Drive for Muscularity in Asian American Men: Sociocultural and Racial/Ethnic Factors as Correlates

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Drive for muscularity (McCreary & Sasse, 2000) is a prominent factor in men’s body image concerns; however, researchers have typically examined this construct in samples of predominantly White, non-Hispanic men. The present study extended existing sociocultural theories of men’s body image by examining the relative contributions of media internalization (i.e., general internalization and athletic-ideal internalization of media body image portrayals), acculturative experiences (i.e., acculturation to mainstream American culture, enculturation to one’s heritage culture), and racial stressors (i.e., perceived racial discrimination, perceived perpetual foreigner racism) as predictors of drive for muscularity attitudes and behaviors in a large sample of Asian American college men ($N = 338$). After controlling for participants’ self-esteem, body mass index, ethnicity, and generational status in the U.S., hierarchal regressions revealed that greater acculturation to mainstream American culture and perceived perpetual foreigner racism predicted unique variance in drive for muscularity attitudes over and above the contributions of both forms of media internalization. By contrast, only internalization of the athletic body ideal predicted unique variance in drive for muscularity behaviors above and beyond the covariates in the model. The present results highlight the importance of understanding Asian American men’s drive for muscularity within broader social, cultural, and racial contexts and suggest that acculturative and racial experiences play a key role in Asian American men’s drive to obtain a body more commensurate with Western standards of masculine physiques.

Keywords: drive for muscularity, media, acculturation, racism, Asian American men

Body image concerns, historically viewed as women’s issues, have been increasingly observed in men (Leone et al., 2011; Neighbors & Sobal, 2007; Olivardia, Pope, Borowiecki, & Cohane, 2004; Olivardia, Pope, & Hudson, 2000; Parent, 2013). Although the sociocultural standard of physical attractiveness for women focuses on thinness and a slender body shape, the standard for men emphasizes a muscular body ideal (McCreary, 2011; McCreary & Sasse, 2000; McCreary, Saucier, & Courtenay, 2005). The ideal physique for men, as reflected in the Western media, is tall and muscular, with wide shoulders, large biceps, a hefty chest, and a narrow waist low in body fat (Hargreaves & Tiggemann, 2004; Pope, Olivardia, Gruber, & Borowiecki, 1999) and, although highly valued, is also unrealistic to attain (Pope et al., 1999; Pritchard & Cramblitt, 2014). Consequently, drive for muscularity, defined as attitudinal preoccupations with muscle mass and behavioral endeavors to enhance muscularity, are common in men (McCreary, 2011; McCreary & Sasse, 2000; McCreary et al., 2005). Empirical studies have found that aspects of drive for muscularity are associated with potentially dangerous strategies to gain muscle (Litt & Dodge, 2008; Olivardia et al., 2000; Parent & Moradi, 2011), as well as a variety of mental health concerns (Grossbard, Atkins, Geisner, & Larimer, 2013; Olivardia et al., 2004).

Although researchers have amassed a considerable body of evidence to support the importance of studying men’s drive for muscularity, previous studies used mostly White, nonminority samples (Cohane & Pope, 2001; McCreary & Sasse, 2000). Thus, much less is known about the experience and correlates of drive for muscularity among racial/ethnic minority men, despite evidence that racial and ethnic minority men engage in more dangerous body-modifying strategies and binge eating than do nonminority men (see Ricciardelli, McCabe, Williams, & Thompson, 2007, for a review). Asian/Asian American men, in particular, may be susceptible to body image concerns surrounding muscularity (Barnett, Keel, & Conoscenti, 2001; Grammas & Schwartz, 2009; Kelly, Cotter, Tanofsky-Kraff, & Mazzeo, 2015; Keum, Wong, DeBlaere, & Brewster, 2015). For example, Asian American col-
lege men reported higher levels of drive for muscularity, more concerns over body image, and greater internalization of media body ideals than did their White and Black counterparts (Kelly et al., 2015).

Researchers have speculated that the unique sociocultural contexts of Asian American men, including both the conformity pressure rooted in Western hegemonic masculinity and the challenges related to being a racial/ethnic minority (e.g., racism, acculturation), may contribute to the elevated concerns regarding muscularity in this group (Kelly et al., 2015; Keum et al., 2015; Lu & Wong, 2013; Ricciardelli et al., 2007). Such speculation, however, has yet to be empirically examined. Accordingly, the present study investigated the relative contributions of internalizing media depictions of the ideal male body and racial/ethnic factors in Asian American men’s drive for muscularity. Although the Asian American population comprises a broad array of diverse ethnicities of Asian descent (e.g., Chinese, Asian Indian, Vietnamese, etc.), subgroup similarities exist in experiences related to racial minority status and Asian ideals of attractiveness (Kawamura, 2011). In the present study, we recruited men from diverse Asian American subgroups as a first step to address the paucity of body image research involving this population.

Media Influence and Asian American Men’s Drive for Muscularity

Asian American men, like most men in the United States, are surrounded by rampant media portrayals of highly muscular male body images (Cafri & Thompson, 2004; Hargreaves & Tiggemann, 2004; Kelly et al., 2015; Pope et al., 1999). Though largely unattainable, the muscularity ideal is espoused by the American public as an embodiment of hegemonic masculine norms such as self-reliance, competitiveness, dominance, and physical strength (Connell & Messerschmidt, 2005; Lu & Wong, 2013). Because muscularity is often associated with masculinity, researchers have noted that minority men who may not fit the typical masculine body ideal are often unhappy with their appearance and may feel less masculine (Lu & Wong, 2013). Asian American men, in particular, may be at a disadvantage to meet the ideal body standards because of a biological predisposition to body types that depart from the White-centric aesthetic ideal (Barnett et al., 2001; Keum et al., 2015; Kuo, 2005). Moreover, the U.S. media often denigrate the Asian male physique, racializing them in restrictive or negative images such as small, unathletic, nerdy, socially awkward, and lacking sexual and romantic competencies (Larson, 2006; Wilson et al., 2009). Thus, it is perhaps not surprising that Asian American men are aware of the negative media and public stereotypes against them (Wong, Owen, Tran, Collins, & Higgins, 2012), which may promote greater drive for muscularity as a stereotype-countering strategy (Chen, 1999; Kelly et al., 2015; Wong et al., 2012).

