



Eating Disorders

The Journal of Treatment & Prevention

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/uedi20>

Intimate partner violence and muscularity-building behavior in latino sexual minority men

Alexandra D. Convertino, John P. Brady, William Grunewald & Aaron J. Blashill

To cite this article: Alexandra D. Convertino, John P. Brady, William Grunewald & Aaron J. Blashill (2021) Intimate partner violence and muscularity-building behavior in latino sexual minority men, *Eating Disorders*, 29:3, 245-259, DOI: [10.1080/10640266.2021.1891371](https://doi.org/10.1080/10640266.2021.1891371)

To link to this article: <https://doi.org/10.1080/10640266.2021.1891371>



Published online: 18 Mar 2021.



[Submit your article to this journal](#)



Article views: 201



[View related articles](#)




[View Crossmark data](#)



Citing articles: 2 [View citing articles](#)



Intimate partner violence and muscularity-building behavior in latino sexual minority men

Alexandra D. Convertino ^a, John P. Brady^a, William Grunewald^b,
and Aaron J. Blashill^{a,b}

^aSan Diego State University/University of California San Diego Joint Doctoral Program in Clinical Psychology, San Diego, California, USA; ^bDepartment of Psychology, San Diego State University, College of Sciences, San Diego, California, USA

ABSTRACT

Intimate partner violence (IPV) has been associated with increased prevalence of eating disorders. In men, disordered eating is often related to the muscularized ideal. Sexual minority men (SMM; e.g., gay, bisexual, etc.) are at higher risk for eating disorders and Latino SMM may be at particularly high risk; however, IPV and eating pathology has yet to be examined in this population. Therefore, the aim of this study is to elucidate the association between IPV and muscularity-related dissatisfaction and muscularity-oriented behavior in Latino SMM. Participants were 81 Latino SMM. Thirty participants (37% of the sample) met the cutoff score for experiencing IPV in the past month. In bivariate analyses, IPV was associated with muscularity-oriented behavior, but not muscularity-related dissatisfaction. In multivariable analyses, IPV was negatively associated with muscularity-related dissatisfaction with a small effect size and positively associated with muscularity-oriented behavior with a large effect size. It may be that SMM engage in muscle building behavior to increase self-esteem, regulate affect, or better physically protect themselves from their abusive partner. Future research should investigate motivation for muscle building behavior in individuals experiencing IPV.

Sexual minority men (SMM; e.g., gay, bisexual) have increased risk for disordered eating behaviors, including disordered behaviors that are consistent with muscularity-building (Blashill & Safren, 2014; Calzo et al., 2017; Eik-Nes et al., 2018; Matthews-Ewald et al., 2014; Yean et al., 2013). Intimate partner violence (IPV) is one factor which may increase risk for body image disturbance. IPV has been positively associated with eating disorders among women (Bartlett et al., 2018; Bundock et al., 2013), but results have been inconsistent among men, likely due to a small number of studies. Of particular interest, Latino SMM may have elevated rates of disordered eating behavior as compared to non-Latino White SMM. A study by Blashill et al. (2017) found that Latino sexual minority adolescent boys were at greater risk

CONTACT Aaron J. Blashill  ajblashill@sdsu.edu  Aaron J. Blashill, 6363 Alvarado Court, Suite 101, San Diego, CA 92120

of anabolic-androgenic steroid misuse than non-Hispanic White adolescent boys. Furthermore, higher rates of body image disturbance, a significant correlate of disordered eating, have been found among Latino SMM as compared to other groups of SMM and sexual minority women (Gonzales IV & Blashill, under review 2021). Therefore, Latino SMM may be a particularly vulnerable population to muscularity-oriented pathology. Thus, this study will examine the association of IPV with disordered eating behavior among Latino SMM.

Eating pathology in men

The pursuit of the “ideal” male form in Western culture often focuses on the pursuit of both muscularity and leanness which manifests as a higher drive for muscularity and lower drive for thinness in comparison with women (Yean et al., 2013). Drive for muscularity is often reflected in behaviors that increase muscularity such as manipulating dietary intake, excessive exercise, taking protein supplements, and misusing anabolic-androgenic steroids (McCreary, 2007), which could be considered on the spectrum of disordered body image-related behaviors. Indeed, prior research has found that drive for muscularity is positively associated with leanness-based disordered eating (Tod & Edwards, 2015) as well as muscularity-oriented disordered eating (Cooper et al., 2020; Murray et al., 2019).

Within men, SMM may be at particular risk for developing maladaptive eating behaviors. Previous research has shown that SMM are at elevated risk for body dissatisfaction (Frederick & Essayli, 2016; Yean et al., 2013), eating disorders (Feldman & Meyer, 2007), and anabolic-androgenic steroid misuse (Blashill et al., 2017; Blashill & Safren, 2014) as compared to heterosexual men. Drive for muscularity is also elevated in SMM as compared to heterosexual men (Eik-Nes et al., 2018; Yean et al., 2013). Therefore, drive for muscularity is a useful measure of muscularity-related forms of body image and eating pathology spectrum behaviors in SMM.

