posits manhood as an unstable social status which is difficult to win, easy to lose, and which must be maintained through social proof and validation (e.g. Vandello et al., 2008). Because of this precariousness, men who violate or challenge male gender norms may feel threatened by challenges to their masculinity (i.e. masculinity threat), which can produce compensatory strategies including physical aggression, hostility, and interpersonal competition (Berke et al., 2017; Bosson et al., 2009; Caswell et al., 2014; O'Neil, 1981; Vandello et al., 2008). Low body esteem can exacerbate masculinity threat (Mescher & Rudman, 2014) because it can make it more challenging for men to successfully engage in courtship behaviours. Self- and other evaluations of the body as unattractive may conflict with the masculine ideal of sexual access, which in turn leads to heightened masculinity threat due to the anxiety produced in not being able to fulfill the masculine role (Levant et al., 2013; Rosenmann & Kaplan, 2014; Tolman et al., 2003). Given these findings, it might be expected that conformity to masculine norms positively influences men's body esteem for those who fit the masculine ideal, but decreases body esteem for men who do not (e.g. Griffiths et al., 2015).

The Role of Body Focused Anxiety

Body-focused anxiety is defined as an anxious attentional focus on the body (Cash et al., 2004). Male body-focused anxiety is related to poor sexual functioning (Cash et al., 2004; Levitan et al., 2019; Ramseyer Winter et al., 2020; Sanchez & Kiefer, 2007) and is associated with increased levels of sexual avoidance in heterosexual and sexual minority men. Thus, high body-focused anxiety may contribute to lower levels of engagement in sexual activity and lowered sexual esteem (La Rocque & Cioe, 2011). Further, high body-focused anxiety is generally related to lower body esteem (Cash et al., 2004). Given these findings, it might be expected that high body-focused anxiety in sexual encounters lowers men's body esteem and sexual esteem.

The Role of Sexual Activity

Research on how body esteem and sexual esteem interact is important given that both are associated with men's engagement in sexual activity (Maas & Lefkowitz, 2015). Though little research has examined the relationship among body esteem, sexual activity, and sexual esteem in tandem, some studies have illustrated that body esteem is positively related to sexual functioning and sexual satisfaction in both men and women (Holt & Lyness, 2007; Milhausen et al., 2014; Ramseyer Winter et al., 2020; Seal et al., 2009). A man's inability to perform and function sexually – and by extension, a failure to adhere to male gender sex norms – may lead to a decrease in the body esteem that has been shown to decrease engagement in sexual activity (Masters & Johnson, 1970; La Rocque & Cioe, 2011; Rosenmann & Kaplan, 2014).

Moreover, Maas and Lefkowitz (2015) reported that men who engage in more sexual activity have higher sexual esteem than their less sexually active peers. One explanation for this finding may be that men are socialised and encouraged to enjoy sex, be sexually competent, and have many sexual partners. They may consequently have higher sexual esteem when adhering to these expectations (Griffiths et al., 2015; Rosenmann & Kaplan, 2014; Tolman et al., 2003). Additionally, high sexual esteem has been shown to positively correlate with body esteem (Frost et al., 2018; Maas & Lefkowitz, 2015). Given these findings, we infer that adherence to male gender norms – particularly those related to sexuality – may influence the relationship between sexual activity, body esteem, and sexual esteem, due to the pressure to engage in sexual activity.

Focus of the Current Study

We examined the relationships between body esteem, male gender norms, body-focused anxiety, and sexual esteem. Specifically, we explored (1) the relationship between dimensions of body esteem and sexual esteem, (2) the influence of adherence to male gender norms on the relationship between body esteem and sexual esteem, (3) the influence of body-focused anxiety on the relationship between body esteem and sexual esteem.

