College Men’s and Women’s Masculine Gender Role Strain and Dating Violence Acceptance Attitudes: Testing Sex as a Moderator

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The present study tested sex as a moderator of the connections between men’s and women’s masculine gender role strain (i.e., masculine gender role conflict and masculine gender role stress) and attitudes toward psychological, physical, and sexual male-perpetrated dating violence. Self-report measures were administered online to a large sample of male (n = 398) and female (n = 390) college students, and data were analyzed using structural equation modeling (SEM) procedures for testing moderation through measurement and structural invariance. In the measurement model for both men and women, masculine gender role stress was associated with acceptance of each form of dating violence acceptance, but only the restricted emotionality and restrictive same-sex affectionate behavior domains of masculine gender role conflict evidenced significant relationships with dating violence acceptance. In the structural model, where dating violence attitudes were regressed onto gender role strain constructs simultaneously, only masculine gender role stress emerged as a significant predictor of acceptance of each form of dating violence in the male sample and acceptance of physical and sexual violence in the female sample. Additionally, the direct associations between masculine gender role strain and dating violence acceptance attitudes were statistically invariant across men and women, although certain regression coefficients were statistically significant for men but not for women. The present findings support a small but growing body of literature examining women’s masculine gender role strain and highlight the importance of studying the combined contributions of different forms of gender role strain with respect to dating violence attitudes.

Keywords: masculine gender role strain, women, dating violence attitudes, moderation, invariance

Dating violence, defined as the use of physical, sexual, or psychological aggression in intimate relationships (Centers for Disease Control and Prevention, 2014), is a pervasive problem on college campuses (Shorey, Cornelius, & Bell, 2008). Although researchers have identified that men and women are both victims and perpetrators of partner violence (e.g., Archer, 2000; Kelley, Edwards, Dardis, & Gidyecz, 2015; Rutter, Weatherill, Taft, & Orazem, 2012), understanding the systemic roots of men’s violence against women continues to be an important and productive area of inquiry (Kilmartin, & McDermott, 2016; Tharp et al., 2013). For instance, feminist scholars have argued that men’s dating violence perpetration is a byproduct of systemic gender inequities which promote a culture that tolerates violence against women (e.g., Dobash & Dobash, 1979; Kilmartin & Allison, 2007; Price et al., 1999; Schwartz, Kelley, & Kohli, 2012). In support of these assertions, acceptance attitudes of partner violence have been linked to greater male-perpetrated violence against women in relationships (Kelly et al., 2015; Murnen, Wright, & Kaluzny, 2002; Price et al., 1999), as well as greater self-blaming and self-silencing in female victims (see Flood & Pease, 2009 for a review).

Dating violence acceptance attitudes are also a widely used benchmark for single-gender and mixed-gender prevention programs aimed at changing social norms (Cornelius & Resseguie, 2007; Whitaker, Murphy, Eckhardt, Hodges, & Cowart, 2013). Understanding the correlates of attitudes accepting of men’s use of psychological, physical, and sexual violence against female dating partners in both male and female samples, therefore, may provide important clues for prevention. Specifically, the masculine gender role strain paradigm (Pleck, 1981, 1995) is a useful framework for understanding why some men accept violence against women (Harway & O’Neil, 1999; Moore & Stuart, 2005; O’Neil, 2008a) and has been influential to the psychology of men (Wong, Steinfeldt, Speight, & Hickman, 2010). To date, however, little is known about how different forms of gender role strain are associated with acceptance of violence. In addition, despite nearly 50 years of understanding that gender expression is not directly tied to one’s biological sex (Smiler, 2004), even less is known about the correlates of women’s masculine gender role strain (i.e., psychological consequences of thinking, feeling, and behaving in restrictive ways that are socially constructed as masculine). To address these gaps, the present study extended previous research by examining the relationships between men’s and women’s masculine gender role strain and attitudes accepting of male-perpetrated dating violence against women.
Masculine Gender Role Strain and Men’s Dating Violence Attitudes