IPV and eating pathology

Prior research has linked IPV experiences with eating pathology. IPV was positively associated with thinness-based disordered eating in women when assessed as both lifetime IPV (Bundock et al., 2013) and IPV during the last year (Bartlett et al., 2018). In men, IPV has been linked to thinness-based disordered eating in some studies (Bartlett et al., 2018; Bundock et al., 2013; Thapa & Kelvin, 2017) but not others (Jonas et al., 2014; Romito et al., 2013). The association between IPV and muscularity-related dissatisfaction and muscularity-oriented behaviors has not yet been examined to our knowledge.

IPV may be associated with eating pathology through multiple mechanisms. Three potential theoretical mechanisms include affect regulation, self-esteem enhancement, and self-protection. For example, prior research in men has demonstrated that disordered eating behaviors, such as binge eating, are linked to emotional regulation difficulties and negative affect (Davis-Becker et al., 2014; Kukk & Akkermann, 2017; Lavender & Anderson, 2009). Furthermore, a qualitative study on IPV in women found that participants often reported using disordered eating as a method of regulating negative affect associated with IPV (Wong & Chang, 2016). Although there is a dearth of information on IPV and men's body image, men may also engage in altered eating patterns and compensatory muscularity-oriented behaviors for similar purposes of emotion regulation (e.g., exercise for emotion regulation benefits). In addition, men may attempt to improve their self-esteem by increasing muscularity since IPV is often associated with decreases in self-esteem (Oliffe et al., 2014). Alternatively, IPV is often bidirectional in same-gender relationships between men (Stanley et al., 2006) and one reported reason for engaging in IPV is self-defense (Oliffe et al., 2014); thus, SMM may also engage in muscularity-oriented behaviors to build muscle to better physically defend themselves. Therefore, IPV should be examined in its association with both muscularity-related dissatisfaction and muscularity-oriented behaviors.

Latino SMM, IPV, and eating pathology

While limited research has examined eating pathology at the intersections of gender, ethnicity, and sexual orientation, what research does exist suggests that Latino SMM may have elevated rates of disordered eating behavior as compared to non-Latino White SMM. Previous research has found elevated rates of eating pathology in Latino individuals as compared to White individuals, and SMM of any race/ethnicity as compared to heterosexual individuals (Austin et al., 2013; Thapa & Kelvin, 2017). Furthermore, a study by Blashill et al. (2017) found elevated rates of anabolic-androgenic steroid misuse in Latino sexual minority adolescent boys as compared to non-Hispanic White sexual minority boys and Latino heterosexual boys. Emerging research has found clinical levels of body dissatisfaction in roughly 50% of Latino SMM (Gonzales IV & Blashill, under review 2021), suggesting that this population may be at elevated risk for eating disorder pathology as compared to non-Latino White SMM.

The association between IPV and eating pathology in Latino men, and especially Latino SMM is relatively understudied. A prior study in adolescents found that exposure to dating violence in Latino boys was associated with greater odds of unhealthy weight control behaviors (i.e., fasting, diet pills, vomiting, and laxatives to lose or maintain weight) as opposed to their unexposed counterparts (Cha et al., 2016), but this study did not examine

sexual orientation. There has only been a single study examining the association of eating pathology and IPV within a sample of Latino SMM. This study in New York City youth found that Hispanic ethnicity did not explain additional variance in a model examining the association between dating violence and unhealthy weight control behavior by gender and sexual orientation (Thapa & Kelvin, 2017); however, this study did not measure muscularity-oriented dissatisfaction or behaviors. To the best of our knowledge, the association of IPV and muscularity-oriented eating spectrum behaviors has not yet been examined among Latino SMM.

The current study

The current study built upon past research by examining the association between IPV and disordered body image-related variables among Latino SMM. Specifically, the association between experiences of IPV and muscularity-related dissatisfaction and muscularity-oriented behavior were explored. We hypothesized that IPV within the past month would be positively associated with increased muscularity-based dissatisfaction and behavior.

Method

Participants

Participants were 207 Latino SMM who participated in an online survey in April through June 2017. Nineteen participants were excluded because they completed less than half of the provided questions. Three validity check items (e.g., “For this question, please select ‘Definitely Agree’ as your answer”) were included to detect invalid responders. Only participants that correctly responded to at least two of the three attention-check items were included in analyses. Thirty-seven participants were excluded in this manner. Seventy participants were excluded from analysis because they were missing data on IPV, resulting in a final analytic sample of 81 participants (see [Table 1](#) for full demographics). Sensitivity analyses were also conducted imputing data for individuals who completed greater than 50% of the IPV items (i.e., individuals who completed 3 items; $N = 37$). Results with multiple imputation ($N = 118$) indicated a similar pattern and magnitude of results to the listwise deletion approach; therefore, the listwise deletion approach is presented for parsimony.

Participants were recruited through the lab’s participant registry as well as through advertisements on Grindr, a dating application for SMM accessed through mobile phones. The inclusion criteria for the survey were as follows: (1) between 18 and 29 years old, (2) identify as a man, (3) either English or Spanish-speaking, (4) sexual minority (e.g., gay, bisexual, pansexual, etc.) identity and/or same-gender attraction, (5)

Table 1. Demographics of the analytic sample ($n = 81$).