Based on previous research on the relationship of body esteem to sexual esteem (e.g. Frost et al., 2018) – and given the influence of male gender norms on body esteem (e.g. Griffiths et al., 2015) – we hypothesised (H1) that indices of body esteem would correlate positively with sexual esteem. Further, this association would be moderated by endorsement of male gender roles (i.e. as endorsement increased so, too, would the strength of the positive association between body esteem and sexual esteem). That is, we interrogated whether endorsement of masculinity norms magnifies the relationship between body esteem and sexual esteem. Because the endorsement of precarious manhood belief is likely higher in men who have both low body esteem and low sexual esteem, and engagement in sexual activity is less likely, we controlled for the endorsement of precarious manhood belief and engagement in sexual activity (Griffiths et al., 2015; Maas & Lefkowitz, 2015).

Given that body-focused anxiety impairs sexual functioning and increases sexual avoidance, we also hypothesised (H2) that the positive correlations between indices of body esteem and sexual esteem would be moderated by body-focused anxiety, such that, as body anxiety increased, the strength of the positive association between body esteem and sexual esteem would weaken. Here, we explored the effects of body image anxiety on the relationship between body esteem and sexual esteem, without the influence of masculinity. We controlled for engagement in sexual activity, given the variability of sexual activity among men with low body and sexual esteem and high body-focused anxiety.

Methods

Participants

A convenience sample of male-identified participants over the age of 16 years were recruited through various social media platforms (e.g. Facebook, Instagram, Twitter, Reddit, recruitment sites for sexology and psychology studies), and via the research participant pool of a large Western Canadian university to complete an online survey on the survey platform Qualtrics.[1] Those who participated via the post-secondary institution were compensated for their participation in this study with 0.5 bonus course credit; no other participants were compensated for their participation.

The initial sample consisted of 389 male-identified participants. As suggested by Garson (2019), we removed 91 (23.3%) participants for failing to complete at least 51% of the study measures. The final sample consisted of 298 individuals who identified as male. Most participants were White (67.8%), cisgender (95%), and heterosexual (69.5%), and the average age of the sample was 32.34 years (*SD* = 13.34). See, Table 1 for a breakdown of demographic characteristics.

Materials

Demographics

Participants completed a set of demographics questions, including age, gender, sexual orientation, ethnicity, relationship status, and highest level of completed education.

Table 1. Demographic distribution of participants.

	$N = 298$ ($M_{age} = 32$, $SD_{age} = 13.24$)	%
Gender/sex		
Cisgender	284	95.3
Transgender	13	4.4
Other identified	1	0.3
Ethnicity		
Black	13	4.4
White	202	67.8
South Asian	21	7.0
Asian	22	7.4
Indigenous/Aboriginal	1	0.3
Hispanic/Latinx	15	5.0
Middle Eastern	3	1.0
Pacific Islander	2	0.7
Multiethnic	18	6.0
Prefer not to say	1	0.3
Sexual Orientation		
Straight	207	69.5
Gay	21	7.0
Bisexual	46	15.4
Asexual	4	1.3
Pansexual	8	2.7
Other	12	4.0
Relationship Status		
Single	124	41.6
Casually dating	24	8.1
Non-married committed relationship	57	19.1
Married/civil union	85	28.5
Separated/divorced	7	2.3
Widowed	1	0.3
Level of Education		
Some high school	18	6.0
High school diploma	38	12.8
Some college/university	96	32.2
Completed undergraduate college/university	97	29.2
Vocational degree/certificate	6	2.0
Postgraduate studies	53	17.8

Sexual Activity

Current level of engagement in sexual activity (i.e. 'How would you rate your overall levels of sexual activity?') was measured on a 4-point Likert scale ranging from 1 (*not at all sexually active*) to 4 (*very sexually active*).

