# Drive for Muscularity and Help-Seeking: The Mediational Role of Gender Role Conflict, Self-Stigma, and Attitudes

Caitlin B. Shepherd and Kathryn M. Rickard Colorado State University

Men with greater gender role conflict (GRC) tend to exhibit a variety of body image concerns, including a drive for muscularity (DM). In accordance with the theory of planned behavior (TPB), men with higher levels of GRC also report negative attitudes and a lack of intentions to seek help for problems. Additionally, prior research regarding other individual and contextual help-seeking related variables has shown that men with higher GRC report increased stigma of both seeking help and having mental health problems, as well as greater concrete barriers to help-seeking. In this study, 176 undergraduate men were assessed for GRC, DM, and help-seeking-related variables including attitudes, intention to seek help, self-stigma of seeking help, self-stigma regarding mental health problems, and concrete barriers to seeking help. Results indicate that GRC is positively correlated with DM and negatively correlated with help-seeking variables. Mediation analyses suggest a relationship between DM, GRC, and help-seeking. Specifically, results demonstrate that GRC mediates the relationship between DM and intentions to seek help, thus explaining why men with body image concerns may be less likely to utilize treatment. In addition, self-stigma of seeking help and attitudes toward seeking help emerged as mediating factors between GRC and intentions to seek help. Intervention strategies aimed at increasing help-seeking behavior for men who suffer from body image concerns, and disordered eating and exercise behaviors, may benefit from targeting stigmatization and attitudes toward seeking help.

Keywords: gender role conflict, drive for muscularity, help-seeking, theory of planned behavior, men

The study of masculinity and its impacts on men's mental health has become a major topic of research in the field of men's psychology. A number of theories have been proposed to explain how men learn gender, how masculinity contributes to mental health outcomes for men, and how masculinity may also, in turn, impact men's likelihood of seeking help. The purpose of the present study was to gain a better understanding of the connections between rigid masculine gender roles, body image concerns, and help-seeking in men, and to identify possible mediators within these relationships.

One of the most influential contributions to the study of men and masculinity has been the identification of gender role conflict (GRC) and the development of the Gender Role Conflict Scale (GRCS) by O'Neil, Helms, Gable, David and Wrightsman (1986). GRC is defined as a tension that arises for men between masculine gender role socialization and both physical and mental health outcomes. The GRC concept asserts that when men adopt rigid masculine gender roles, they experience detrimental health effects. O'Neil et al. (1986) partitioned GRC into four empirically derived patterns of masculinity ideologies centered on the fear of femininity, thus creating the following subscales: Success/Power/ Competition (SPC), Restrictive Emotionality (RE), Restrictive Affectionate Behavior between Men (RABM), and Conflict between Work and Family relations (CWF). Studies have used both the full GRC scale as well as the subscales in examining correlates of socialized masculine gender roles and the relationship to mental health issues.

The concept of GRC may provide some clues as to why men experience negative mental

This article was published Online First October 24, 2011. Caitlin B. Shepherd and Kathryn M. Rickard, Department of Psychology, Colorado State University.

Correspondence concerning this article should be addressed to Caitlin B. Shepherd, Department of Psychology, Colorado State University, 1876 Campus Delivery, Fort Collins, CO 80523-1876. E-mail: caitlin.shepherd@colostate.edu

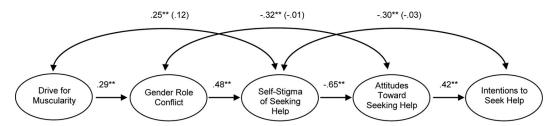


Figure 1. Standardized regression coefficients for the analyzed mediation models. The standardized regression coefficients when controlling for mediators are in parentheses. \*\* p < .01.

health outcomes. Research using the GRCS has supported the claim that GRC may be partially responsible for negative mental health outcomes for men, such as depression; anxiety; stress; low self-esteem; substance abuse; alexithymia; feelings of shame, guilt, failure and pessimism; interpersonal relationship difficulties; and psychological distress (O'Neil, 2008; Shepard, 2002). A few studies have specifically supported the connection between GRC and mental health problems related to body image issues, and disordered eating and exercise patterns (McCreary, Saucier, & Courtenay, 2005; Schwartz & Tylka, 2008). In particular, studies utilizing the GRCS have found that GRC is negatively related to body esteem and positively related to a desire to be more muscular. This relationship is further substantiated by studies that have used constructs and scales similar to the GRCS (Frederick et al., 2007; Mussap, 2008: Tager, Good, & Morrison, 2006). This research has shown that men who endorse conventional male gender roles are more likely to support a muscular ideal for men, desire a more muscular body for themselves, want decreased body fat, and have lower levels of body satisfaction and self-acceptance.