Characteristic	
Age	M (SD) 24.0 (3.3)
Sexual Orientation	N (%)
Gay	64 (79.0)
Bisexual	16 (19.8)
Pansexual	1 (1.2)
Sexual Attraction	52 (64.2)
Males Only	12 (17.3)
Mostly Attracted to Males	13 (16.0)
Equally Attracted to Males and Females	2 (2.5)
Mostly Attracted to Females	
Race	47 (58.0)
White	15 (18.5)
Black/African American	3 (3.7)
Native American/American Indian	2 (2.5)
Asian/Pacific Islander	13 (16)
Other	1 (1.2%)
Missing	

Hispanic/Latino ethnicity, and (6) residing in San Diego, California. Because the current study is a secondary data analysis and the parent study addressed sexual risk behaviors related to HIV acquisition in Hispanic/Latino sexual minority men, participants were excluded if they reported HIV seropositive status and were therefore not available for analyses within the current study.

Procedure

Participants from the lab registry of prior study participants were emailed information and a link to the pre-screen eligibility survey. If participants were recruited through Grindr advertisements, they provided their email addresses on an online form and subsequently emailed the pre-screen eligibility survey. To complete the pre-screener, participants were required to log in through Facebook to verify that they were residents of San Diego. All identifying information for the participants was erased upon data collection completion. Participants were informed that their IP addresses were collected in order to prevent participants from taking the survey multiple times for repeated compensation. Participants could select whether the survey would be administered in English ($n = 149$) or Spanish ($n = 2$).

Upon verification of eligibility via the pre-screener, participants completed an online consent form prior to completing the study survey. After participants completed the survey, they were directed to a separate webpage for inputting their name and email to receive compensation (a 10 USD Amazon.com gift card). Informed consent was obtained for all participants in the

current study. All aspects of this study were approved by the San Diego State University Institutional Review Board.

Measures

Intimate partner violence

IPV was measured for the past month using the HITS (Hurt-Insult-Threaten-Scream) screening tool (Sherin et al., 1998). The HITS is a four-item measure assessing how frequently an individual's partner physically hurts, insults, threatens, or screams at them. The HITS uses a 5-point Likert scale (1 = Never; 5 = Frequently). There were three additional response options, which were: "Not Applicable (n/a)," "I Don't Know," and "Refused/Refuse to answer." The current study utilized a cutoff score of 11 for positive screen of IPV for the purposes of describing the sample, as this threshold has shown to have strong sensitivity and specificity (88% and 97%, respectively; Shakil et al., 2005). Since the HITS also produces a continuous score, we did not dichotomize for regression analyses. Prior research has shown that dichotomizing continuous predictors leads to a substantial loss of statistical power (Royston et al., 2006); therefore, we chose to retain the continuous score for the main analyses. The HITS has been validated in Spanish, as well as in samples of men, inclusive of SMM (Chen et al., 2007; Shakil et al., 2005). Internal consistency for this measure was $\alpha = .92$.

Drive for muscularity

Muscularity concerns were measured with the Drive for Muscularity Scale (DMS; McCreary, 2007). The DMS is a 15-item survey that measures dissatisfaction with one's musculature as well as muscle-building behaviors, with higher scores indicating a greater drive for muscularity. Each item is scored on a 6-point Likert-type scale (1 = Always; 6 = Never). The DMS yields a mean total score and two subscales; one that measures engagement in muscularity-oriented behaviors and one that measures muscularity-related dissatisfaction. The DMS has been validated for use with Spanish-speaking males (Escoto et al., 2013). Internal consistency for the muscularity-related dissatisfaction subscale was $\alpha = .83$. Internal consistency for the muscularity-oriented behaviors subscale was $\alpha = .82$.

Appearance evaluation

The Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation subscale (MBSRQ-AE; Cash, 2000) was used to measure participants' body satisfaction. The MBSRQ-AE is a subscale of the MBSRQ that measures the respondent's level of satisfaction and/or dissatisfaction with their body. This subscale consists of 7-items measured on a 5-point Likert scale (1 = Definitely Disagree; 5 = Definitely Agree). Lower scores indicate more body

dissatisfaction; higher scores indicate more body satisfaction. The MBSRQ-AE has been validated in Spanish (Roncero et al., 2015). Internal consistency for the MBSRQ-AE was $\alpha = .75$.

Depressive symptoms

The Personal Health Questionnaire Depression Scale (PHQ-8; Kroenke & Spitzer, 2002) was used to assess depressive symptoms. This scale consists of 8-items measured on a 4-point frequency scale (0 = Not at all; 3 = Nearly every day). The PHQ-8 is a widely used measure of depressive symptoms in both large clinical studies and population-based studies. Additionally, this scale has been validated in Spanish (Huang et al., 2006). Internal consistency for the PHQ-8 was $\alpha = .76$.

Sociodemographics

Demographic information, such as age, sexual orientation, sexual attraction, race, highest grade level, and income were collected.

Statistical analyses

Positive screen of IPV, frequencies of each form of IPV, and mean scores on the DMS subscales were calculated. Bivariate Pearson and point-biserial correlations were used to assess association between all study variables and to evaluate additional variables for inclusion as covariates. Depressive symptoms and appearance evaluation were significantly associated with IPV and muscularity-related dissatisfaction; age was significantly associated with muscularity-related dissatisfaction. Given that depression, body dissatisfaction, and age have been identified by previous research as robust covariates of drive for muscularity in men (Brennan et al., 2012; Schneider et al., 2016), and the correlations found in the current sample, these were added as covariates. Muscularity-related dissatisfaction was included as a covariate in the model assessing the association of IPV with muscularity-oriented behaviors because previous work has established evidence that muscularity-related dissatisfaction theoretically precedes engagement in muscularity-oriented behaviors (Tylka, 2011) Therefore, muscularity-related dissatisfaction is important to control for in this model to determine the association between muscularity-oriented behaviors and IPV independent from muscularity-related dissatisfaction. Data were analyzed for assumptions of linearity and multicollinearity and all assumptions were met.