Asian American men who have internalized sociocultural messages about masculine body ideals may be especially driven to obtain a muscular physique. Specifically, sociocultural perspectives of body image hold that Western media play a major role in prescribing and perpetuating unrealistic muscularity ideals for men (Hargreaves & Tiggemann, 2004; Pope et al., 1999; Schoeller & Ward, 2006). When men set media ideals as personal goals (i.e., media internalization), they may be more susceptible to body image concerns because of the unattainable nature of these standards (Daniel & Bridges, 2010; Morrison, Morrison, & Hopkins, 2003; Pritchard & Crandall, 2014). Indeed, studies with men have consistently found that media internalization is associated with a greater desire to obtain a muscular image (Cramblitt & Pritchard, 2013; Daniel & Bridges, 2010; Hatoum & Belle, 2004; Morrison et al., 2003; Parent & Moradi, 2011) and engagement in behavioral strategies (e.g., excessive exercise, taking supplements) to gain muscle mass (Hatoum & Belle, 2004). Recent research (e.g., Karazsia & Crowther, 2008; Pritchard & Crandall, 2014) further indicates that athletic-ideal internalization, defined as adherence to athletic standards and muscular figures portrayed in the media (Thompson, van den Berg, Roehr, Guarda, & Heinberg, 2004), has more influence on men’s drive for muscularity than general internalization (i.e., a desire to look like popular icons in the media regardless of their level of muscularity; Thompson et al., 2004). This research highlights the importance of empirically differentiating between the two aspects of media internalization.

Racial/Ethnic Factors and Asian American Men’s Drive for Muscularity

Racial Discrimination

In addition to the media propaganda of the muscularity ideal in most American men’s daily context, racial experiences unique to Asian American men may also be critical in shaping their body image. In particular, despite Asian Americans’ long history in the United States and the fact that they are the fastest growing racial minority in the country (U.S. Census Bureau, 2012), many Asian Americans report experiences of racial discrimination and denigrating stereotypes (Yoo, Steger, & Lee, 2010). Racial discrimination refers to unfair treatment by others because of one’s membership in a racial group (Yoo et al., 2010) and has been linked to a range of mental health issues (e.g., anxiety, depression, psychological distress) in Asians and Asian Americans (for a review, see Lee & Ahn, 2011). The role of racial discrimination in men’s drive for masculinity and related concerns (e.g., body dissatisfaction, disordered eating), however, has yet to be examined. Nevertheless, emerging literature indicates that Asian and Asian American men reported higher drive for muscularity and lower body satisfaction than did Whites and Blacks (Barnett et al., 2001; Grammas & Schwartz, 2009; Kelly et al., 2015; Keum et al., 2015), suggesting that unique racial/ethnic experiences, such as discrimination, may play a role in vulnerability to muscularity and body image concerns (Kelly et al., 2015).

Because racial discrimination involves the suppression of racial/ethnic minority men in the societal structure of hegemonic masculinity (Lu & Wong, 2013), experience with discrimination may increase drive for muscularity in Asian and Asian American men as they attempt to assert power and social status (Kelly et al., 2015; Wong et al., 2012). For example, prominent stereotypes of Asian American men in U.S. society include perceptions that they are effeminate, asexual, lacking in masculinity, and physically weak (Iwamoto & Liu, 2009; Wong, Horn, & Chen, 2013). Therefore, to the extent that some of the most salient features of racism against Asian American men are characterized by emasculation (Liu & Chang, 2007), drive for muscularity might be one of the means...
Acculturation and Enculturation

Other racial/ethnic and sociocultural contexts that are frequently postulated to play an important role in Asian American men’s drive for muscularity and body image concerns are acculturation and enculturation (Kelly et al., 2015; Keum et al., 2015; Ricciardelli et al., 2007). Acculturation refers to the process through which individuals experience contact between their original culture and another culture that results in changes and adaptations in personal values, beliefs, behaviors, and ways of life to better fit the new cultural context (Berry, 1997; Ryder, Alden, & Paulhus, 2000). By contrast, enculturation refers to individuals’ adherence to their culture of origin (Kim, 2007). Although a unidimensional model of acculturation posits that acquisition of new cultural standards results in relinquishment of enculturated practices (e.g., Gordon, 1964), a bidimensional model holds that obtaining beliefs, values, and customs from the host culture does not necessarily result in discarding one’s world view from the culture of origin (e.g., Berry, 1997). Empirical findings indicate that the bidimensional model captures the phenomenon of acculturation more accurately and thoroughly than the unidimensional model (Abe-Kim, Okazaki, & Goto, 2001; Miller, 2010; Ryder et al., 2000; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). Thus, both enculturation and acculturation (Ryder et al., 2000) should be considered when examining cultural influences on one’s drive for muscularity. Indeed, researchers found that Asian American men encounter distinctive stressors because they are expected to meet not only the mainstream cultural standards but also their heritage, Asian cultural norms regarding masculinity (Lu & Wong, 2013).

It is likely that both heritage and mainstream cultural norms influence men’s views about physical attractiveness, masculinity, and manhood (Watt & Ricciardelli, 2012). However, their influence may be in opposite directions. Specifically, although mainstream American culture is observed to prize masculinity as a reflection of masculinity (Lu & Wong, 2013; Yang, Gray, & Pope, 2005), traditional Asian cultures are thought to hold different ideals of masculinity that do not embrace the muscular physique as a prime feature of male attractiveness and desirability. For example, traditional Chinese concepts of masculinity value cerebral qualities (e.g., wisdom, mental strength, literary/cultural attainment) over muscular appearance (Louie, 2002; Yang et al., 2005). Indeed, Ng, Tan, and Low (2008) found that only 5% of the Asian men surveyed in several different countries considered physical attractiveness or having a macho body an important feature of masculinity. Thus, it is possible that the stronger an Asian American man adheres to his Asian heritage’s cultural norms, the less likely he is to endorse masculinity ideals of the mainstream American culture. In contrast, Asian American men who are more acculturated to majority societal values may be more likely to demonstrate a drive for pursuing muscular body types. Although researchers have yet to test these assertions directly, related findings support a link between acculturation and drive for muscularity. Specifically, a study in the United States found that male Chinese college students with greater levels of acculturation to the mainstream American culture (measured unidimensionally) scored higher on the perfectionism subscale of the Eating Disorder Inventory (Davis & Katzman, 1999). Other studies found that perfectionism predicted muscle preoccupation among boys (Saling, Ricciardelli, & McCabe, 2005) and body image dissatisfaction among college men (Grammas & Schwartz, 2009).