As a whole, findings from these studies reveal that men who experience GRC may be at greater risk for developing mental health problems, including body image and disordered eating and exercise behaviors. While previous research on eating disorders and related variables has focused primarily on women, recent attention has shifted toward men (Freeman, 2005). Current statistics show that about 5% to 15% of those presenting for eating disorder treatment are men; however, it is estimated that only about 16% of men with eating disorders actually seek treatment. These statistics demonstrate that

though eating disorders are an area of concern for men, many are not seeking help to address these issues. There is, additionally, a large population of men who suffer from severe body image dissatisfaction but who do not meet formal criteria for eating disorder diagnosis (Frederick, Peplau, & Lever, 2006; McCabe & Ricciardelli, 2004; Olivardia, Pope, Borowiecki, & Cohane, 2004; Ridgeway & Tylka, 2005; Tiggemann, Martins, & Kirkbride, 2007). For example, Frederick and colleagues (2006) conducted a public Internet survey of 25,714 men and found that only approximately half of the respondents were satisfied with their weight. The results also confirmed that men who were underweight or overweight were most likely to be dissatisfied with their bodies and that an overwhelming 90% of men in the study expressed a desire to be more muscular. Studies such as this one suggest that understanding men's body image concerns is not a simple task; while some men want to gain weight, others want to lose weight. Yet, based on these findings, it appears that the majority of men do desire more muscular bodies.

Due to the scope and complexity of male body image concerns, accurate methods of measuring male body image have become increasingly crucial. In the past, most research examining men and body image utilized female-oriented scales such as the Eating Disorders Inventory and the Eating Attitudes Test, which focus on lower body areas and weight gain prevention behaviors (Cafri & Thompson, 2004). However, these measures do not yield valid measurements of male body image variables because they do not focus on the desire to build muscle. The creation of specific maleoriented body image scales, such as the Drive for Muscularity Scale (DMS), allows research-

ers to more precisely measure male body image and begin to understand how it relates to other variables (McCreary, Sasse, Saucier, & Dorsch, 2004). The DMS consists of items focusing on upper body areas, the desire to increase muscularity, and behaviors that potentially enhance muscularity. This scale was created for, and has been used to assess, body image concerns of nonclinical samples of adolescent and collegeaged males (McCreary et al., 2004). In a sample of 157 college students, results indicated that men had higher levels of the drive for muscularity than females, and that the DMS had good reliability and validity (McCreary et al., 2004). Furthermore, in an evaluation of assessment methods for male body image, the DMS was recommended as the most effective measure, and thus it is frequently used in empirical studies (Cafri & Thompson, 2004).

Although statistics show that many men are experiencing body-image-related concerns, especially an increased drive for muscularity, men tend to be reluctant to talk about their body image and the change techniques they employ (Hargreaves & Tiggeman, 2006). Studies have found that men are particularly hesitant to acknowledge that their body issues are related to appearance, vanity, weight, dieting, or other more typically feminine activities and worries (De Souza & Ciclitira, 2005; Grogan & Richards, 2002; Hargreaves & Tiggeman, 2006). Since discussing body image has generally been viewed as effeminate and demasculinizing, men may believe that they must keep their thoughts, feelings, and behaviors on this subject to themselves in order to appear masculine (Grogan & Richards, 2002). Men are more likely to say that their body image and eating and exercise behaviors are based on health or medical concerns, since these explanations do not carry the same feminine stigma (De Souza & Ciclitira, 2005). Men are also more likely to deal with their negative self-perceptions by utilizing potentially dangerous body-change strategies, including excessive weight lifting, use of supplements or diet pills, and obsessive regulation of food intake and calories (Bottamini, 2006; Mc-Creary et al., 2004; Ridgeway & Tylka, 2005; Smolak, Murnen, & Thompson, 2005).

This stigma for men experiencing body image issues appears to make men more hesitant to share their concerns, which may, in turn, contribute to the low levels of help-seeking

behavior identified by Freeman (2005). It is clear, however, that receiving help for body dissatisfaction is imperative for men, as they may otherwise turn to risky disordered eating and exercise behaviors. Evidence suggests that psychotherapy is effective in the treatment of body image and eating-disorder-related problems in men (Fernández-Aranda et al., 2009). In order to determine how men may be encouraged to obtain psychological help for these concerns, research is needed to explore the factors that prevent men from utilizing available services. The GRC research contributes to our understanding of men's decreased help-seeking for mental health problems, including body image issues. O'Neil (2008) cited 18 studies that found significant negative relationships between GRC and help-seeking. Results from these studies demonstrate that GRC is associated with negative attitudes toward seeking help, negative perceptions of treatment helpfulness, negative mood reactions to treatment brochures, and preference for nontraditional counseling methods such as classes, workshops, and online techniques (Blazina & Marks, 2001; Cusack, Deane, Wilson, & Ciarrochi, 2006; Good, Dell, & Mintz, 1989; Robertson & Fitzgerald, 1992; Rochlen, Blazina, & Raghunathan, 2002; Rochlen, Land, & Wong, 2004; Rochlen, McKelley, & Pituch, 2006). The results of this body of research collectively validate the paradox whereby men who are experiencing greater distress may also be those who are most unwilling to seek help. Moreover, the association between higher GRC and decreased help-seeking suggests that men may not seek help when they are suffering because this behavior is not consistent with the restrictive masculine gender roles to which they ascribe.