Research grounded in the masculine gender role strain paradigm (Pleck, 1981, 1995) indicates that men who adhere to rigid, sexist male roles are likely to experience personal and relational problems (see Levant & Richmond, 2016 for a review). Specifically, Pleck argued that masculine gender role socialization is inherently problematic and can lead to different forms of gender role strain with profound intrapersonal and interpersonal consequences. Masculine gender role conflict (O’Neil, Helms, Gable, David, & Wrightsman, 1986) and masculine gender role stress (Eisler & Skidmore, 1987) are two gender role strain constructs which have received strong attention in the literature for their connections to men’s negative attitudes and behaviors toward women (see Moore & Stuart, 2005; O’Neil, 2008a; O’Neil, 2015 for comprehensive reviews).

Although both constructs share an underlying assumption that men internalize rigid, restrictive, and sexist gendered norms, each provides a unique theoretical perspective of men’s violence-related beliefs and behaviors. Gender role conflict theory, for instance, suggests that men are implicitly and explicitly socialized such that they begin to fear femininity and adhere to rigid, restrictive, and sexist male roles in ways which lead to personal and relational dysfunction (O’Neil, 2015). Thus, men with higher gender role conflict are likely to endorse ideologies which maintain male power over women, (e.g., O’Neil & Nadeau, 1999; Robinson & Schwartz, 2004). Several researchers have found relationships between masculine gender role conflict domains and men’s aggressive attitudes and behaviors toward female partners (e.g., Good, Heppner, Hillenbrand-Gunn, & Wang, 1995; Hill & Fischer, 2001; Rando, Rogers, & Brittan-Powell, 1998; Rietzel-Jaffe & Wolfe, 2001; Schwartz et al., 2012). Relatedly, gender role stress theory suggests that men have internalized rigid male roles to the point where violating those roles is stressful. Thus, it is not surprising that previous investigators have also found connections between men’s gender role stress and aggressive attitudes and behaviors toward women (McDermott & Lopez, 2013; Moore & Stuart, 2005; Schwartz et al., 2012).

Women’s Masculine Gender Roles Strain

Studies of masculine gender role strain and men’s acceptance of violence against women yield findings consistent with feminist perspectives that men are socialized in ways that foster sexist ideologies and practices (e.g., Enns, 2008; O’Neil, 2008b; O’Neil & Nadeau, 1999). At the same time, a closer examination of the literature suggests that two important gaps are present. First, little is known about the relative contributions of masculine gender role conflict and masculine gender role stress to partner violence attitudes. Because gender role stress and gender role conflict are related but distinct constructs (O’Neil, 2008a), such a gap in the literature precludes a deeper understanding of acceptance of violence in dating relationships. Second, no studies have examined women’s masculine gender role strain (i.e., psychological consequences of thinking, feeling, and behaving in ways that are considered stereotypically masculine) in relation to acceptance of men’s violence toward women. Considering that gender role ideology has been identified as a better predictor than biological sex for certain attitudes about male-perpetrated dating violence (Black & McCloskey, 2013), developing a deeper understanding of how men’s and women’s masculine gender role strain is related to dating violence acceptance may help identify novel pathways for prevention and education.

Although researchers have yet to examine the possible connections between women’s masculine gender role strain and their acceptance of men’s dating violence, findings from several related studies provide indirect support for these connections. Indeed, the psychology of gender was founded on research emphasizing the distinction between biological sex and socially constructed behaviors (see Smiler, 2004 for a review), and several landmark studies have demonstrated that both men and women internalize characteristics socially constructed as masculine (e.g., Bem, 1974). More recently, researchers have established that women conform to certain traditional gender norms that are stereotyped as masculine (Parent & Smiler, 2013; Steinfeldt, Zakrjsek, Carter, & Steinfeldt, 2011). Such norms have been associated with sexist ideologies in male and female samples (Smiler, 2006) and attitudes accepting of sexual violence in male samples (Locke & Mahalik, 2005). Of note, Parent and Smiler (2013) found that the factor loadings for items on a popular measure of embodying traditional male role norms, the Conformity to Masculine Role Norms Inventory-46 (CMNI-46; Parent & Moradi, 2011), were generally invariant for participants’ sex. Thus, CMNI-46 items measured the same constructs across men and women. Considering that researchers have found connections between conformity to traditional masculine role norms and interpersonal and intrapersonal problems in men (e.g., Burn & Ward, 2005; Wong, Owen, & Shea, 2012), it is a logical hypothesis that women may also experience similar problems when they behave in ways socially constructed as masculine (i.e., masculine gender role strain).