Body Esteem Questionnaire-Revised (BES-R)

The BES-R is a 28-item measure used to assess body esteem (Frost et al., 2018). Items are categorised as either body parts (e.g. arms, thighs, face) or body functions (e.g. agility, physical stamina, muscular strength). Each item is measured using a Likert scale ranging from 1 (*have strong negative feelings*) to 5 (*have strong positive feelings*). Items are totalled into three separate dimensions of upper body strength (e.g. body build), physical condition (e.g. agility), and sexual attractiveness (e.g. sex drive), with higher scores indicating a more positive body evaluation for that construct. Previous research has indicated α = .88 for the upper body strength dimension, α = .89 for the physical condition dimension, and α = .80 for the sexual attractiveness dimension (Frost et al., 2018). The current study attained good to excellent scale score reliability, with α = .90 for the body strength dimension, α = .92 for the physical condition dimension, and α = .82 for the sexual attractiveness dimension.

We introduced four additional exploratory items to the BES-R. These included three body parts (wrists, jaw/chin, and nose) and one body function (height). The inclusion of these four exploratory items was based on research findings (see, Griffiths et al., 2019; Mautz et al., 2013; Spuhler, 1968; Terino & Edwards, 2008) and recent plastic surgery trends (American Society of Plastic Surgeons, 2019), indicating that height, wrists, jaws/chins, and noses influence both women's evaluations of men's attractiveness and men's assessment of their own attractiveness. Each of these exploratory items was measured using the same Likert scale ranging from 1 (*have strong negative feelings*) to 5 (*have strong positive feelings*). With a higher score indicating a more positive body evaluation for that construct

Precarious Manhood Beliefs Scale (PMB)

The PMB consists of seven items assessing the perceived precariousness of manhood, or the degree to which manhood is seen as tenuous and elusive (Vandello et al., 2008). Participants respond to each item using a 7-point Likert scale with responses ranging from 1 (*not at all true*) to 7 (*very true*). Higher scores indicated greater endorsement of beliefs in the precariousness of manhood. Previous research utilising this scale has achieved good scale score reliability (α = .85; Vandello et al., 2008). We also attained good scale score reliability (α = .88) for the PMB in the current study.

Male Role Norms Inventory-Short Form (MRNI-SF)

The MRNI-SF is a 21-item measure used to evaluate endorsement towards traditional male gender norms (Levant et al., 2013). The MRNI-SF examines the endorsement of specific statements regarding manhood which are rated on a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) across seven separate subscales including: restrictive emotionality, self-reliance through mechanical skills, negativity towards sexual minorities, avoidance of femininity, importance of sex, toughness, and dominance. Higher summed scores indicated higher overall endorsement of traditional male gender norms. Previous research has illustrated excellent scale score reliability for the total MRNI-SF scale (α = .92; Levant et al., 2013). We also achieved excellent reliability for the total scale (α = .93).

Sexuality Scale (Sexual Esteem Subscale)

The Sexuality Scale (SS; Snell & Papini, 1989) is a 30-item measure used to evaluate different aspects of sexuality which include sexual esteem, sexual depression, and sexual preoccupation. Given the purpose of the present study, only the sexual esteem subscale was used. The sexual esteem subscale includes 10 items evaluating self-perception of sexual competence, rated on a 5-point Likert scale ranging from 1 (*disagree*) to 5 (*agree*), with higher summed scores indicating greater sexual esteem. Previous research has indicated α = .93 for the sexual esteem subscale for men (Snell & Papini, 1989). In the current study, α = .94 was attained for the sexual esteem subscale.

Body Exposure During Sexual Activities Questionnaire (BESAQ)

The BESAQ is a 28-item measure of anxious attentional focus on, and avoidance of, body exposure during sexual relations (Cash et al., 2004). Participants rate the frequency of their endorsement to statements of anxiety and avoidance on a Likert scale ranging from 0 (*never*) to 4 (*always*). Higher summed scores indicate greater self-conscious focus and avoidance. Previous research has indicated α = .95 (Cash et al., 2004). In the current study, α = .95.