Domains of Drive for Muscularity

Beyond the identification of media influences and racial/ethnic factors, it might also be important to delineate between different domains of Asian American men’s drive for muscularity. Researchers have found that the behavioral aspects of drive for muscularity are associated with the use of potentially harmful muscle-building strategies, such as abusing anabolic steroids and supplements (Litt & Dodge, 2008; Olivardia et al., 2000; Parent & Moradi, 2011). On the other hand, the attitudinal aspects of drive for muscularity have been linked to a range of mental health concerns, such as depression and eating disorder symptomatology (Grossbard et al., 2013; Olivardia et al., 2004). Moreover, several studies have found that drive for muscularity attitudes and behaviors are only moderately correlated together (e.g., Cafri & Thompson, 2004; Leone et al., 2015), suggesting that they may be measuring different constructs. Most available studies, with few exceptions (e.g., Hatoum & Belle, 2004), do not differentiate
between muscularity attitudes and muscularity behaviors in their primary analyses, although a recent study suggests that these two constructs may be more distinct for Asian American than White men (Keum et al., 2015). Indeed, Keum et al. specifically recommended that future research address Asian American men’s muscularity attitudes and behaviors as separate outcomes.

The Present Study

Informed by the foregoing literature, we advanced the following hypotheses regarding Asian American men. First, we posited that the two media internalization variables (i.e., general internalization and athletic-ideal internalization) would be positively associated with drive for muscularity. Second, to examine the unique relevance of racial/ethnic factors, we hypothesized that general racial discrimination, perpetual foreigner racism, and mainstream-culture acculturation would positively predict drive for muscularity above and beyond the two media internalization variables. In contrast, our third hypothesis posited that heritage-culture enculturation would negatively predict drive for muscularity. In testing these hypotheses, we controlled for body mass index (BMI), generation status in the United States, and ethnicity because previous research has shown that these variables might be associated with muscularity and body image concerns (Jung, Forbes, & Chan, 2010; Ricciardelli et al., 2007; Yates, Edman, & Aruguete, 2004). In addition, we controlled for global self-esteem, which has been identified as a potential driving force in anxiety about men’s physical appearance, as well as drive for muscularity (Brunet, Sabiston, Dorsch, & McCreary, 2010). Finally, we examined the attitudinal and behavioral domains of drive for muscularity as distinct criterion variables (Keum et al., 2015) to provide a more nuanced understanding of these concerns as they relate to Asian American men.

Method

Procedures and Participants

After our receipt of institutional review board approval, data were collected via an anonymous, secure online survey at a large public university in the Midwest. The university registrar contacted all students who identified as Asian or Asian American men with a targeted e-mail inviting them to participate in exchange for a chance to win one of ten $25 gift cards or one $100 gift card. A total of 536 noninternational Asian and Asian American students out of the 2,596 contacted participated in the survey, suggesting an approximate response rate of 21%. Among the 536 students who submitted the survey, 338 completed each measure and passed the validity-check items. Participants’ mean age was 21.6 years (SD = 3.69). A wide range of ethnicity groups was present in the sample, including Chinese (35%), Asian Indian (21%), Korean (15%), Taiwanese (11%), and “other” ethnicities (18%). The “other” category consisted of Bangladeshi, Cambodian, Filipino, Hmong, Japanese, Malaysian, Pakistani, Vietnamese, multiple Asian ethnicities (e.g., Chinese and Korean), and biracial Asian groups. These groups were combined into the “other” category because of small sizes in each group (i.e., n = 1 to n = 12). In terms of generation status in the United States, most participants were second generation (65%), followed by 1.5 generation (28%), first generation (4%), and third generation and above (3%).

Measures

Demographics and BMI. Participants completed a short demographic form inquiring about age, ethnicity, height, weight, and generational status. Participants’ self-reported weight and height were used to calculate BMI. We also embedded four validity-check items in the survey to monitor for inattentive responding (e.g., “Thanks for paying attention to our survey so closely, please select option ‘5’ here.”).

Drive for muscularity. Participants’ drive for muscularity was assessed using a modified version of the Drive for Muscularity Scale (DMS; McCreary & Sasse, 2000). The original DMS is an empirically derived 15-item scale measuring men’s motivations and behaviors for becoming more muscular. It is comprised of two subscales: Attitudes (7 items; “I think I would feel more confident if I had more muscle mass.”) and Behaviors (8 items; “I lift weights to build my muscle.”). Each item is scored using a 6-point Likert-type scale ranging from 1 (never) to 7 (always), and higher scores indicate greater drive for muscularity. Initial evidence for the validity of the DMS has been supported by studies of body-building behaviors (McCreary & Sasse, 2000) and an analysis of the factor structure of the instrument (McCreary, Sasse, Saucier, & Dorsch, 2004) in adolescent populations. McCreary and Sasse (2000) reported good internal consistency estimates for the behavioral (α = .88) and attitudinal (α = .81) DMS subscales.