While GRC seems to be an important element in understanding men's help-seeking, a variety of theories propose other factors that may encourage and prevent individuals from engaging in help-seeking. The Theory of Planned Behavior (TPB) is one such framework that has been commonly used by researchers to predict help-seeking behaviors. Ajzen (1985) developed this theory, contending that intentions are the central factor in determining whether or not someone will perform a behavior. Additionally, he suggested that there are three factors that predict intentions: attitudes, subjective norms, and perceived behavioral control. Attitudes refer to

how favorably an individual judges a behavior (Smith, Tran & Thompson, 2008). Ajzen (1985) proposed that while all three of these factors are integral to the theory, attitudes are the key predictor of intentions. Studies have shown that GRC is negatively related to both attitudes and intentions to seek help (Berger, Levant, Mc-Millan, Kelleher, & Sellers, 2005; Blazina & Marks, 2001; Cusack et al., 2006; Lane & Addis, 2005; Robertson & Fitzgerald, 1992; Wisch, Mahalik, Hayes, & Nutt, 1995). In addition, studies with men have found that attitudes are predictors of intentions to seek help (Komiya, Good, & Sherrod, 2000; Pederson & Vogel, 2007). Moreover, Smith et al. (2008) directly tested whether or not the TPB could explain help-seeking behavior for men who adhere to conventional male gender roles. The results of this study illustrated that attitudes toward seeking psychological help mediated the relationship between conventional male gender roles and help-seeking intentions, such that more negative attitudes were related to decreased intentions to seek help. Thus, research utilizing the TPB variables of attitudes and intentions provides some clarification as to why men who are high in GRC may be less likely to seek help.

While the TPB research sheds some light on men's decreased help-seeking behavior, Addis and Mahalik (2003) have emphasized the importance of exploring other individual and contextual variables that may impact the relationship between GRC and intentions to seek psychological help. Pederson and Vogel (2007) further stated that research is needed to analyze how these factors might mediate the relationship between GRC and intentions to seek help. They reasoned that since attempting to alter rigid socialized gender roles is a daunting task, it might prove more effective to directly target mediating factors through intervention programs for men. Based on this premise, Pederson and Vogel (2007) identified that an individual's self-stigma of seeking help partially mediated the relationship between GRC and attitudes. Self-stigma of seeking help has been linked not only to GRC but also to an individual's perceived self-stigma, and nonnormativeness regarding mental health issues, specifically alcohol abuse and depression, has also been identified as a correlate (Magovcevic & Addis, 2005). Additionally, in terms of contextual variables, concrete barriers such as lack of knowledge about available help or distrust of health care professionals have also been found to be related to GRC and attitudes toward seeking help (Mansfield, Addis, & Courtenay, 2005). Based on Pederson and Vogel's (2007) assumption, these variables may be important mediating factors between GRC and TPB variables.

The purpose of the current study was to investigate the nature of the relationships between GRC, DM, and help-seeking-related variables, including key components of TPB (i.e., intentions and attitudes) as well as possible mediators (i.e., self-stigma of seeking help, selfstigma and perceived nonnormativeness of body image concerns and concrete barriers to help-seeking). The literature suggests that GRC is correlated with body dissatisfaction and behavioral attempts to obtain the muscular ideal. Given the negative relationship between GRC and help-seeking behaviors, the implication is that men with more body image concerns are least likely to seek treatment. Specifically, this study sought to determine which variables might mediate the relationship between DM and help-seeking in order to explain the discrepancy between the number of men who identify that they experience body image disturbance and the proportion who actually present for treatment. To date, there are no published empirical works examining the connections between GRC, body image, and help-seeking behavior in men.

## **Hypotheses**

Three hypotheses were examined in this study.

Hypothesis 1: It was hypothesized that attitudes toward seeking help would mediate the relationship between intentions to seek help (dependent variable) and the following three other help-seeking variables (independent variables): self-stigma of seeking help, self-stigma and perceived nonnormativeness of body image concerns, and concrete barriers to help-seeking.

Hypothesis 2: It was hypothesized that self-stigma of seeking help, self-stigma and perceived nonnormativeness of body image concerns and concrete barriers to help-seeking would mediate the relationship between the GRC (independent vari-

able) and attitudes toward seeking help (dependent variable).

Hypothesis 3: It was hypothesized that the relationship between DM (independent variable) and other help-seeking variables (dependent variables: self-stigma of seeking help, self-stigma and perceived non-normativeness of body image concerns, concrete barriers to help-seeking) would be mediated by GRC.