A small but growing body of literature has provided findings supporting this hypothesis with respect to masculine gender role stress and masculine gender role conflict. Specifically, McCreary et al. (1996) examined the associations between college men’s and women’s masculine gender role stress and psychological adjustment. The authors found that sex (i.e., male vs. female) did not moderate the associations between masculine gender role stress and depression, anxiety, or hostility. In a subsequent study, Zamarripa, Wampold, and Gregory (2003) surveyed men and women to determine if sex differences were present in the associations between masculine gender role conflict, depression, and anxiety. The authors identified that sex did not moderate the regression coefficients for each domain of gender role conflict as predictors of anxiety and depression; however, they noted that men generally reported higher levels of gender role conflict than women.

The Present Study

In summary, studies of masculine gender role strain and acceptance of violence toward women suggest that men who adhere to patriarchal male roles to the point where they experience distress from personal and relational restrictions (i.e., gender role conflict) or stress from role violations (i.e., gender role stress) are likely to accept men’s use of violence in relationships (Moore & Stuart, 2005; O’Neil, 2008a). These findings are consistent with feminist perspectives that men’s partner violence is a symptom of a broader
culture that accepts violence against women (Kilmartin & Allison, 2007), and that certain ways of enacting masculinity are rooted in sexist ideologies transmitted throughout a patriarchal society (O’Neil, 2008a, 2008b). At the same time, burgeoning research examining women’s masculine gender role strain indicates that both men and women can perform masculinity in rigid and dysfunctional ways (McCreary et al., 1996; Parent & Smiler, 2013; Zamarripa et al., 2003). Therefore, analyzing the connections between men’s and women’s masculine gender role strain may help to illuminate the underlying and systemic reasons both sexes accept men’s violence toward women.

To date, researchers have yet to examine women’s masculine gender role strain in relation to dating violence attitudes. Nevertheless, the lack of gender differences in the correlations between masculine gender role strain and psychological dysfunction in previous research (e.g., McCreary et al., 1996; Zamarripa et al., 2003) suggests that a similar pattern may emerge with respect to dating violence attitudes. However, it is important to note that previous researchers relied on fairly rudimentary tests of sex differences such as transforming correlations into z-scores or using univariate statistics for comparing means (e.g., Zamarripa et al., 2003). Because simple tests of between-groups differences can be compromised by measurement error (Kline, 2016), using more sophisticated approaches, such as Structural Equation Modeling (SEM) for measurement and structural invariance (Cheung & Lau, 2012; Kline, 2016; Vandenberg, 2007), will yield more definitive evidence for the existence, or lack thereof, of differences in the associations between masculine gender role strain and dating violence attitudes across men and women. In other words, SEM allows for a more sophisticated analysis of sex as a moderator.

The present study examined the moderating role of participants’ sex in a model connecting masculine gender role strain with men’s and women’s acceptance of male-perpetrated physical, psychological, and sexual violence in dating relationships. In addition, the present investigation used recently developed short-form measurements of masculine gender role conflict and masculine gender role stress, respectively. Given that the original measures of masculine gender role strain have been criticized for including items which may lack construct validity (Good, Robertson et al., 1995; McCreary et al., 1996), examining men’s and women’s masculine gender role strain using refined instruments may provide a clearer picture of any potential sex differences.