Recent research has called into question the factor structure of the original DMS for Asian and Asian American men. Specifically, Keum et al. (2015) found that the original 15 items provided a poor fit to the data in confirmatory factor analysis with a sample of Asian and Asian American men. Keum et al. noted that an exploratory factor analysis suggested that the removal of three behavioral items might increase model fit in subsequent samples, but they did not reconfirm the model in a subsequent confirmatory factor analysis (CFA). Accordingly, we performed a CFA with maximum likelihood estimation using the modified DMS proposed by Keum et al. (2015) in which items 4 (“I drink weight-gain or protein shakes”), 5 (“I try to consume as many calories as I can.”), and 10 (“I think about taking anabolic steroids.”) were omitted. The results of the model approached an acceptable fit, χ²(53, N = 346) = 237.69, p < .001, confirmatory fit index (CFI) = .921, standardized root-mean-square residual (SRMR) = .08, root-mean-square error approximation (RMSEA) = .10, 90% confidence interval (CI) [.088, .114]. However, item 12 (“I think that my weight training schedule interferes with other aspects of my life”) loaded poorly (.18) on the behaviors factor. Moreover, although the two-factor model explained between 30% and 80% of the variance in each item, the model explained only 10% of the variance for item 12. As such, we removed item 12 from the model, and this yielded a more acceptable fit to the data, χ²(43, N = 346) = 195.362, p < .001, CFI = .934, SRMR = .06, and RMSEA = .10 (90% CI = .087, .116). The modified version of the DMS—in which items 4, 5, 10, and 12 were omitted—correlated highly with the original DMS (r = .95). Internal consistency estimates for the present sample were acceptable for the Attitudes subscale (α = .94) and the Behaviors subscale (α = .80).
Media internalization. Participants’ internalizations of media images of the ideal body were assessed by the General Internalization subscale (9 items; “I would like my body to look like the people who are on TV.”) and the Athletic-Ideal Internalization subscale (5 items; “I wish I looked as athletic as sports stars.”) of the Sociocultural Attitudes Toward Appearance Scale–3 (SATAQ-3; Thompson et al., 2004). Individuals rated each item using a Likert-style scale ranging from 1 (definitely disagree) to 5 (definitely agree). Higher scores indicated greater body image-ideal internalization. Thompson et al. (2004) provided initial support for the construct validity of the SATAQ-3 subscales, which demonstrated excellent convergent validity with measures of body image and eating disturbance and yielded excellent internal consistency coefficients (α ≥ .95) for each subscale in a sample of adolescent females. The SATAQ-3 is a widely used measure, and subscale scores have been associated with greater drive for muscularity in college men (e.g., Pritchard & Cramblitt, 2014) and college male athletes (e.g., Galli, Petrie, Reel, Chatterton, & Baghurst, 2014). In the present study, internal consistency estimates were excellent for the General Body-Image Internalization subscale (α = .96) and the Athletic-Ideal Internalization subscale (α = .90).

Acculturation/enculturation. Participants’ level of acculturation/enculturation was assessed by the Vancouver Index of Acculturation (VIA; Ryder et al., 2000). The VIA consists of 20 items assessing the extent to which respondents participate in and identify with the nondominant (i.e., heritage) and dominant (i.e., mainstream) cultures. Items are divided into two subscales of 10 items each: the Mainstream American Culture Acculturation subscale (e.g., “I often participate in mainstream American cultural traditions.”) and the Ethnic-Culture subscale (e.g., “I often participate in my heritage’s cultural traditions.”). Individuals rated each item using a Likert-style scale ranging from 1 (disagree) to 9 (agree), and higher mean scores indicated greater acculturation/enculturation in each domain. VIA scores demonstrated adequate concurrent validity with measures of time lived in the West, time educated in the West, generational status, anticipation of remaining in the West, English as a first language, Western identification, and Asian self-identity across three samples of undergraduate men and women who self-defined as Chinese or Chinese American (Ryder et al., 2000). A recent meta-analysis of studies using the VIA found that internal consistency estimates for the Ethnic-Culture Enculturation subscale ranged from .66 to .92 and from .70 to .89 for the Mainstream American Culture Acculturation subscale (Huynh, Howell, & Benet-Martinez, 2009). In the present study, internal consistency coefficient alphas were acceptable for the American Culture Acculturation subscale (α = .85) and the Ethnic-Culture Enculturation subscale (α = .89).

General racial discrimination. Participants’ level of perceived general racial discrimination was assessed by the Subtle and Blatant Racism Scale for Asian American College Students (SABRA-A2; Yoo et al., 2010). The SABRA-A2 has 8 items assessing experiences of subtle and blatant racism. The SABRA-A2 consists of a total score, which can be further broken down into two interrelated subscales of subtle racism (4 items; “In America, I am viewed with suspicion because I’m Asian.”) and blatant racism (4 items; “In America, I am called names such as ‘chink, gook, etc.’ because I’m Asian.”). For the present study, we used only the total score. Individuals rated each item using a Likert-style scale ranging from 1 (almost never) to (almost always), and higher mean scores indicated greater experiences of racism. Yoo et al. (2010) provided initial evidence for the factor structure of the SABRA-A2, and demonstrated excellent convergent validity coefficients with SABRA-A2 scores in relation to measures of mental health, psychological impacts of racism, and other experiences of discrimination in a large sample of Asian and Asian American college men and women. SABRA-A2 total scores have evidenced adequate internal consistency estimates (α = .88; Yoo et al., 2010). In the present study, the internal consistency coefficient alpha for the total scale was acceptable (α = .85).

Perpetual foreigner racism. Participants’ level of perceived perpetual foreigner racism was assessed by the Perpetual Foreigner Racism-Related Stress subscale of the Asian American Racism-Related Stress Inventory (Liang et al., 2004). The Perpetual Foreigner Racism-Related Stress subscale consists of 7 items of potential experiences of experiencing racism related to being perceived as a foreigner in the American society (e.g., “You are told that ‘you speak English so well.’”). Items are rated on a 5-point scale ranging from 1 (This has never happened to me or someone I know) to 5 (This event happened, and I was extremely upset), and higher scores indicate greater distressing experiences of racism. Liang et al. (2004) reported an internal consistency estimate of .84 for the Perpetual Foreigner Racism-Related Stress subscale, as well as excellent convergent validity coefficients with measures of minority stress, self-esteem, perceived stress, and mental health in a large sample of Asian and Asian American college men and women. In the present study, internal consistency coefficient alpha (α = .77) was acceptable.