#### Method

## **Participants**

An a priori power analysis using SPSS SamplePower indicated that a sample size of N = 118 would be sufficient to provide adequate power (i.e., 0.8,  $\alpha = .05$ ) to conduct the proposed analyses. In our study, 176 male college students were recruited from undergraduate introductory psychology courses at a large public university in the Western region of the United States; thus, the sample size met the requirements as indicated by the power analysis. Age of participants ranged from 18 to 30 years (M = 19.65 years, SD = 1.70). The ethnic composition of the sample was as follows: 88.1% White; 4.0% Hispanic; 2.8% Asian American; 1.7% African American; and 3.4% "Other." The participants were predominantly lower classmen: 51.1% freshman, 26.7% sophomores, 18.2% juniors, and 4.0% seniors.

#### Measures

GRC. GRC was measured using the GRCS (O'Neil et al., 1986). The questionnaire consists of 37 items that ask participants to rate their agreement with statements on a 6-point Likert scale. The GRCS contains four subscales: Restrictive Emotionality (e.g., "I have difficulty expressing my tender feelings"; Success, Power, and Competition (e.g., "I worry about failing and how it affects my doing well as a man"); Conflict Between Work and Family (e.g., "My work or school often disrupts other parts of my life: home, health, or leisure"); and Restrictive Affectionate Behavior Between Men (e.g., "Affection with other men makes me tense"). Studies have used the total score on the GRCS as an overall measure of GRC, with higher scores representing higher levels (O'Neil, 2008). The test–retest reliability of the total GRCS has been reported at .88, and internal consistencies have ranged from .73 to .91. Psychometric analyses have supported the factorial, construct, and criterion validity of the subscales.

Male body image attitudes and related behavior. Body image attitudes and related body change behaviors were measured using the Drive for Muscularity Scale (DMS). The DMS assesses attitudes (Muscle-Oriented Body Image subscale; e.g., "I wish that I were more muscular") and behaviors (Muscularity Related Behavior Subscale; e.g., "I try to consume as many calories as I can in a day") related to the desire for muscularity (McCreary & Sasse, 2000). The DMS consists of 15 items measured on a 6-point Likert scale, such that higher scores indicate a high drive for muscularity. Internal consistencies have been reported between .83 and .87, and test-retest reliability has been reported at .93 (Cafri & Thompson, 2004; McCreary et al., 2004). Convergent validity, discriminant validity, and concurrent validity have also been supported in the research (Wojtowicz & von Ranson, 2006).

Attitudes toward seeking help. Attitudes regarding seeking psychological help were measured using the shortened version of the Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS; Fischer & Farina, 1995). This scale contains 10 items (e.g., "If I believed I was having a mental breakdown, my first inclination would be to get professional attention") answered on a 4-point Likert scale. Higher scores represent a more positive attitude toward help-seeking. Internal consistency has been reported between .82 and .84, and test-retest reliability has been reported at .80 (Fischer & Farina, 1995).

Self-stigma of seeking help. Perceived self-stigma about seeking psychological help was measured with the Self-Stigma of Seeking Help Scale (SSOSHS; Vogel, Wade, & Haake, 2006). The SSOSHS includes 10 items (e.g., "I would feel inadequate if I went to a therapist for psychological help") measured on a 5-point Likert scale. Half of the items are reversescored so that higher total scores reflect greater self-stigma regarding seeking counseling and increased perceived threat to one's self-esteem for seeking help. Internal consistencies have been reported between .86 and .92, and con-

struct validity, convergent validity, and divergent validity for the SSOSHS have also been supported (Vogel et al., 2006).

Self-stigma and perceived nonnormativeness of body image concerns. Self-stigma and perceived nonnormativeness of body image and disordered eating and exercise behaviors was specifically measured using the Perceptions of Problems in Living Questionnaire (PPLQ; Magovcevic & Addis, 2005). The PPLQ was developed to assess peoples' negative perceptions of mental health concerns. Based on previous literature, the PPLQ initially included items revolving around three constructs: normativeness, stigma, and ego-centrality. After conducting a factor analysis, a two-factor structure was obtained. Thus, the PPLQ examines negative perceptions of mental health problems via these two subscales: the Self-Stigma scale (e.g., "I would be disappointed in myself for having this problem") and the Normativeness scale (e.g., "If I had this problem I would be the only one I know who had it"). For this study, participants were asked to imagine that they were experiencing body-image-related concerns and to respond to the items accordingly. Participants rate their level of agreement with each item on a 5-point Likert scale. Higher total scores reflect greater self-stigma and lower perceived normativeness of having body image and disordered eating and exercise concerns. Internal consistency has been reported at .87 for the selfstigma subscale and .66 for the normativeness subscale. The PPLQ is a new measure, and the validity and reliability for the full scale need to be further evaluated.