Procedure

After receiving ethics approval from a Western Canadian university Research Ethics Board and providing informed consent, participants completed a brief demographic questionnaire, followed in random

order by the questionnaires of body esteem, male gender norm endorsement, precarious manhood belief, body image anxiety, and sexual esteem. Scale items were also randomised for all measures – with the exception of the sexual esteem subscale of the sexuality survey – due to a randomisation error within the survey platform . The study concluded with a debriefing form stating the purpose and benefits, contact information for the investigators, and information on counselling services for participants for whom the study content proved distressing. The experiment was self-paced and the median completion time was approximately 8 minutes.

Results

Data Analysis Plan

Two separate hierarchical multiple linear regressions (MLR) examined the role of body esteem dimensions on sexual esteem. We replaced varying amounts of missing data (no greater than 4% for any participant) from 147 participants on dependent measures using multiple imputation procedures (Garson, 2019).[2] A check of assumptions, including multicollinearity, indicated no violation of collinearity as VIF values and tolerance levels were as expected. A check for multivariate outliers and influential points – using Mahalanobis distance and Cook's distance – revealed no outliers or influential points.

The Role of Male Gender Norms in the Relationship between Sexual Esteem and Body Esteem Indices

As illustrated in Table 2, there were significant positive correlations between each of the body esteem indices of the BES-R (i.e. upper body strength physical condition, and sexual attractiveness) and overall sexual esteem, as predicted.

A three-stage hierarchical multiple regression analysis tested the positive correlation of each of the three dimensions of body esteem with sexual esteem to determine whether greater male norm endorsement strengthened those relationships. Both precarious manhood belief endorsement and engagement in sexual activity were controlled for in the analysis. At step one, with precarious manhood beliefs and sexual activity included, the overall regression model was significant, $F(2, 1751) = 402.40$, $p < .001$ and accounted for 32% of the variance in sexual esteem. At step two, the addition of the three body esteem dimensions – upper body strength, physical condition, and sexual attractiveness – explained an additional 17% of the variance in sexual esteem, $F(5, 1748) = 327.76$, $p < .001$. An examination of the unique contribution of the coefficients indicated all three were significant; sexual attractiveness (.40; $p < .001$) was the strongest positive predictor of sexual esteem. In step three, the addition of male gender norms as a moderating variable for each dimension of body esteem explained an additional 1% of the variance $F(8, 1745) = 208.40$, $p < .001$. The final model at stage three accounted for 49% of the total variance in sexual esteem. Table 3 illustrates the unique contribution of coefficients at each stage of the analysis, illustrating a significant male gender norms x sexual attractiveness interaction and a significant male gender norms x physical condition interaction. Male role norm endorsement did not moderate the relationship between upper body strength and sexual esteem.

An analysis of simple slopes (see supplementary materials Table 1 and Figure 1) revealed that the body esteem dimension of sexual attractiveness positively predicted sexual esteem at both moderate and high levels of male role norm endorsement; the strength of the correlation between sexual attractiveness and sexual esteem was greater when male role norm endorsement was high, compared to low, as predicted. The body esteem dimension of physical condition also positively predicted sexual esteem at both high and low levels of male role norm endorsement. However, the strength of the correlation between physical condition and sexual esteem was weaker at high levels of male norm endorsement and strongest at low levels (see supplementary materials Table 2 and Figure 2).

Table 2. Descriptive statistics and zero-order correlations of dependent, control, moderating, and predictor variables.