Self-esteem. Participants’ self-esteem was assessed using the Rosenberg Self-Esteem Inventory (RSES; Rosenberg, 1965). The RSES is a 10-item scale assessing global self-esteem, with items such as “On the whole, I am satisfied with myself.” Participants rate each item using a Likert-scale ranging from 1 (strongly disagree) to 4 (strongly agree), with higher scores indicating higher global self-esteem. The RSES is a widely used measure and has been examined in a variety of different cultures. Allik (2005) found support for the construct validity and reliability of RSES scores across samples from 53 different nations, with only two samples, Tanzania and the Democratic Republic of the Congo, yielding internal consistency estimates below .70. In the present study, the internal consistency coefficient alpha was good (α = .92).

Results

Preliminary Analyses

Before conducting our primary analysis, we examined participants’ scores for missing data, univariate and multivariate outliers, and normality. The percentage of missing data in the sample ranged from 0.3 for Self-Esteem scores to 0.9 for BMI scores. Following the recommendations of Schlomer, Bauman, and Card (2010), we used a series of tests with an adjusted alpha of .006 to examine mean differences on key variables between participants with complete responses compared to participants with missing data. The results indicated that there were no significant differences in responses for missing versus complete data. Accordingly, we used available item analysis, in which total and subscale scores are calculated by taking the average of all available items, thus
resulting in scores that are free of missing data (Parent, 2013). Next, although no problematic univariate outliers were identified, and both subscales of the Drive for Muscularity Scale were normally distributed, perpetual foreigner racism and general racial discrimination scores evidenced a slight positive skew, and 10 multivariate outliers were identified using the Mahalanobis distance procedure. Given the large sample size and the normal distribution of the dependent variables, we followed the recommendations of Meyers, Gamst, and Guarino (2013) and did not perform any data transformations, and we did not delete multivariate outliers. Lastly, in order to examine the interrelationships between subscale scores, we conducted bivariate correlations. Table 1 presents the means, standard deviations, and scale intercorrelations within the sample.

**Primary Analysis: Hierarchical Regression**

Tables 2 and 3 present the results of two separate hierarchical regression analyses with DMS Attitudes scores and DMS Behaviors scores as criterion variables, respectively. To test the relative contributions of each variable on men’s drive for muscularity behaviors and attitudes while also controlling for ethnicity, generational status, BMI, and self-esteem as covariates, we first created dummy variables for each of the categorical variables. Asian Indian ethnicity (a South Asian subgroup; Kawamura, 2011) was used as the reference group for the ethnicity dummy variables because it may provide comparisons with the Chinese, Korean, and Taiwanese groups (i.e., East Asians; Kawamura, 2011) in our sample. For the generation-status dummy variables, first generation was used as the reference group. Next, we entered the covariates (i.e., BMI, self-esteem, generational status, and ethnicity) as a block at the first step, followed by general media internalization and athletic-ideal internalization at the second step, and ending with heritage-culture acculturation, mainstream-culture acculturation, general racial discrimination, and perpetual foreigner racism at the third step. In addition to examining the significance of the model at each step of the regression, we examined changes in adjusted $R^2$ at the third step to determine if adding racism and acculturation-enculturation variables increased the amount of total variance explained in DMS Attitudes and DMS Behaviors scores.

For DMS Attitudes at the first step, the model was significant, adjusted $R^2 = .12, F(9, 328) = 6.25, p = .000$. BMI ($\beta = -.20, p = .000$) and self-esteem ($\beta = -.27, p = .000$) emerged as significant negative predictors. At the second step, the model was also significant, adjusted $R^2 = .33, F(11, 326) = 16.06, p = .000$. General media internalization ($\beta = .19, p = .005$) and athletic-ideal internalization ($\beta = .31, p = .000$) emerged as significant positive predictors. At the final step, the model was also significant, adjusted $R^2 = .36, F(15, 322) = 13.39, p = .000$. Although only perpetual foreigner racism ($\beta = .17, p = .003$) and mainstream American culture acculturation ($\beta = .14, p = .004$) emerged as significant predictors among the racism-related and acculturation variables entered in the model, the addition of these constructs predicted unique variance in DMS attitudes above and beyond the contributions of general media internalization and athletic-ideal internalization ($\Delta R^2 = .02, p = .020$).

For DMS Behaviors at the first step, the model approached statistical significance, adjusted $R^2 = .02, F(9, 328) = 1.86, p = .058$. Only BMI emerged as a significant predictor ($\beta = .13, p = .02$), and Taiwanese ethnicity approached significance ($\beta = -.12, p = .055$). At the second step, the model was significant, adjusted $R^2 = .20, F(11, 326) = 8.63, p = .000$, and athletic-ideal internalization emerged as a significant predictor ($\beta = .41, p = .000$). At the third step, the model was also significant, adjusted $R^2 = .21, F(15, 322) = 7.03, p = .000$. Mainstream-culture acculturation ($\beta = .12, p = .035$) and perpetual foreigner racism ($\beta = .13, p = .032$) emerged as significant predictors. The addition of racism and acculturation-related variables approached a significant increase in the amount of total variance explained by the model ($\Delta R^2 = .02, p = .062$). It should be noted that although we use a modified version of the DMS, we examined our analyses using both the original version and the Keum et al. (2015) version. Our results remained consistent across all versions of the DMS.

**Discussion**

The current study extends the male body image literature in several ways. First, we addressed drive for masculinity in an understudied population, Asian American men, to complement extant empirical knowledge that has been largely based on re-

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**Table 1**

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Note. N = 338. BMI = body mass index; SATQ-G = General Body-Ideal Internalization subscale of the Sociocultural Attitudes Towards Appearance Scale-3; SATQ-A = Athletic-Ideal Internalization subscale of the Sociocultural Attitudes Towards Appearance Scale-3; Enculturation = Heritage-Culture Acculturation subscale of the Vancouver Index of Acculturation; Acculturation = Mainstream American Culture Acculturation subscale of the Vancouver Index of Acculturation; Discrimination = Subtle and Blatant Racism Scale for Asian American College Students; PFRRS = Perpetual Foreigner Racism-Related Stress subscale of the Asian American Racism-Related Stress Inventory; DMS = Drive for Muscularity Scale.