Concrete barriers to help-seeking. crete barriers to seeking help was assessed using the Concrete Barriers and Distrust of Caregivers subscale (CBDC) of the Barriers to Help Seeking Scale (Mansfield et al., 2005). The CBDC subscale consists of 6 items (e.g., "I wouldn't know what sort of help was available") measuring barriers such as finances, lack of knowledge about available resources, and lack of trust in caregivers, which may prevent people from seeking help. Respondents rate their agreement with a number of statements on a 5-point Likert scale. High scores on this scale indicate that the individual perceives more barriers to getting help and is therefore less likely to seek help. Internal consistencies have been reported between .77 and .79, and test-retest reliability has been reported at .95. Research has supported the convergent criterion validity of this scale (Mansfield et al., 2005).

Intentions to seek help. Intentions to seek help were measured using a modified version of the Intentions to Seek Professional Psychological Help Scale (ISPPHS; Deane, Skogstad, & Williams, 1999). The ISPPHS, as modified by Young (2004), consists of four items (e.g., "How likely are you to attend an appointment you set up with a counselor in the next 1 month?") measuring increasing levels of intentions to seek psychological help for a specified problem. In this study, participants specifically responded to questions regarding body image concerns (i.e., "How likely would you be to engage in these behaviors if you were experiencing body image concerns or eating disorder symptoms?"). Participants respond by indicating the likelihood that they would engage in each behavior on a 7-point Likert scale. Higher total scores reflect a greater overall likelihood of seeking psychological help. Internal consistencies have been reported at .95 (Young, 2004).

Random responding checks. Three items were included throughout the questionnaire packets to determine whether or not participants were randomly responding: "I am carefully reading each question and answering to the best of my ability," "I am honestly responding to every item on this questionnaire," and "I randomly responded to items on this questionnaire."

#### **Procedures**

Data collection. Approval for this study was obtained from the institutional review board at a large public university in the Western region of the United States. Participants were recruited from introductory psychology courses via the psychology department research pool and received course credit for participation. The study took approximately 30 min and was completed in small groups (i.e., 5 to 20 men) in a university classroom. Participants were provided with information about the nature of the study, specifically that the purpose was to examine college males' perceptions of body image and eating disorders and gender-role-related behaviors. In addition, they were assured anonymity and confidentiality. Participants signed the informed consent form with the knowledge that they could discontinue the study at any time without penalty. After obtaining consent, participants were asked to complete a questionnaire packet consisting of demographic questions (age, ethnicity, and class year), the GRCS, DMS, ATSPPHS, SSOSHS, PPLQ, CBDC subscale, and the ISPPHS. After participants returned their questionnaire packets, they were given a debriefing form describing the purpose of the study.

#### Results

## **Data Management and Analyses**

Data management and analyses were conducted using SPSS, Version 17.0. Regression imputation was used to replace missing data (three missing items). According to the random response detection items, none of the participants randomly responded on the questionnaires.

## **Preliminary Analyses**

### Descriptive data and variable correlations.

Means and standard deviations were calculated in order to determine whether or not the sample was comprised of individuals experiencing a range of GRC and DM. For both GRC (M = 126.90, SD = 23.21) and DM (M = 46.85, SD = 14.72), the mean was found to be within the moderate range, with individuals receiving more minimal, as well as more elevated, scores on both of these measures. Therefore, the sample is comprised of individuals experiencing a broad range of GRC and DM scores, allowing

the hypotheses to be tested. To test the first and second hypotheses, that GRC would be positively related to DM and correlated with help-seeking related variables, a number of correlation analyses were conducted. Table 1 shows the means, standard deviations, and intercorrelations for GRC, DM, and help-seeking-related variables.

Internal consistency. Table 1 also shows internal consistency estimates for variables. For the ISPPHS, analyses revealed that the scale was not internally consistent,  $\alpha = .52$ . Removing Item 4 from the ISPPHS resulted in a more reliable scale,  $\alpha = .94$ . This item read, "How likely are you to attend an appointment you set up with a counselor in the next 1 month?" In examining participant responses, many indicated that it was "very unlikely" or "unlikely" that they would "seek information in the next 1 month regarding counseling," "contact (i.e., phone, e-mail) a counselor in the next 1 month" and/or "set up an appointment with a counselor in the next 1 month"; however, those same participants rated Item 4 as "very likely" or "likely." The ISPPHS is designed to capture increasing levels of intentions; thus, if participants rated Item 4 as being likely, they should also have ranked the previous items as being likely. Item 4 is intended to determine a respondents' likelihood of actually attending a counseling appointment; however, participants' may have interpreted the question as being indicative of whether or not they would follow through on a scheduled appointment. As a result, although they may have indicated that it was unlikely that they would schedule an appointment, they may

Table 1
Means, Standard Deviations, Reliability Estimates, and Intercorrelations for Variables