Taking into account previous research demonstrating no sex differences in the associations between masculine gender role strain and psychological problems (e.g., McCreary et al., 1996; Zamarripa et al., 2003), as well as numerous studies connecting gender role strain to attitudes condoning violence against women (e.g., Moore & Stuart, 2005; O’Neil, 2008a), the following hypotheses were advanced: (a) masculine gender role conflict domains and masculine gender role stress would be positively associated with acceptance of male-perpetrated violence toward women (i.e., physical, psychological, and sexual), (b) the model would demonstrate configural invariance (i.e., provide an acceptable fit to the data for both men and women), (c) the model would demonstrate factorial invariance (i.e., a form of measurement invariance necessary for testing moderation in SEM where the factor loadings for each observed indicator on its respective latent variable are similar for each group), and (d) the model would demonstrate invariance of direct effects (i.e., the directional paths from each gender role strain variable to specific dating violence attitudes would be statistically invariant across men and women).

### Method

#### Archival data from a related study (McDermott & Lopez, 2013)

Archival data from a related study (McDermott & Lopez, 2013) were used for a portion of the data in the present investigation. Specifically, gender role conflict and women’s responses were unique to the present study. After institutional review board approval, all data were gathered by means of an anonymous online survey distributed to undergraduate psychology and humanities courses at a large Southern university with the title, “Relationship Attitudes Survey.” Participants took the survey as one of several extra credit options provided by their professors, and a total of 788 (398 male and 390 female) completed the survey. The mean age of participants was 22 ($SD = 3.9$), and the majority (89.4%) identified as heterosexual. The sample was diverse in terms of race and ethnicity: 24.6% White non-Hispanic, 28.8% Asian, 12.9% Black, 18.7% Hispanic/Latino, and 15% multiracial.

#### Measures

##### Abbreviated Masculine Gender Role Stress Scale (MGRS-A).

The MGRS-A (Swartout, Parrott, Cohn, Hagman, & Gallagher, 2015) is a refined, abbreviated version of the original Masculine Gender Role Stress Scale (MGRS; Eisler & Skidmore, 1987). The MGRS-A measures the extent to which respondents would experience stress from certain situations where they must violate traditional roles by appearing feminine. It consists of 15 of the most construct-relevant items identified through item response theory. Questions are rated on a 6-point Likert scale, where 0 is *not stressful* and 5 is *extremely stressful*. A sample item is, “Being perceived as having feminine traits.” Although the original MGRS measured gender role strain in five domains, Swartout et al. (2015) identified that the MGRS evidenced a poor fit to the data in a large sample of men regardless of the number of factors specified. By contrast, the MGRS-A provided an acceptable fit to the data for a one-factor model only, suggesting the refined instrument is unidimensional. Moreover, the MGRS-A correlated highly with the original MGRS, as well as with measures of male role norm adherence, and Swartout et al. further reported good internal consistency estimates ($\alpha = .90$) for the total score. In the present study, MGRS-A internal consistency estimates were similar for the total sample ($\alpha = .86$).