* $p < .05$. ** $p < .01$. *** $p < .001$. 
both types of media internalization were associated with stronger minority men’s concerns over muscularity. In addition, although the role of the mainstream media in influencing both majority and minority samples (e.g., Cramblitt & Pritchard, 2013; Daniel & Bridges, 2010; Hatoum & Belle, 2004) and highlight the powerful image concerns. Moreover, our study complemented these sociocultural models by investigating racism and acculturation/enculturation factors as unique contexts for muscularity issues in Asian American men.

We found that (a) Asian American men who experienced greater perpetual foreigner racism reported higher levels of attitudes toward achieving muscularity; (b) men who were more acculturated to the mainstream culture were also more likely to endorse muscularity attitudes; (c) perpetual foreigner racism and acculturation significantly predicted drive for muscularity behaviors, but the increment of variance in muscularity behaviors only approached significance; and (d) general racism discrimination was not associated with drive for muscularity concerns in the regression models, despite having significant bivariate correlations with muscularity attitudes and behaviors. Previous studies have not specifically examined these racial and cultural variables as predictors of drive for muscularity; however, our findings are consistent with theoretical assertions maintaining that muscularity concerns in Asian American men cannot be fully understood apart from the

<table>
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<td>0.17**</td>
<td>.36***</td>
<td>.03**</td>
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Note. N = 338. Reference = Reference group; BMI = body mass index; Other ethnicity = Bangladeshi, Cambodian, Filipino, Hmong, Japanese, Malaysian, Pakistani, Vietnamese, two Asian ethnicities (e.g., Chinese and Korean), and biracial Asian; SATQ-G = General Body-Ideal Internalization subscale of the Sociocultural Attitudes Towards Appearance Scale–3; SATQ-A = Athletic-Ideal Internalization subscale of the Sociocultural Attitudes Towards Appearance Scale–3; Enculturation = Heritage-Culture Acculturation subscale of the Vancouver Index of Acculturation; Acculturation = Mainstream American Culture Acculturation subscale of the Vancouver Index of Acculturation; Discrimination = Subtle and Blatant Racism Scale for Asian American College Students; PFRRS = Perpetual Foreigner Racism-Related Stress subscale of the Asian American Racism-Related Stress Inventory.

* * p < .01, ** * * p < .001.

search with primarily White male samples (Cohane & Pope, 2001; McCready & Sasse, 2000). Second, our study is the first to attend to multiple sociocultural and racial/ethnic contexts (e.g., media, racism, acculturation) to understand Asian American men’s muscularity concerns. Third, we diagnostically investigated two types of media internalization (i.e., general vs. athletic-ideal internalization) and two domains of drive for muscularity (i.e., attitudes vs. behaviors) to provide more nuanced evidence. Finally, we considered several important psychological (e.g., self-esteem), demographic (e.g., ethnicity, generation status), and physical characteristics (e.g., BMI) as covariates in our analyses to provide more rigorous evaluation of the sociocultural and racial/ethnic factors as predictors of drive for muscularity.

Findings supported our first hypothesis in that we found (a) Asian American college men who reported more desire to look like the popular icons in the media (general internalization) and men who subscribed more strongly to the media athletic body ideals (athletic-ideal internalization) reported greater levels of drive for muscularity attitudes; and (b) Asian American men with a stronger adherence to the media athletic ideals were also more likely to engage in behavioral strategies to gain muscle mass. The present findings are consistent with previous studies based on primarily White samples (e.g., Cramblitt & Pritchard, 2013; Daniel & Bridges, 2010; Hatoum & Belle, 2004) and highlight the powerful role of the mainstream media in influencing both majority and minority men’s concerns over muscularity. In addition, although both types of media internalization were associated with stronger muscularity attitudes, only the athletic-ideal internalization was found to predict muscularity behaviors. This differential finding is in line with prior research (Karazsia & Crowther, 2008; Pritchard & Cramblitt, 2014) indicating that athletic-ideal internalization may be especially influential on drive for muscularity. Thus, our findings are in overall agreement with sociocultural perspectives (e.g., Hargreaves & Tiggemann, 2004; Pope et al., 1999) that emphasize the complicit role of Western media in men’s body image concerns. Moreover, our study complemented these sociocultural models by investigating racism and acculturation/enculturation factors as unique contexts for muscularity issues in Asian American men.
unique contexts within which these men are embedded (Kelly et al., 2015; Keum et al., 2015; Lu & Wong, 2013; Ricciardelli et al., 2007).

The finding that Asian American men who encountered more racial phenotype-based racism in the form of perpetual foreigner stereotype were more vulnerable to developing increased concerns about masculinity in the present study is especially noteworthy. This pattern of results provides initial evidence for the postulation about muscularity in the present study is especially noteworthy. Of note, although perpetual foreigner racism and mainstream-racism-related stress were found to be a less relevant factor than perpetual foreigner racism in explaining muscularity concerns in Asian American men. Scholars have contended that perpetual foreigner racism is a group-specific exclusion that inflicts Asian Americans more so than other groups (Suzuki, 2002; Takaki, 1998). The present findings concur with these assertions by revealing that this distinct form of racism is particularly critical for Asian American men’s drive to approximate the Western aesthetic male physique—a drive that may be motivated by the need to compensate for the unchangeable Asian racial attributes (Barnett et al., 2001) marginalized by mainstream society (Iwamoto & Liu, 2009; Wong et al., 2013).