Variable	М	SD	α	1	2	3	4	5	6
1. GRC-T	126.90	23.21	.90	_					
2. DM	46.85	14.72	.89	.29*	_				
3. ATSPPH	14.57	5.83	.82	$32^{*}$	08	_			
4. SSOSHS	26.20	8.27	.89	.48*	.25*	$65^{*}$	_		
5. PPLQ	42.59	9.99	.87	.35*	.14	34*	.47*	_	
6. CBDC	14.75	3.97	.66	.35*	.08	$30^{*}$	.33*	2.11*	_
7. ISPPH	5.81	4.24	.94	10	.08	.42*	$29^{*}$	03	$17^{*}$

Note. N = 176. GRC-T = Gender Role Conflict total scale; DM = Drive for Muscularity scale; ATSSH = Attitudes Toward Seeking Professional Psychological Help scale; SSOSHS = Self-Stigma of Seeking Help scale, PPLQ = Perceptions of Problems in Living Questionnaire; CDBC = Concrete Barriers and Distrust of Caregivers subscale; ISPPHS = Intentions to Seek Professional Psychological Help scale.

<sup>\*</sup> p < .05. \*\* p < .01.

have assumed that if they became motivated enough to schedule an appointment, they would follow through. Due to the possible misinterpretation of this item, all future analyses using the ISPPHS used the modified three-item version of the scale. Reliability analyses also revealed that the CBDC subscale did not have adequate internal consistency,  $\alpha = .66$ . Therefore, future analyses were conducted without the CBDC subscale.

## **Primary Analyses**

Due to the lack of internal consistency for the CBDC subscale, this variable was removed from Hypotheses 1, 2, and 3. To test the remaining components of the mediation models proposed in the three hypotheses, preconditions for mediation were assessed using Baron and Kenney's (1986) causal steps method. This method is the most commonly used method to assess mediation (MacKinnon, Fairchild, & Fritz, 2007). After conditions for mediation were met, Sobel's (1982) product of coefficients test, which is the most widely used formula for measuring standard error of mediation effects, was used to determine the significance of the mediation effect (MacKinnon et al., 2007). Results

of these analyses are represented in Table 2. Also in accordance with Baron and Kenney's (1986) recommendations, intercorrelations among variables in each mediation model were examined. Variables that were not significantly correlated, in this case, PPL, were removed from each model as per Baron and Kenney's (1986) recommendation. The PPLQ assesses stigma of having body image concerns rather than being directly related to help-seeking behavior. Although it has been suggested that stigma and perceived nonnormativeness of having mental health concerns, as assessed by the PPLQ, may decrease help-seeking behavior, it is possible that this variable is actually not related to intentions to seek help in the expected way (Magovcevic & Addis, 2005). Therefore, it seems inappropriate to include this measure in further analyses and this variable was therefore also removed from Hypotheses 1, 2, and 3.

Based on the remaining variables, the first hypothesis, that attitudes toward seeking help would mediate the relationship between self-stigma of seeking help and intentions to seek help, was tested. Results indicate that attitudes are a significant predictor of intentions with self-stigma also entered into the model,  $\beta$ 

Table 2
Results of Mediation Analyses

Hypothesis	Variables	B	$SE\ B$	β	Sobel's t
1	$SSOSHS \rightarrow ISPPH$	15	.04	30*	
	$SSOSHS \rightarrow ATSPPH$	46	.04	$65^{*}$	
	$ATSPPH \rightarrow ISPPH$	.30	.05	.42*	
	SSOSHS + ATSPPH →ISPPH				-4.09*
	SSOSHS	02	.05	03	
	ATSPPH	.30	.07	.40	
2	$GRC \rightarrow ATSPPH$	08	.02	32*	
	$GRC \rightarrow SSOSHS$	.17	.02	.48*	
	$SSOSHS \rightarrow ATSPPH$	46	.04	$65^{*}$	
	$GRC + SSOSHS \rightarrow ATSPPH$				-6.03*
	GRC	00	.02	01	
	SSOSHS	.46	.05	65	
3	$DM \rightarrow SSOSHS$	.44	.13	.25*	
	$DM \rightarrow GRC$	.18	.05	.29*	
	$GRC \rightarrow SSOSHS$	.17	.02	.48*	
	$DM + GRC \rightarrow SSOSHS$				3.47*
	DM	.07	.04	.12	
	GRC	.16	.03	.44	

Note. N=176. SSOSHS = Self-Stigma of Seeking Help scale; ISPPHS = Intentions to Seek Professional Psychological Help scale; ATSPPH = Attitudes Toward Seeking Psychological Help Scale; GRC = Gender Role Conflict scale; DM = Drive for Muscularity scale. \* p < .05. \*\* p < .01.