	1	2	3	4	5	6	7	8	9	10	11	12
Means (SD)												
	34.22 (10.72)	2.77 (1.06)	16.67 (9.54)	57.51 (21.40)	31.09 (19.97)	28.59 (6.35)	16.48 (4.90)	32.97 (8.88)	3.37 (1.01)	3.24 (.94)	3.52 (1.08)	3.30 (.94)
(1) Sexual esteem	–											
(2) Sexual activity	.55**	–										
(3) Precarious manhood belief	−.18**	−.16**	–									
(4) Male role norm endorsement	.03	−.01	.40**	–								
(5) Body image anxiety	−.57**	−.41**	.24**	−.04	–							
(6) Body esteem (sexual attractiveness)	.62**	.49**	−.14**	.07**	−.54**	–						
(7) Body esteem (upper body strength)	.40**	.29**	−.10**	.13**	−.39**	.64**	–					
(8) Body esteem (physical condition)	.45**	.26**	−.06*	.12**	−.41**	.64**	.79**	–				
(9) Body esteem (jaw)	.41**	.20**	−.04	.02	−.31**	.51**	.53**	.57**	–			
(10) Body esteem (wrist)	.28**	.22**	−.10**	.07**	−.27**	.47**	.50**	.41**	.37**	–		
(11) Body esteem (height)	.37**	.31**	−.21**	.03	−.29**	.49**	.34**	.35**	.36**	.36**	–	
(12) Body esteem (nose)	.32**	.17**	−.15**	−.01	−.19**	.51**	.43**	.40**	.46**	.50**	.41**	–

Note. *$p \leq .05$, **$p \leq .01$.

Table 3. Summary of hierarchical multiple regression analysis for variables predicting sexual esteem moderated by male gender norms (N = 298).

	β	*t*	Semi-partial *r*	*R*	R^2	ΔR^2
Step 1	−.10	−4.780***	−.10	.56	.32	
Precarious Manhood						
Sexual Activity	.54	26.89***	.53			
Step 2				.70	.48	.17
Precarious Manhood	−.07	−4.13***	−.07			
Sexual Activity	.32	16.23***	.28			
Body Esteem (sexual attractiveness)	.40	15.50***	.27			
Body Esteem (upper body strength	−.08	−2.79**	−.05			
Body Esteem (physical condition)	.17	5.82***	.10			
Step 3				.70	.49	.01
Precarious Manhood	−.08	−4.23***	−.07			
Sexual Activity Engagement	.32	16.24***	.28			
Body Esteem (sexual attractiveness)	.21	3.69***	.06			
Body Esteem (upper body strength)	−.03	−0.40	−.01			
Body Esteem (physical condition)	.34	4.55***	.08			
Sexual attractiveness x male norms	.41	3.80***	.07			
Upper body strength x male norms	−.10	−0.80	−.01			
Physical condition x male norms	−.32	−2.58**	−.04			

Note. **$p \leq .01$, ***$p \leq .001$.

The Prediction of Sexual Esteem from Body Esteem Moderating for Body Image Anxiety

A three-stage hierarchical multiple regression tested the positive correlation of each of the three dimensions indices (i.e. upper body strength physical condition, and sexual attractiveness) of body esteem with sexual esteem, and whether greater body image anxiety would weaken those relationships. In this analysis, frequency of sexual activity was controlled. Results revealed that at step one, with only

Table 4. Summary of hierarchical multiple regression analysis for variables predicting sexual esteem moderated by body image anxiety (N = 298).

Variable	β	*t*	Semi-partial *r*	*R*	R^2	ΔR^2
Step 1				.56	.30	
Sexual Activity	.55	27.51***	.55			
Step 2				.69	.47	.17
Sexual Activity	.33	16.38***	.28			
Body Esteem (sexual attractiveness)	.41	15.56***	.27			
Body Esteem (upper body strength)	−.08	−2.59**	−.05			
Body Esteem (physical condition)	.16	5.64***	.10			
Step 3				.72	.52	.05
Sexual Activity	.28	14.15***	.23			
Body Esteem (sexual attractiveness)	.38	9.30***	.15			
Body Esteem (upper body strength)	−.05	−0.87	−.01			
Body Esteem (physical condition)	.15	2.70**	.05			
Sexual attractiveness x body anxiety	−.16	−2.05*	−.03			
Upper body strength x body anxiety	−.05	−0.48	−.01			
Physical condition x body anxiety	−.03	−2.60	−.01			