Hierarchical multiple regression was conducted to determine whether IPV experiences explained significant variance in muscularity-related dissatisfaction. Depressive symptoms, age, and appearance evaluation were entered in Step 1 and IPV experiences—measured on the continuous scale—was entered in Step 2. Similarly, hierarchical multiple regression was conducted to

determine whether IPV contributed significantly to muscularity-oriented behaviors. Depressive symptoms, age, muscularity-related dissatisfaction, and appearance evaluation were entered in Step 1 and the IPV experiences were entered in Step 2. Cohen's f^2 is presented as a measure of effect size with the following benchmarks noted by Cohen (1988): ≥ 0.02 is small, ≥ 0.15 is medium, and ≥ 0.35 is large.

Results

Of the 81 participants who completed the HITS in full, 30 participants screened positive for experiencing IPV (37.0%). Forty-nine participants (60.5%) endorsed experiencing at least one form of IPV in the past month. Thirty-three participants (40.7%) endorsed their partner physically hurting them, 43 participants (53.1%) endorsed their partner insulting or talking down to them, 33 participants (40.7%) endorsed their partner threatening them with harm, and 41 participants (50.6%) endorsed their partner screaming or cursing at them in the past month. Muscularity-related dissatisfaction ($M = 3.36$, $SD = 1.14$) and muscularity-oriented behavior ($M = 2.60$, $SD = 0.95$) scores were comparable to prior samples of SMM (DeBlaere & Brewster, 2017) and presumably heterosexual men (McCreary et al., 2004). Pearson bivariate correlations were calculated between IPV experiences ($M = 8.86$, $SD = 5.45$) and muscularity-related dissatisfaction ($r = -.12$, $p = .268$), muscularity-oriented behavior ($r = .54$, $p < .001$), age ($r = .11$, $p = .320$), appearance evaluation ($r = -.22$, $p = .048$), and depressive symptoms ($r = .26$, $p = .020$).

A hierarchical multiple regression model was utilized to assess the contribution of age, depressive symptoms, and appearance evaluation, as well as the

Table 2. Summary of hierarchical regression analysis for variables associated with muscularity-related dissatisfaction ($n = 81$).

Variable	Unstandardized			β	Cohen's f^2	t
	B	SE	95% CI			
Step 1						
Depressive Symptoms	0.05	0.03	[0.00, 0.10]	0.23	0.05	2.04*
Appearance Evaluation	-0.25	0.17	[-0.59, 0.09]	-0.16	0.03	-1.47
Age	-0.08	0.04	[-0.16, -0.01]	-0.24	0.07	-2.31*
R^2	.19					
Adj. R^2	.16					
F for Change in R^2	5.90**					
Step 2						
Depressive Symptoms	0.06	0.03	[0.01, 0.11]	0.28	0.08	2.48*
Appearance Evaluation	-0.31	0.17	[-0.65, 0.03]	-0.19	0.04	-1.79
Age	-0.07	0.04	[-0.14, 0.00]	-0.21	0.05	-1.96
Intimate Partner Violence	-0.05	0.02	[-0.09, 0.00]	-0.22	0.05	-2.01*
R^2	.23					
Adj. R^2	.19					
F for Change in R^2	4.04*					

* $p < .05$, ** $p < .01$, *** $p < .001$

Note. Cohen (1988) provides the following benchmarks for effect size for f^2 : ≥ 0.02 is small, ≥ 0.15 is medium, and ≥ 0.35 is large.

Table 3. Summary of hierarchical regression analysis for variables associated with muscularity-oriented behavior ($n = 81$).

Variable	Unstandardized					
	<i>B</i>	<i>SE</i>	95% CI	β	Cohen's f^2	<i>t</i>
Step 1						
Depressive Symptoms	0.05	0.02	[0.01, 0.10]	0.28	0.07	2.30*
Appearance Evaluation	0.23	0.16	[-0.08, 0.53]	0.17	0.03	1.46
Age	0.04	0.03	[-0.03, 0.11]	0.14	0.02	1.20
Muscularity-Related Dissatisfaction	0.05	0.10	[-0.15, 0.25]	0.06	0.00	0.51
R^2	.09					
Adj. R^2	.04					
<i>F</i> for Change in R^2	1.85					
Step 2						
Depressive Symptoms	0.02	0.02	[-0.02, 0.06]	0.12	0.01	1.01
Appearance Evaluation	0.38	0.13	[0.12, 0.64]	0.29	0.11	2.90**
Age	0.02	0.03	[-0.04, 0.08]	0.07	0.01	0.71
Muscularity-Related Dissatisfaction	0.17	0.09	[0.00, 0.34]	0.20	0.05	1.94
Intimate Partner Violence	0.10	0.02	[0.07, 0.14]	0.59	0.48	5.98***
R^2	.38					
Adj. R^2	.34					
<i>F</i> for Change in R^2	35.70***					

* $p < .05$, ** $p < .01$, *** $p < .001$

Note. Cohen (1988) provides the following benchmarks for effect size for f^2 : ≥ 0.02 is small, ≥ 0.15 is medium, and ≥ 0.35 is large.

unique contribution of IPV to muscularity-related dissatisfaction (see Table 2). In Step 1, the covariate-only model was significant. Step 2 was significant, demonstrated significant improvement over Step 1, and IPV experiences was negatively associated with muscularity-related dissatisfaction. Similarly, a hierarchical multiple regression model was utilized to assess the contribution of depressive symptoms, appearance evaluation, and muscularity-related dissatisfaction, as well as the unique contribution of IPV to muscularity-oriented behaviors (see Table 3). In Step 1, the covariate-only model was non-significant. Step 2 was significant, demonstrated significant improvement over Step 1, and IPV experiences were positively associated with muscularity-oriented behaviors.