.40, p < .05. Furthermore, when attitudes are entered into the model, self-stigma is no longer a significant predictor of intentions,  $\beta = .30$ , p > .05, indicating mediation. Results of the Sobel test show that the mediation effect is significant, z = -4.09, p < .01. These analyses indicate that attitudes toward seeking help mediate the relationship between self-stigma of seeking help and intentions to seek help. This finding implies that an individual's self-stigma of seeking help impacts intentions to seek help via attitudes about help-seeking.

The second hypothesis, that other helpseeking-related variables (i.e., SSOSH) would mediate the relationship between GRC and attitudes toward seeking help, was examined. Results indicate that self-stigma is a significant predictor of attitudes with GRC also entered into the model,  $\beta = -.65$ , p < .05. Furthermore, when self-stigma is entered into the model, GRC is no longer a significant predictor of attitudes,  $\beta = -.01$ , p > .05, indicating mediation. Results of the Sobel test demonstrate that the mediation effect is significant, z =-6.03, p < .01. Based on these analyses, the relationship between GRC and attitudes toward seeking help seems to be mediated by selfstigma of seeking help. This result suggests that GRC affects attitudes toward help-seeking by means of self-stigma of seeking help.

Finally, mediation analyses were conducted for the third hypothesis stating that GRC would mediate the relationship between DM and other help-seeking-related variables (i.e., SSOSH). Results indicate that GRC is a significant predictor of SSOSH with DM also entered into the model,  $\beta = .44$ , p < .05. Furthermore, when GRC is entered into the model, DM is no longer a significant predictor of intentions,  $\beta = .12$ , p > .05, demonstrating mediation. Results of the Sobel test indicate that the mediation effect is significant, z = 3.47, p < .01. According to these results, GRC appears to mediate the relationship between DM and self-stigma of seeking help. This finding indicates that DM influences self-stigma of seeking help through GRC. Figure 1 provides a pictoral representation of the analyzed mediation models and results.

#### Discussion

Recent evidence suggests that GRC has a significant and negative impact on various as-

pects of mental health in men (O'Neil, 2008; Shepard, 2002). The current study sought to further support this link by confirming that a relationship exists between GRC and male body-image-related concerns, specifically Drive for Muscularity, since such connections have been demonstrated in past research (McCreary et al., 2005; Schwartz & Tylka, 2008). In addition, this study examined how the TBC, as well as other individual and contextual variables, may help explain help-seeking behavior for men with high levels of GRC and DM.

The first hypothesis, that attitudes toward seeking help would mediate the relationship between intentions to seek help and other helpseeking variables (self-stigma of seeking help, self-stigma and perceived nonnormativeness of body image concerns, and concrete barriers to help-seeking), could not be tested due to the fact that neither self-stigma and perceived nonnormativeness of body image concerns nor concrete barriers to help-seeking could be analyzed as independent variables. Consequently, this hypothesis was not supported in this study. However, the proposed mediation model was found to be significant when using self-stigma of seeking help as the sole independent variable. This finding directly mirrors past research in the GRC literature, showing that for men, selfstigma is related to willingness to seek counseling, with attitudes toward counseling as the mediator (Pederson & Vogel, 2007). According to these findings, attitudes toward seeking help are the critical predictor of intentions to seek help, as has been suggested in past TPB research (Smith et al., 2008).

The second hypothesis, that other helpseeking variables would mediate the relationship between GRC and attitudes toward seeking help, was also unable to be tested and thus was not supported in this study. Self-stigma and perceived nonnormativeness of body image concerns and concrete barriers to help-seeking could not be analyzed as mediators; therefore, the significance of these variables in this mediation model is not known. The significance of self-stigma of seeking help was supported in this study. The validity of this mediation model has also been demonstrated in past research (Pederson & Vogel, 2007). The results for this hypothesis suggest that self-stigma of seeking help is an important variable to consider in

discussions of GRC and attitudes toward seeking help.

Analyses also did not support the third hypothesis, that the relationship between DM and other help-seeking related variables would be mediated by GRC. Again, self-stigma and perceived nonnormativeness of body image concerns and concrete barriers to help-seeking could not be analyzed as mediators; thus, the potential contribution of these variables to this relationship is unknown. Once more, only the significance of self-stigma of seeking help was supported for this hypothesis in this study. The results suggest that body image concerns are related to self-stigma of seeking help due to adherence to restrictive masculine gender roles.

## **Future Research**

Future research would benefit from identifying a more reliable measure of concrete barriers to help-seeking in order to more accurately examine the contribution of this variable. Studies could also include other individual and contextual variables that have been incorporated in previous studies, such as distress disclosure, stigmatization by others, devaluation of those with psychological conditions, and normativeness of problems (Mahalik, Burns, & Syzdek, 2007; Pederson & Vogel, 2007; Vogel, Wade, & Ascheman, 2009). Other measures of body image concerns could also be included in future research to more adequately capture not only drive for muscularity but also other male body image issues that have been shown to be important to overall male body satisfaction, such as desiring decreased adiposity (Tylka, Bergeron, & Schwartz, 2005). Lastly, although no order effects have been identified in similar studies conducted in the past, future studies might counterbalance measures to account for the possibility of order concerns.