In addition to racism, our findings also highlight acculturation as an important context for masculinity concerns. We found that Asian American men who were more acclimated to mainstream cultural values and practices were more likely to demonstrate preoccupations related to muscle enhancement. Because masculinity is greatly admired by Western hegemonic male culture as a reflection of masculinity (Connell & Messerschmidt, 2005; Lu & Wong, 2013), highly acculturated Asian American men may be more likely to conform to the majority culture’s standards of attractiveness and manhood than their less acculturated peers, thus resulting in a greater likelihood to endorsing body image beliefs that are unrealistic and engaging in body building behaviors that are potentially harmful. Our finding concurs with related literature suggesting that greater levels of acculturation are associated with more perfectionist beliefs about body image (Davis & Katzman, 1999), which, in turn, is associated with muscle preoccupation (Salting et al., 2005) and body image dissatisfaction (Grammas & Schwart, 2009) among males.

Of note, although perpetual foreigner racism and mainstream-culture acculturation were significantly associated with masculinity attitudes and behaviors, they only explained extra variance in masculinity attitudes, but not masculinity behaviors, above and beyond media internalization variables and covariates. This suggests that these two racial/cultural variables may be more influential on masculinity attitudes rather than behaviors, thereby concurring with research indicating that masculinity attitudes and behaviors may be distinct and should be treated as separate outcomes (Keum et al., 2015). Given that many of the attitudinal

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**Table 3**

**Summary of Hierarchical Regression Analyses Predicting Drive for Muscularity Behaviors**

<table>
<thead>
<tr>
<th>Step Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>Adjusted $R^2$</th>
<th>Δ$R^2$</th>
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<td>−.09</td>
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<tr>
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<td>−.12</td>
<td>.19</td>
<td>−.04</td>
<td></td>
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</tr>
<tr>
<td>Taiwanese</td>
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<td>.20</td>
<td>−.12</td>
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</tr>
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<td>Third generation and above</td>
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<td></td>
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<td>.22</td>
<td>.10</td>
<td>.13*</td>
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**Note.** $N = 338.$ Reference = Reference group; BMI = body mass index; Other ethnicity = Bangladeshi, Cambodian, Filipino, Hmong, Japanese, Malaysian, Pakistani, Vietnamese, two Asian ethnicities (e.g., Chinese and Korean), and biracial Asian. SATQ-G = General Body-Ideal Internalization subscale of the Sociocultural Attitudes Towards Appearance Scale–3; SATQ-A = Athletic-Ideal Internalization subscale of the Sociocultural Attitudes Towards Appearance Scale–3; Enculturation = Heritage-Culture Acculturation subscale of the Vancouver Index of Acculturation; Acculturation = Mainstream American Culture Acculturation subscale of the Vancouver Index of Acculturation; Discrimination = Subtle and Blatant Racism Scale for Asian American College Students; PFRRS = Perpetual Foreigner Racism-Related Stress subscale of the American American Racism-Related Stress Inventory.

* $p < .05.$ ** $p < .001.$
items on the DMS appear to be tapping insecurities in one’s body type (e.g., “I think I would feel more confident if I had more muscle mass.”), one intriguing possibility is that the combination of mainstream American acculturation and experiences of feeling as though one does not look American (i.e., perpetual foreigner racism-related stress) are particularly relevant to body image insecurity.

Further research is needed to identify important conceptual and empirical differences between the two facets of drive for muscularity.

In contrast with acculturation to the mainstream culture, our third hypothesis posited that Asian American men who adhered more strongly to their Asian heritage cultural norms (i.e., enculturation) would be less likely to endorse drive for muscularity attitudes and behaviors because traditional Asian cultures do not emphasize muscularity but instead favor cerebral qualities as desirable reflections of masculinity (Louie, 2002; Yang et al., 2005). Results of our study, however, showed that enculturation was not associated with drive for muscularity variables. The null findings suggest that enculturation may not be as relevant as acculturation in understanding body image development in Asian American college men.

In addition to our main variables of interest, we identified several notable findings concerning the covariates in our models. For instance, we found a significant and negative association between self-esteem and drive for muscularity attitudes but not behaviors. Although some prior studies also indicated a negative association between self-esteem and drive for muscularity (e.g., Brunet et al., 2010; Olivardia et al., 2004), others reported null associations (e.g., Grieve & Helmick, 2008). It is noted, however, that previous studies have not differentially examined the two domains of drive for muscularity in relation with self-esteem, which may explain why a recent review of drive for muscularity research found inconsistent associations between self-esteem and drive for muscularity across studies (Edwards, Tod, & Molnar, 2014). Similarly, mixed findings were revealed for BMI in that higher BMI was associated with higher muscularity behaviors but with lower muscularity attitudes. We could not find any studies that have differentially examined BMI with muscularity attitudes and behaviors. Furnham, Badmin, and Sneade (2002) argued that because some men desire to gain weight while others wish to lose weight, weight concerns and muscularity issues may be intertwined, resulting in an inconsistent link between BMI and drive for muscularity. Future studies need to differentiate between muscularity attitudes and behaviors as well as consider using the fat-free mass index (Kouri, Pope, Katz, & Oliva, 1995) that may better clarify the associations between physical attributes and muscularity concerns than BMI. Regarding the covariates of generation status and ethnicity, some previous studies suggest that these demographic factors might be associated with body image issues (Jung et al., 2010; Ricciardelli et al., 2007; Yates et al., 2004). In particular, Kelly et al. (2015) argued that research attention to generational differences is needed because immigrants and U.S.-born individuals likely have varying levels of exposure to U.S. male body image ideals. Nevertheless, we found no connections between these demographic variables and drive for muscularity concerns. However, this null finding could be due to insufficient statistical power inherent in subgroup sample size problems that are discussed below in the Limitations and Directions for Future Research section.