Note: *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$

sexual activity included, the overall regression model was significant, $F(1, 1749) = 756.86$, $p < .001$, explaining 30% of the variance in sexual esteem. In step two, the addition of the three body esteem dimensions explained an additional 17% of the variance in sexual esteem, $F(4, 1746) = 395.00$, $p < .001$. Sexual attractiveness (.41; $p < .001$) and physical condition (.16; $p < .001$) positively predicted sexual esteem. Upper body strength (−.08; $p = .010$) negatively predicted sexual esteem. In step three, the addition of body image anxiety as a moderating variable explained an additional 5% of the variance, $F(7, 1743) = 271.48$, $p < .001$. The final model accounted for 52% of the variance. An examination of the coefficients (see, Table 4) indicated only a significantly body image anxiety x sexual attractiveness interaction.

An analysis of the simple slopes (see supplementary materials Table 3 and Figure 3) revealed that the body esteem dimension of sexual attractiveness positively predicted sexual esteem at both low and high levels of body image anxiety, but as predicted, the strength of the correlation between sexual attractiveness and sexual esteem was weakest when body image anxiety was high, compared to low or average.

Exploratory Items of Body Esteem

A sequential multiple regression analysis explored whether stronger positive esteem for the exploratory items of the jaw, wrist, height, and nose items individually predicted sexual esteem. Results revealed that positive perceptions of the jaw ($B = 2.93$, $p < .001$), the wrists ($B = 0.73$, $p = .010$), height ($B = 2.15$, $p < .001$), and the nose ($B = 0.76$, $p = .011$) predicted higher sexual esteem.

Discussion

This study explored how body esteem influences sexual esteem in men. As hypothesised, all three dimensions of male body esteem (i.e. sexual attractiveness, upper body strength, and physical condition) significantly predicted sexual esteem. These findings are in accord with those of Frost and colleagues (2018), who reported that body esteem dimensions of sexual attractiveness and physical condition correlate positively with sexual esteem; our study also found that the dimension of upper body strength correlated positively with sexual esteem, a unique contribution that may have been due to our more diversified sample of men.

When accounting for the potential moderating influence of male gender norm endorsement and body-focused anxiety, our hypotheses were partially confirmed. Specifically, as predicted, the strength of the correlation between the body esteem dimension of sexual attractiveness and sexual

esteem was greatest when male role norm endorsement was high. This finding is perhaps unsurprising, given that traditional male norms include themes of dominance, confidence, and sexual prowess (Griffiths et al., 2015).

Contrary to our hypotheses however, the strength of the correlation between physical condition and sexual esteem was weakest at high levels of male norm endorsement and strongest at low levels, contrary to our prediction. A potential explanation for this finding may reside in the possibility that men less likely conform to male gender norms also feel less pressure to maintain a traditionally male body type by being physically fit; therefore, physical condition is not as relevant to their body esteem compared to men who strongly endorse masculine norms. Collectively, these findings may serve as a useful addition to body image programmes for men who adhere to a specific masculinity ideology. Examples may include having men question the expectation to conform to a muscular body ideal as seen in the media (e.g. Doley et al., 2021) or by exploring men's attitude towards their body as a means by which to adhere to male gender norms.

Moreover, male role norm endorsement did not moderate the relationship between the body image dimension of upper body strength (e.g. muscular strength, body build, biceps) and sexual esteem. It is possible that shifting norms are pushing men towards body leanness, rather than immense musculature as an indicator of sexual prowess (Filiault & Drummond, 2010), a conjecture supported by our significant interaction between physical condition dimension and male norm endorsement; items in the physical condition dimension contained more 'lean traits' (e.g. appearance of the stomach, figure or physique, weight).