# Strengths

Altogether, these hypotheses add to the body of research supporting the relationship between GRC and decreased help-seeking behaviors (Blazina & Marks, 2001; Cusack et al., 2006; Good et al., 1989; O'Neil, 2008; Robertson & Fitzgerald, 1992; Rochlen et al., 2004; 2006). Based on this study, self-stigmatization of seeking help and negative attitudes toward professional help appear to be important predictors of intentions. These rela-

tionships imply that men with body image concerns do not seek help because they tend to have more restrictive masculine gender roles, greater stigmatization about getting help for their problems, and more negative attitudes about seeking help. Their negative attitudes are ultimately connected to decreased intentions to engage in behaviors to help themselves, and presumably, to actual decreased help-seeking behaviors. Current rates of those presenting for treatment for body image issues suggest that women experience more body image concerns than men; however, findings from this study support the notion that perhaps many men with body image concerns are not being accounted for because they do not seek help (Freeman, 2005). Thus, this study suggests that stigmatization and attitudes toward seeking help should be the primary focus of interventions aimed at increasing help-seeking behavior for men who suffer from body image concerns and disordered eating and exercise behaviors.

#### Limitations

There were several limitations in this study that indicate the need for future research in this area. First of all, the sample was fairly homogenous and was not sampled at random. Participants were predominantly White, traditional undergraduate students, which limits the generalizability of the results. Future studies should include different samples to examine how men from other groups might respond differently to body image, GRC, and help-seeking-related variables. In particular, studies should seek to incorporate more diversity in terms of race/ ethnicity, age, and SES, since other research has demonstrated that these variables may influence GRC, body image concerns, and help-seeking (O'Neil, 2008). An additional limitation of the sample is that only male college students were included. Studies should seek to reach samples of males who have not had the opportunity to attend college to determine if there are body image and help-seeking differences in this group. Another factor to consider in future studies would be class year. More than half of the sample was first-year college students and may represent different body image and GRCrelated concerns compared to upperclassmen. Longitudinal research should be conducted to determine if maturation effects or adjustment might impact these variables over the course of one's college education. Lastly, random sampling methods were not utilized for this study and participants had the opportunity to self-select to participate based on some knowledge of the purpose of the study. Thus, participants in this study may represent a biased sample of individuals rather than being representative of the larger population.

With regard to the method, this study also only assessed intentions and other predictors of behavior but did not measure actual helpseeking behaviors. Future studies could examine actual behaviors rather than relying on selfreport measures, which are subject to demand characteristics and underreporting. In addition, as was previously mentioned, future studies should incorporate more reliable and varied measures of the variables included in this study, as well as more extensive and focused interventions. Other variables not currently included in this study might also be added to future research. For example, prior research has included measures of previous experience with helpseeking settings and behaviors to determine how this impacts participants' responses to outcome measures (Blazina & Marks, 2001; Rochlen et al., 2006). Another important limitation to consider with this study is the use of a cross-sectional research design. This research design does not allow us to make causal inferences about the relationship between GRC, DM, and help-seeking.

One final limitation of this study was the statistical analysis conducted for mediation. Although Baron and Kenney's (1986) causal steps method is the most widely used method to examine mediation, this method has also been shown to have lower power than other statistical analyses (MacKinnon et al., 2007). Analyses such as structural equation modeling (SEM) could be used to identify multiple pathways between variables, and more accurately and adequately account for all of the relationships between the variables included in this study. Although SEM is recognized as a more powerful statistical method, it also requires a larger sample size. Garver and Mentzer (1999) suggest that 200 participants constitute a "critical sample size"; therefore, the sample size was not large enough in the present study for the authors to consider using SEM.

This study contributes to the literature on increasing help-seeking behavior for men suf-

fering from mental health concerns. These findings can be applied to a number of mental health issues to develop interventions for men in the hopes of decreasing negative mental health consequences. Efforts to increase helpseeking behavior and decrease mental health problems for men might also benefit from more qualitative research in this area, directly questioning men about the barriers that prevent them from seeking help. Further research might also address the potential conflict between restrictive gender roles and typical interventions by seeking more masculine-congruent methods of both marketing to as well as providing help for men. One potentially promising direction that has been suggested is combining the Stages of Change Model with social marketing strategies when designing interventions (Rochlen & Hoyer, 2005). This strategy is said to achieve a better fit between the needs of the target audience and the intervention characteristics, leading to maximum behavior change potential. By further evaluating the barriers that men experience, as well as their needs in terms of psychological help services, more appropriate and successful interventions can be developed to better the lives of men who need help but feel unable to ask for it.

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