Discussion

SMM endorse elevated rates of disordered eating (Feldman & Meyer, 2007), body dissatisfaction (Frederick & Essayli, 2016), and drive for muscularity (Eik-Nes et al., 2018; Yean et al., 2013) as compared to heterosexual men. Furthermore, there is some indication that Latino SMM may be at increased risk for disordered muscularity-oriented behaviors and clinical body image concerns, even in comparison to other groups of SMM (Eik-Nes et al., 2018; Gonzales IV & Blashill, under review 2021). IPV may be a potential explanatory factor for eating pathology in general and the specific muscularity-based behaviors that are characteristic of body image concerns in men (Murray et al.,

2017). To our knowledge, this is the first study to examine associations between experiences of IPV and muscularity-related dissatisfaction and muscularity-oriented behaviors in Latino SMM. Results of the study were that greater IPV displayed a small effect size with lower muscularity-related dissatisfaction in multivariable models; however, non-significant associations were revealed in bivariate models. Therefore, this finding should be interpreted with caution. In contrast, greater IPV was associated with increased muscularity-oriented behavior with a large effect size, both in bivariate and multivariable models. Age, depressive symptoms, muscularity-related dissatisfaction, and appearance evaluation are some of the most robust correlates of body change behaviors (Brennan et al., 2012; Schneider et al., 2016). Since IPV was associated with muscularity-oriented behavior even while controlling for these covariates, this finding suggests that there may be alternative motivations for engaging in muscle building behavior in Latino SMM that are experiencing IPV, beyond body dissatisfaction.

In the current sample, 37% of participants met the cutoff for experiencing IPV in the past month. For comparison, 5.2% of all men in the U.S. experienced IPV during the past 12 months in 2015 (Smith et al., 2018). Few prior studies have examined prevalence rates of IPV in Latino SMM. Of the studies that have examined Latino SMM, our sample endorsed greater rates of any abuse (61% versus 51–52%), psychological abuse (53% versus 33–45%) and physical abuse (41% versus 24–35%) in the past month than the lifetime rates found in these studies (Feldman et al., 2007; Nieves-Rosa et al., 2000; Toro-Alfonso & Rodríguez-Madera, 2004). Of note, it is unclear how the aforementioned studies handled missing data. Therefore, the estimates from this study may be higher than previously reported due to our exclusion of individuals that did not complete the HITS screening measure in full.

While little research has focused on physical protection strategies that SMM enact in response to IPV, it is possible that Latino SMM engage in muscle building behavior to physically protect themselves from their abusive partner. Prior research has found that sexual minority individuals endorse perpetrating IPV for self-defense or retaliation against prior violence (Donovan et al., 2014; Stanley et al., 2006). While the current study did not assess the perpetration of IPV or motives for muscularity building, it is possible that the men in our sample engaged in muscle building behavior to either avoid confrontations of violence or respond with violent means. Further research should be conducted in Latino SMM to determine the motivations behind muscularity-building behavior and whether this is related to the perpetration of or protection against IPV.

Alternatively, building muscle may serve to increase self-esteem and/or regulate negative affect after experiences of IPV. SMM often feel that their self-esteem needs to be rebuilt after IPV (Olliffe et al., 2014), and men anticipate an increase in confidence with greater muscularity (Frederick et al., 2007).

Therefore, SMM may pursue muscle building as a gender-consistent method of improving their physical appearance, and therefore self-esteem. In addition, exercise is often encouraged for its emotion regulation qualities and experimental studies have shown that exercise is effective for regulating anger, sadness, and anxiety (e.g., Bernstein & McNally, 2017). It is therefore plausible that SMM may engage in muscle building behaviors to modulate their feelings of self-blame, guilt, anger, or other negative affect after experiences of IPV.

The current study is not without limitations. The HITS screening measure only assesses IPV in the past month, does not assess for sexual abuse, nor does it assess for potential SMM-specific forms of abuse, such as forced “outing” of a partner. Motivations for engaging in muscularity-oriented behaviors were not assessed, which means that the association between IPV and muscularity-building behavior remains unexplained. Eating pathology assessment was limited; future research should consider assessing the association between IPV and muscularity-oriented eating pathology. The current study is cross-sectional in design, precluding any temporal ordering of variables. Furthermore, the sample was limited in scope, as data were collected from San Diego and may not generalize to Latino SMM outside of Southern California. Finally, the final analytic sample was small, and thus, caution should be taken in generalizing findings until replication occurs with a larger sample.