##### Masculine Gender Role Conflict Scale-Short Form (GRCS-SF).

The GRCS-SF (Wester, Vogel, O’Neil, & Danforth, 2012) is a shortened version of the original GRCS (O’Neil et al., 1986) and includes 16 of the highest loading items from the original scale. Items are scored on a 6-point Likert scale, ranging from (1) *strongly disagree* to (6) *strongly agree*. The measure yields an overall score, as well as subscale scores for four different gender role conflict domains. Success, Power, and Competition (SPC; 4 items; e.g., “Being smarter or physically stronger than other men is important to me.”) measures a maladaptive drive to achieve success through competition and power. Restricted Emotionality (RE; 4 items; e.g., “I have difficulty expressing my tender feelings.”) measures difficulties with expressing or sharing vulner-
able emotions. Restricted Affectionate Behavior Between Men (RABBWM; 4 items; e.g., “Affection with other men makes me tense.”) assesses difficulties in connecting to other men. Conflicts Between Work and Family Relations (CBWFR; 4 items; e.g., “My work or school often disrupts parts of my life: home, health, or leisure.”) measures difficulties striking a healthy work-life balance. Following the procedures of Zamarripa et al., 2003, we made changes to the sex pronouns in the GRCS-SF for the female sample. For example, we modified the items measuring RABBWM (e.g., “Men who touch other men make me uncomfortable”) to reflect women’s restrictive affectionate behavior with other women (e.g., RABBWM). Wester et al., 2012 found that the GRCS-SF correlated highly with the original GRCS (subscale rs = .90 to .96, ps < .001), and the four-factor structure demonstrated an acceptable fit to the data. The GRCS-SF also demonstrated acceptable internal consistency estimates (subscale rs ranging from .77 to .80) (Wester et al., 2012). Internal consistency estimates in the present study were also acceptable for the total sample: SPC (α = .77), RABBM/RRBM (α = .78), and CBWFR (α = .82).

**Attitudes Toward Male Dating Violence Scale (AMDV).**

The AMDV scale (Price et al., 1999) assesses attitudes about men’s interpersonal violence against women. The AMDV scale consists of three subscales: Attitudes Toward Male Psychological Dating Violence (AMDV-Psych; 15 items, e.g., “A guy should not insult his girlfriend” [reverse scored]), Attitudes Toward Male Physical Dating Violence (AMDV-Phys; 12 items, e.g., “Some girls deserve to be slapped by their boyfriends”), and Attitudes Toward Male Sexual Dating Violence (AMDV-SEX; 12 items, e.g., “When a guy pays on a date, it is okay for him to pressure his girlfriend for sex”). Items are rated on a 6-point Likert scale, where 1 indicates *strongly disagree* and 6 is *strongly agree.* Items are averaged to produce subscale scores, and higher scores indicate greater acceptance of attitudes condoning violence and coercion in heterosexual dating relationships. Price et al. (1999) provided initial evidence for the construct validity of the subscale scores of the AMDV scale and reported internal consistency coefficients ranging from .85 to .81. AMDV subscale scores have been correlated with reported use of physical, psychological, and sexual abuse (Josephson & Proulx, 2008; Sears, Byers, & Price, 2007), as well as acceptance of traditional views of women (Price et al., 1999). In the present study, internal consistency estimates were acceptable for acceptance of psychological (α = .81), physical (α = .86), and sexual (α = .87) dating violence for the total sample.

### Results

**Preliminary Analyses**

Prior to conducting our primary analyses, we screened for missing data, univariate and multivariate outliers, and normality violations. Of the 788 participants who completed the survey, some had missing data, but the percentage was less than .05%. A series of one-way analyses of variance (ANOVA) comparing participants with complete versus missing responses indicated either a missing at random or missing completely at random pattern. Accordingly, we used full information maximum likelihood estimation (FIML) to handle missing data in our model. Next, although our masculine gender role strain measures evidenced no noteworthy univariate outliers, each of the acceptance of dating violence scores contained some univariate outliers, with the majority (12 cases) for acceptance of physical violence. We also identified seven multivariate outliers as a whole. Given that the number of univariate and multivariate outliers was small (i.e., less than 5% of the sample), we followed the recommendations of Myers, Garmst, and Guarino (2013) and made no modifications to the data. Next, we tested each subscale score for assumptions of normality, examined zero-order correlations among our study variables, and tested whether men and women differed in their average levels of gender role strain using a series of one-way ANOVA with an adjusted alpha of .006. Tests of normality indicated no extreme distortions in the total sample, but men scored significantly higher than women on all variables except CBWFR. Table 1 displays the zero-order correlations among all variables of interest, as well as the