**Limitations and Directions for Future Research**

Several limitations should be addressed before discussing the practical implications of the present findings. First, our findings are based on one sample recruited from a large public university in the Midwest and may not be generalizable to Asian American college men in other geographical areas or other types of institutions. Second, the present study’s use of cross-sectional design precludes confirmation of chronological sequence or test of causality among the research variables. Next, although we recruited an ethnically diverse Asian American sample and the effects of ethnicity were examined in the analyses, some notable group size differences existed (e.g., 120 Chinese vs. 39 Filipino). Similar issues existed for generation status. These unequal group sizes could have confounded accurate estimation of the effects of ethnicity and generation status. A related concern is that there were many Asian American ethnicities (e.g., Cambodian, Filipino, and Japanese) that were categorized in the “other ethnicities” category. The small sample size for these ethnicities precluded a more fine-grained analysis of ethnic differences, a concern that we hope future research with larger samples can address. Finally, the amount of explained variance was 36% for muscularity attitudes and 21% for muscularity behaviors in our study, representing medium effect sizes (Cohen, 1992). As discussed in the following paragraph, we may have missed other factors that could explain larger effect sizes. Nevertheless, our study represented a first step in bridging media and racial/cultural factors with drive for muscularity concerns in Asian American men.

Building on our multicontextual framework (e.g., media, racism, acculturation), future studies could expand this model to integrate potential risk factors from sociocontextual, psychological, and developmental contexts. For example, an integration of developmental and contextual perspectives might be promising. A hallmark developmental task for many college students is romantic relationship exploration and establishment (Arnett, 2000; Erikson, 1968). Because Asian American men are frequently racialized and stereotyped for lacking romantic and sexual competencies (Larson, 2006; Wilson et al., 2009; Wong et al., 2012), it might be important to examine how such stereotyping may influence or interact with their romantic or relational concerns (e.g., attachment insecurity) to inform drive for muscularity. For instance, contextual stressors of perpetual foreigner racism and sexual inadequacy stereotyping may intensify potential connections between attachment issues and drive for muscularity concerns in Asian American men. Related research with women has indicated a positive association between romantic attachment anxiety and body image dissatisfaction (Cheng & Mallinckrodt, 2009; Patton, Beaujean, & Benedict, 2014).

Another promising line of inquiry lies in a more nuanced approach to the examination of potential within-group differences (e.g., ethnicity, generation status) and consideration of the intersectionality of multiple contexts and identities. For example, future studies could examine how acculturation and racism variables intersect with gendered variables (e.g., conformity to masculine norms) to increase muscularity concerns in Asian American men as recent research has found a positive association between con-
formity to traditional masculine norms and muscle dissatisfaction (Griffiths, Murray, & Touyz, 2015). Moderated mediation designs based on longitudinal data may be especially helpful for shedding light on potential etiological links and chronological orders among the variables examined in the present study. For example, mainstream-culture acculturation or perpetual foreigner racism may longitudinally increase tendencies to adopt media body image ideals, which may in turn result in stronger desires to attain muscular body types; furthermore, this mediation mechanism may be moderated by generation status. Specifically, the associations among these variables might be stronger for U.S.-born Asian American men (who would likely have greater exposure to U.S. media body image ideals) than their immigrant counterparts. Supporting this speculation, research with Asian American women found that experiencing racial/ethnic teasing (i.e., teasing of racial/ethnic physical features) was associated with greater internalization of media beauty ideals, which was then associated with more body dissatisfaction and disordered eating (Cheng, 2014).

Practice Implications

Despite the study limitations, our findings offer several practice implications. Sociocultural approaches of counseling informed by racial/ethnic considerations may be especially useful for therapists to help their Asian American male clients untangle potential etiological influences of media, racism, and acculturation on masculinity-related body image concerns. Specifically, given the critical role of media internalization revealed in our study, it is important to help clients examine how the mainstream media’s prescriptions of male attractiveness, particularly the emphasis placed on athletic ideals, may promote emotional distress and behavioral strivings surrounding the achievement of more muscular physiques. Of equal importance is helping clients discern the media’s preferences for Eurocentric body norms and marginalization of Asian male images and how such racialized practices may have increased the clients’ body image inferiority and drive for masculinity (Lu & Wong, 2013; Wong et al., 2012).

In addition to helping clients scrutinize and resist media propaganda on how they should view and treat their body, the current findings suggest that confronting perpetual foreigner racism and examining acculturation-related issues may further help clients overcome masculinity concerns, particularly insecure attitudes and distress about masculinity levels. Examining possible experiences of being repeatedly stereotyped as foreigners and exploring deeper thoughts and feelings related to such experiences may increase awareness of potential internalized racism that may have fueled compensatory attitudes and behaviors toward gaining masculinity when negotiating the marginalized status of Asian males in the U.S. hegemonic hierarchy. Such awareness may block potential etiological influence of perpetual foreigner racism on masculinity concerns. Similarly, it may prove useful to understand clients’ processes of acclimating to the mainstream American society, particularly how they interpret the mainstream cultural messages about masculinity and masculinity. Mindful examination of acculturation-related beliefs and practices might enhance abilities and confidence in selectively adopting the mainstream cultural norms so that potentially oppressive and unhealthy norms (e.g., masculinity equals masculinity) would not affect one’s body image. Such attention to racism and acculturation issues is consistent with best-practice suggestions on counseling Asian American men (Liang, Rivera, Nathwani, Dang, & Dourox, 2010; D. Sue, 2005).

Finally, because Asian American college students, particularly males, tend to report the highest levels of stigma and the lowest rates of seeking professional psychological help relative to other racial/ethnic groups (Cheng, Kwan, & Sevig, 2013; Eisenberg, Downs, Golberstein, & Zivin, 2009), alternative practices, in addition to counseling, are necessary to address masculinity and related mental health concerns. Outreach presentations, Internet-based interactive programs, and psychoeducational workshops may be less stigmatizing to Asian American college men. These alternative interventions and interventions could involve developing consciousness awareness activities for Asian college men about the Eurocentric definitions of masculinity and how they are portrayed in Western media of the ideal male body. Likewise, providing information about racial hierarchy and majority–minority cultural adaptation may help some Asian men identify the systemic reasons they are inundated with Western ideals of masculinity. These programs could supplement other activism endeavors that promote appreciation of diverse body types, reject unhealthy media messages and racialized images, and confront the public’s stereotyping and ostracizing of Asian American (and other minority) men to encourage health and social justice for all men.

References


Received July 5, 2015
Revision received September 7, 2015
Accepted October 13, 2015