This study may impart certain clinical implications. IPV can be a traumatic event and prior research indicates that traumatic events and posttraumatic symptoms were more common in men with eating disorders than those without (Mitchell et al., 2012). Given the association of IPV and muscularity-oriented behaviors found in the current study, clinicians working with clients with muscularity-oriented behaviors should consider whether clients’ prior or current experiences with IPV may be influencing and/or perpetuating their symptoms. This may require integrating trauma-informed care as indicated by clinical need (see Brewerton, 2019 for specific recommendations). Clinicians may consider the effect that trauma-related symptoms and experiences may have for their clients with muscularity-oriented behaviors in case formulations.

Another clinical implication is the importance of assessing for muscularity-related eating and behaviors in all individuals, but also specifically SMM that present to eating disorder treatment. Eating disorder assessment has traditionally only measured thinness-based pathology, which systematically under-identifies males with muscularity-focused eating pathology (Murray et al., 2017). The DMS (McCreary, 2007) used in this study may be of clinical utility, as well as the Muscularity Oriented Eating Test (Murray et al., 2019). Clinicians are encouraged to utilize assessment tools that specifically assess for muscularity-oriented behaviors to avoid missing relevant symptom targets for intervention.

In summary, the current study contributes to the literature by examining the association between IPV and muscularity dissatisfaction and behavior in Latino SMM. Results found that IPV is associated with greater muscularity-building behavior. Latino SMM may engage in muscularity-oriented behavior for increasing self-esteem, managing negative affect, or to physically defend themselves. Future research should investigate motivations for muscle-building behavior within the context of IPV. Results may be incorporated into clinical practice by integrating trauma-informed care into eating pathology treatment.

ORCID

Alexandra D. Convertino  <http://orcid.org/0000-0003-0073-6053>

References

- Austin, S. B., Nelson, L. A., Birkett, M. A., Calzo, J. P., & Everett, B. (2013). Eating disorder symptoms and obesity at the intersections of gender, ethnicity, and sexual orientation in US high school students. *American Journal of Public Health, 103*(2), e16–e22. <https://doi.org/10.2105/AJPH.2012.301150>
- Bartlett, B. A., Iverson, K. M., & Mitchell, K. S. (2018). Intimate partner violence and disordered eating among male and female veterans. *Psychiatry Research, 260*, 98–104. <https://doi.org/10.1016/j.psychres.2017.11.056>
- Bernstein, E. E., & McNally, R. J. (2017). Acute aerobic exercise helps overcome emotion regulation deficits. *Cognition and Emotion, 31*(4), 834–843. <https://doi.org/10.1080/02699931.2016.1168284>
- Blashill, A. J., Calzo, J. P., Griffiths, S., & Murray, S. B. (2017). Anabolic steroid misuse among US adolescent boys: Disparities by sexual orientation and race/ethnicity. *American Journal of Public Health, 107*(2), 319–321. <https://doi.org/10.2105/AJPH.2016.303566>
- Blashill, A. J., & Safren, S. A. (2014). Sexual orientation and anabolic-androgenic steroids in US adolescent boys. *Pediatrics, 133*(3), 469–475. <https://doi.org/10.1542/peds.2013-2768>
- Brennan, D. J., Craig, S. L., & Thompson, D. E. A. (2012). Factors associated with a drive for muscularity among gay and bisexual men. *Culture, Health & Sexuality, 14*(1), 1–15. <https://doi.org/10.1080/13691058.2011.619578>
- Brewerton, T. D. (2019). An overview of trauma-informed care and practice for eating disorders. *Journal of Aggression, Maltreatment & Trauma, 28*(4), 445–462. <https://doi.org/10.1080/10926771.2018.1532940>
- Bundock, L., Howard, L. M., Trevillion, K., Malcolm, E., Feder, G., & Oram, S. (2013). Prevalence and risk of experiences of intimate partner violence among people with eating disorders: A systematic review. *Journal of Psychiatric Research, 47*(9), 1134–1142. <https://doi.org/10.1016/j.jpsychires.2013.04.014>
- Calzo, J. P., Blashill, A. J., Brown, T. A., & Argenal, R. L. (2017). Eating disorders and disordered weight and shape control behaviors in sexual minority populations. *Current Psychiatry Reports, 19*(8), 49. <https://doi.org/10.1007/s11920-017-0801-y>
- Cash, T. F. (2000). *The MBSRQ users' manual*. Available from the author at www.body-images.com.