Further, we found that body image anxiety negatively moderated the relationship between sexual attractiveness and sexual esteem; as predicted, the strength of the correlation between sexual attractiveness and sexual esteem was weakest when body image anxiety was high. This suggests that increased body image anxiety interrupts the positive relationship between sexual attractiveness and sexual esteem, a finding partially consistent with research demonstrating that body image anxiety is negatively associated with the positive regard and confidence to engage in sex in an enjoyable way (e.g. Cash et al., 2004; La Rocque & Cioe, 2011). It should be noted that and body image anxiety did not moderate the relationship between upper body strength and sexual esteem, or between physical condition and sexual esteem – as indicated by non-significant interactions. It may be that men consider these body dimensions less important during sexual encounters than their overall sexual attractiveness.

Finally, our exploratory analyses revealed the body esteem dimensions of the wrist, nose, jaw, and height also predicted sexual esteem, indicating that men who have positive self-perceptions of these body constructs reported greater sexual esteem. This was a particularly novel finding not reported in previous literature, indicating that variables beyond those of sexual attractiveness, upper body strength, and physical condition are related to the relationship between body and sexual esteem and warrant further investigation. For instance, height as a body dimension was an important indicator to explore, given previous research that men who hold moderate to high levels of male role endorsement have lower body esteem (O'Gorman et al., 2019). Height is related to the masculine theme of dominance seen among heterosexual men in both Eastern and Western nations (Bogaert & McCreary, 2011; Yamamura & Tsutsui, 2017) and is associated with improved success at finding a sexual partner (Bogaert & McCreary, 2011; Herpin, 2005; Yamamura & Tsutsui, 2017). One explanation for the unique link between wrist esteem and sexual esteem could be explained by men perceiving small wrists as an indication of femininity and fragility, which is presumably unattractive to a potential sexual partner.

Overall, our exploratory findings suggest that other dimensions predict body esteem beyond those measured in previous literature, which might benefit future renditions of the BES-R. As an example, the significance of the two facial items (i.e. nose and jaw) show that the face could theoretically be broken down into parts, and that some areas of the face are more related to sexual esteem than others. These items could either be added to an existing body esteem dimension, or become a new dimension entirely (e.g. handsomeness).

Limitations and Considerations for Future Research

It should be noted that, although male gender norms moderated the relationships between the body esteem dimensions of sexual attractiveness and sexual esteem, and physical condition and sexual esteem, the effect of the interactions was small; suggesting that the influence of these moderators on these dimensions has only a minor impact. Nonetheless, the presence of a moderating influence indicates that the relationship between these dimensions and sexual esteem does differ for men who adhere to male gender norms relative to men who do not – findings in concert with previous research (see, Alleva et al., 2018). Overall, our results thus lend mixed support to previous research proposing that conformity to traditional masculinity poses a significant threat for men who violate these norms (Frederick et al., 2007; Gattario et al., 2015; see, also Griffiths et al., 2015) and further research is therefore warranted.

Further, we did not empirically measure the role of social comparison of body image on men, although men often draw social comparisons from media representation, peers, and parents (Cafri et al., 2005; Hobza et al., 2007; Smolak et al., 2005). These comparisons – particularly for men who perceive themselves as gender atypical (e.g. less muscular) – may have important implications for men's overall body image, as well as their sense of masculinity. Exploring how men compare their bodies to those of other men may provide further insight into the relationship between body esteem and sexual esteem.

Most research examining body esteem is focused on heterosexual men. This is a notable gap in the literature, because sexual minorities experience body dissatisfaction differently than other social groups (Doyle & Engeln, 2014; Filiault et al., 2012). Specifically, gay and bisexual men display greater negative effects of lower body esteem than do heterosexual men, such as muscle dysphoria, lower self-esteem, increased loneliness, and a lower quality sex life (Chaney, 2008; Peplau et al., 2009). Further, body ideologies formed around body types within the gay community – such as 'twinks' or 'bears' – often produce differing issues (e.g. prioritising of less body weight over muscularity) related to body esteem (Doyle & Engeln, 2014). While our sample was diverse in sexual orientation and is thus more representative of men overall, we did not capture the individual differences in body esteem and sexual esteem between heterosexual and sexual minority men. Future studies should examine the role of sexual orientation in the relationship of body esteem to sexual esteem.