- Cha, S., Ihongbe, T. O., & Masho, S. W. (2016). Racial and gender differences in dating violence victimization and disordered eating among U.S. high schools. *Journal of Women's Health, 25*(8), 791–800. <https://doi.org/10.1089/jwh.2015.5324>
- Chen, P.-H., Rovi, S., Washington, J., Jacobs, A., Vega, M., Pan, K.-Y., & Johnson, M. S. (2007). Randomized comparison of 3 methods to screen for domestic violence in family practice. *The Annals of Family Medicine, 5*(5), 430–435. <https://doi.org/10.1370/afm.716>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates, Inc.
- Cooper, M., Griffiths, K. M., & Burns, R. (2020). Getting shredded: Development and validation of a measure of muscularity-oriented disordered eating. *Psychological Assessment, 32*(5), 451–460. <https://doi.org/10.1037/pas0000804>
- Davis-Becker, K., Peterson, C. M., & Fischer, S. (2014). The relationship of trait negative urgency and negative affect to disordered eating in men and women. *Personality and Individual Differences, 56*, 9–14. <https://doi.org/10.1016/j.paid.2013.08.010>
- DeBlaere, C., & Brewster, M. E. (2017). A confirmation of the drive for muscularity scale with sexual minority men. *Psychology of Sexual Orientation and Gender Diversity, 4*(2), 227–232. <https://doi.org/10.1037/sgd0000224>
- Donovan, C., Barnes, R., & Nixon, C. (2014). *The coral project: Exploring abusive behaviours in lesbian, gay, bisexual and/or transgender relationships (Interim Report)*. University of Sunderland and University of Leicester. <https://www2.le.ac.uk/departments/criminology/documents/coral-project-interim-report>
- Eik-Nes, T. T., Austin, S. B., Blashill, A. J., Murray, S. B., & Calzo, J. P. (2018). Prospective health associations of drive for muscularity in young adult males. *International Journal of Eating Disorders, 51*(10), 1185–1193. <https://doi.org/10.1002/eat.22943>
- Escoto, C., Alvarez-Rayón, G., Mancilla-Díaz, J. M., Camacho Ruiz, E. J., Franco Paredes, K., & Juárez Lugo, C. S. (2013). Psychometric properties of the drive for muscularity scale in Mexican males. *Eating and Weight Disorders, 18*(1), 23–28. <https://doi.org/10.1007/s40519-013-0010-6>
- Feldman, M. B., Díaz, R. M., Ream, G. L., & El-Bassel, N. (2007). Intimate partner violence and HIV sexual risk behavior among Latino gay and bisexual men. *Journal of LGBT Health Research, 3*(2), 9–19. https://doi.org/10.1300/J463v03n02_02
- Feldman, M. B., & Meyer, I. H. (2007). Eating disorders in diverse lesbian, gay, and bisexual populations. *International Journal of Eating Disorders, 40*(3), 218–226. <https://doi.org/10.1002/eat.20360>
- Frederick, D. A., Buchanan, G. M., Sadehgi-Azar, L., Peplau, L. A., Haselton, M. G., Berezovskaya, A., & Lipinski, R. E. (2007). Desiring the muscular ideal: Men's body satisfaction in the United States, Ukraine, and Ghana. *Psychology of Men & Masculinity, 8*(2), 103–117. <https://doi.org/10.1037/1524-9220.8.2.103>
- Frederick, D. A., & Essayli, J. H. (2016). Male body image: The roles of sexual orientation and body mass index across five national U.S. Studies. *Psychology of Men & Masculinity, 17*(4), 336–351. <https://doi.org/10.1037/men0000031>
- Gonzales, M., IV, & Blashill, A. J. (under review 2021). Ethnic/racial and gender differences in body image disorders among a diverse sample of sexual minority U.S. adults. *Body Image, 36*, 64–73. <https://doi.org/10.1016/j.bodyim.2020.10.007>
- Huang, F. Y., Chung, H., Kroenke, K., Delucchi, K. L., & Spitzer, R. L. (2006). Using the patient health questionnaire-9 to measure depression among racially and ethnically diverse primary care patients. *Journal of General Internal Medicine, 21*(6), 547–552. <https://doi.org/10.1111/j.1525-1497.2006.00409.x>
- Jonas, S., Khalifeh, H., Bebbington, P. E., McManus, S., Brugha, T., Meltzer, H., & Howard, L. M. (2014). Gender differences in intimate partner violence and psychiatric

- disorders in England: Results from the 2007 adult psychiatric morbidity survey. *Epidemiology and Psychiatric Sciences*, 23(2), 189–199. <https://doi.org/10.1017/S2045796013000292>
- Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: A new depression diagnostic and severity measure. *Psychiatric Annals*, 32(9), 509–515. <https://doi.org/10.3928/0048-5713-20020901-06>
- Kukk, K., & Akkermann, K. (2017). Fluctuations in negative emotions predict binge eating both in women and men: An experience sampling study. *Eating Disorders*, 25(1), 65–79. <https://doi.org/10.1080/10640266.2016.1241058>
- Lavender, J. M., & Anderson, D. A. (2009). Contribution of emotion regulation difficulties to disordered eating and body dissatisfaction in college men. *International Journal of Eating Disorders*, 43(4), 352–357. <https://doi.org/10.1002/eat.20705>
- Matthews-Ewald, M. R., Zullig, K. J., & Ward, R. M. (2014). Sexual orientation and disordered eating behaviors among self-identified male and female college students. *Eating Behaviors*, 15(3), 441–444. <https://doi.org/10.1016/j.eatbeh.2014.05.002>
- McCreary, D. R. (2007). The drive for muscularity scale: Description, psychometrics, and research findings. In J. K. Thompson & G. Cafri (Eds.), *The muscular ideal: Psychological, social, and medical perspectives* (pp. 87–106). American Psychological Association.
- McCreary, D. R., Sasse, D. K., Saucier, D. M., & Dorsch, K. D. (2004). Measuring the drive for muscularity: Factorial validity of the drive for muscularity scale in men and women. *Psychology of Men & Masculinity*, 5(1), 49–58. <https://doi.org/10.1037/1524-9220.5.1.49>
- Mitchell, K. S., Mazzeo, S. E., Schlesinger, M. R., Brewerton, T. D., & Smith, B. N. (2012). Comorbidity of partial and subthreshold PTSD among men and women with eating disorders in the National comorbidity survey-replication study: PTSD and eating disorders in men and women. *International Journal of Eating Disorders*, 45(3), 307–315. <https://doi.org/10.1002/eat.20965>
- Murray, S. B., Brown, T. A., Blashill, A. J., Compte, E. J., Lavender, J. M., Mitchison, D., Mond, J. M., Keel, P. K., & Nagata, J. M. (2019). The development and validation of the muscularity-oriented eating test: A novel measure of muscularity-oriented disordered eating. *International Journal of Eating Disorders*, 52(12), 1389–1398. <https://doi.org/10.1002/eat.23144>
- Murray, S. B., Nagata, J. M., Griffiths, S., Calzo, J. P., Brown, T. A., Mitchison, D., Blashill, A. J., & Mond, J. M. (2017). The enigma of male eating disorders: A critical review and synthesis. *Clinical Psychology Review*, 57, 1–11. <https://doi.org/10.1016/j.cpr.2017.08.001>
- Nieves-Rosa, L. E., Carballo-Dieguez, A., & Dolezal, C. (2000). Domestic abuse and HIV-risk behavior in Latin American men who have sex with men in New York City. *Journal of Gay & Lesbian Social Services*, 11(1), 77–90. https://doi.org/10.1300/J041v11n01_04
- Oliffe, J. L., Han, C., Maria, E. S., Lohan, M., Howard, T., Stewart, D. E., & MacMillan, H. (2014). Gay men and intimate partner violence: A gender analysis. *Sociology of Health & Illness*, 36(4), 564–579. <https://doi.org/10.1111/1467-9566.12099>
- Romito, P., Beltrami, L., & Escribà-Agüir, V. (2013). Intimate partner violence and mental health among Italian adolescents: Gender similarities and differences. *Violence Against Women*, 19(1), 89–106. <https://doi.org/10.1177/1077801212475339>
- Roncero, M., Perpiñá, C., Marco, J. H., & Sánchez-Reales, S. (2015). Confirmatory factor analysis and psychometric properties of the Spanish version of the multidimensional body-self relations questionnaire-appearance scales. *Body Image*, 14, 47–53. <https://doi.org/10.1016/j.bodyim.2015.03.005>
- Royston, P., Altman, D. G., & Sauerbrei, W. (2006). Dichotomizing continuous predictors in multiple regression: A bad idea. *Statistics in Medicine*, 25(1), 127–141. <https://doi.org/10.1002/sim.2331>

- Schneider, C., Rollitz, L., Voracek, M., & Hennig-Fast, K. (2016). Biological, psychological, and sociocultural factors contributing to the drive for muscularity in weight-training men. *Frontiers in Psychology, 7*, 1992. <https://doi.org/10.3389/fpsyg.2016.01992>
- Shakil, A., Donald, S., Sinacore, J. M., & Krepcho, M. (2005). Validation of the HITS domestic violence screening tool with males. *Family Medicine, 37*(3), 193–198. <http://www.stfm.org/fmhub/fm2005/March/Amer193.pdf>
- Sherin, K. M., Sinacore, J. M., Li, X. Q., Zitter, R. E., & Shakil, A. (1998). HITS: A short domestic violence screening tool for use in a family practice setting. *Family Medicine, 30*(7), 508–512.
- Smith, S. G., Zhang, X., Basile, K. C., Merrick, M. T., Wang, J., Kresnow, M., & Chen, J. (2018). *The National intimate partner and sexual violence survey (NISVS): 2015 data brief – updated release*. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Stanley, J. L., Bartholomew, K., Taylor, T., Oram, D., & Landolt, M. (2006). Intimate violence in male same-sex relationships. *Journal of Family Violence, 21*(1), 31–41. <https://doi.org/10.1007/s10896-005-9008-9>
- Thapa, K., & Kelvin, E. A. (2017). Peer victimization and unhealthy weight control behaviors—the role of intersecting identities among New York City youth. *Journal of Urban Health, 94*(4), 506–513. <https://doi.org/10.1007/s11524-017-0163-0>
- Tod, D., & Edwards, C. (2015). A meta-analysis of the drive for muscularity's relationships with exercise behaviour, disordered eating, supplement consumption, and exercise dependence. *International Review of Sport and Exercise Psychology, 8*(1), 185–203. <https://doi.org/10.1080/1750984X.2015.1052089>
- Toro-Alfonso, J., & Rodríguez-Madera, S. (2004). Domestic violence in Puerto Rican gay male couples: Perceived prevalence, intergenerational violence, addictive behaviors, and conflict resolution skills. *Journal of Interpersonal Violence, 19*(6), 639–654. <https://doi.org/10.1177/0886260504263873>
- Tylka, T. L. (2011). Refinement of the tripartite influence model for men: Dual body image pathways to body change behaviors. *Body Image, 8*(3), 199–207. <https://doi.org/10.1016/j.bodyim.2011.04.008>
- Wong, S. P. Y., & Chang, J. C. (2016). Altered eating behaviors in female victims of intimate partner violence. *Journal of Interpersonal Violence, 31*(20), 3490–3505. <https://doi.org/10.1177/0886260515585535>
- Yean, C., Benau, E. M., Dakanalis, A., Hormes, J. M., Perone, J., & Timko, C. A. (2013). The relationship of sex and sexual orientation to self-esteem, body shape satisfaction, and eating disorder symptomatology. *Frontiers in Psychology, 4*, 887. <https://doi.org/10.3389/fpsyg.2013.00887>