Most men who participated in the present study were from Western cultures (e.g. North America), limiting the generalisability of the present results. Non-Westernised men typically have higher body esteem (Frederick et al., 2007; Yang et al., 2005), a finding explained by Yang et al. (2005) by the salient focus on muscularity and fitness to represent masculinity in Western cultures. Future studies would benefit from exploring the relationship between body esteem and sexual esteem in varying cultures to garner a more complete and generalisable understanding of men's body and sexual esteem across cultures. Further, the study included a convenience sample of relatively small size; future studies should examine whether our findings are replicable in a larger, more representative sample.

One final major limitation of our study is that data collection occurred during the COVID-19 pandemic, notable because – although men's sexual desire may not have decreased during the pandemic – engagement in sexual activity did due to global social restrictions (Delcea et al., 2021; Wignall et al., 2021). Thus, our assessment of current engagement in sexual activity may not have accurately reflected men's typical engagement in sex. Future research should examine the influence of sexual activity on the relationship between body esteem and sexual esteem when COVID-19 restrictions are removed. Further, our measurement of sexual activity asked participants to report their level of engagement, without explicitly defining what 'counts' as sexual activity. There was likely variation in participants' responses to this item based on their interpretation of what sexual activity actually is (see, Bogart et al., 2000; Schick et al., 2015). Though a single-item approach, as adopted here, allows for participants to define sexual activity in their own terms, and avoids

potentially heteronormative, cisnormative, or otherwise limited definitions of sexual activity, future work may benefit from including explicit definitions of sexual activity to better understand how engagement in specific behaviours or types of sexual activity may be related to sexual esteem.

Conclusion

This study explored the relationship of body esteem, the endorsement of masculine norms, and levels of body image anxiety to sexual esteem. Given the risk factors associated with low body esteem and sexual esteem, in addition to the lack of research examining men's body image more broadly, it is important to understand how these variables interact among men. Heightened body esteem on all dimensions (i.e. sexual attractiveness, upper body strength, and physical condition, as well as exploratory variables of wrist, jaw, nose, and height) correlated positively with increased sexual esteem. High conformity to male norms positively moderated the relationship between sexual attractiveness and sexual esteem, and negatively moderated the relationship between physical condition and sexual esteem. Further, body image anxiety negatively moderated the relationship between sexual attractiveness and sexual esteem. These moderating effects reveal the complexity of the relationship between body esteem and sexual esteem and suggest that further exploration is needed to completely understand the relationship. The present study indicates that men's sexual esteem is, in part, explained by their body esteem, which is important to consider when developing educational and clinical programmes for men experiencing body image issues. As programmes examining body image anxiety are limited, we suggest that such programmes may include interventions that examine how anxious body pre-occupation impacts men's sexual confidence and ability to engage in sexual activity. As body image anxiety is measured within the context of sexual encounters, sexual education programmes should include content which includes how dimensions of body esteem – especially sexual attractiveness – impact men's sexual satisfaction and sexual esteem. Though we examined body esteem only among men in the current study, it is possible that there are similarly additional facets of body esteem among women which have not been assessed in previous literature, particularly given the shifting ideals surrounding women's bodily appearances in Western cultures (e.g. McComb & Mills, 2022). Future work should therefore interrogate whether relationships identified herein hold for women and – especially – non-binary people, particularly given noted links between body dysphoria and sexual esteem among non-binary individuals (e.g. Kennis et al., 2021).

Notes

1. Given IRB requirements, surveys were anonymous, with all potentially identifying participant information disabled and information regarding recruitment locations not gathered. Thus, information regarding participant acquisition is unknown.
2. MI relies on the assumption that the data are missing at random (MAR) and not missing completely at random (MCAR; Garson, 2019). MCAR was assessed via Little's test, which was significant, χ^2 (1894) = 2105.03, $p < .001$, indicating the data was not MCAR and therefore suitable for MI.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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