### Table 1

Zero-Order Correlations, Means, Standard Deviations, and Univariate Analysis of Variance Between Men and Women on all Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGRS-A</td>
<td>.25***</td>
<td>.34***</td>
<td>.26***</td>
<td>.19***</td>
<td>.25***</td>
<td>.23***</td>
<td>.29***</td>
<td>3.23</td>
</tr>
<tr>
<td>SPC-SF</td>
<td>.24***</td>
<td>.30***</td>
<td>.26***</td>
<td>.48***</td>
<td>.09</td>
<td>-.06</td>
<td>.00</td>
<td>4.11</td>
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<tr>
<td>RE-SF</td>
<td>.25***</td>
<td>.19***</td>
<td>.50***</td>
<td>.38***</td>
<td>.19***</td>
<td>.15***</td>
<td>.21***</td>
<td>3.39</td>
</tr>
<tr>
<td>RABBWM-W)SF</td>
<td>.25***</td>
<td>.09</td>
<td>.28***</td>
<td>.30***</td>
<td>.18***</td>
<td>.11</td>
<td>.16***</td>
<td>3.51</td>
</tr>
<tr>
<td>CBWFR-SF</td>
<td>.07</td>
<td>.42***</td>
<td>.23***</td>
<td>.11</td>
<td>.09</td>
<td>.00</td>
<td>-.01</td>
<td>3.78</td>
</tr>
<tr>
<td>ATMD-Psych</td>
<td>.13**</td>
<td>-.04</td>
<td>.05</td>
<td>.16**</td>
<td>-.02</td>
<td>.61***</td>
<td>.64***</td>
<td>4.31</td>
</tr>
<tr>
<td>ATMD-Phys</td>
<td>.20***</td>
<td>.07</td>
<td>.12**</td>
<td>.15**</td>
<td>.00</td>
<td>.55***</td>
<td>.70***</td>
<td>1.82</td>
</tr>
<tr>
<td>ATMD-Sex</td>
<td>.21***</td>
<td>-.05</td>
<td>.05</td>
<td>.14**</td>
<td>-.07</td>
<td>.50***</td>
<td>.59***</td>
<td>2.02</td>
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</table>

*Note.* Men (n = 398) are above the diagonal, and Women (n = 390) are below the diagonal. MGRS-A = Abbreviated Masculine Gender Role Stress Scale total score; SPC-SF = Success Power and Competition subscale of the Short-Form Gender Role Conflict Scale; RE-SF = Restrictive Emotionality subscale of the Short-Form Gender Role Conflict Scale; RABBWM-W)SF = Restrictive Affectionate Behavior Between Men subscale of the Short-Form Gender Role Conflict Scale; CBWFR-SF = Conflict Between Work and Family Relations subscale of the Short-Form Gender Role Conflict Scale; ATMD-Psych = Acceptance of Male-Perpetrated Psychological Dating Violence; ATMD-Phys = Acceptance of Male-Perpetrated Physical Dating Violence; ATMD-Sex = Acceptance of Male-Perpetrated Sexual Dating Violence.

* p < .05. ** p < .01. *** p < .001.
means and standard deviations and ANOVA results. Lastly, given the racial diversity of the present sample, we used multivariate ANOVA to examine potential differences between majority and nonmajority students on the independent and dependent variables to rule in or rule out race as a potential covariate. These results indicated no significant multivariate effect for race on gender role conflict subscale scores or the gender role stress total score, as well as no significant differences for race on either of the acceptance of violence measures.

**Primary Analyses**

Our primary analyses consisted of SEM for testing forms of invariance at both the measurement and structural levels (Cheung & Lau, 2012; Kline, 2016) using Mplus 7.31 (Muthén & Muthén, 2012). Measurement and structural invariance testing in SEM are systematic approaches for determining different levels of between-groups differences by comparing several parameters of a model across groups (Kline, 2016; Vandenberg, 2002). There are numerous levels of invariance that can be tested in SEM, such as equivalence of intercepts or of observed or residual variance, but three forms of invariance are specifically required to test moderation: configural invariance, factorial invariance, and direct-effect invariance (Kline, 2016). Configural invariance (i.e., ensuring that the model provides an acceptable fit to the data for all groups) is an important prerequisite for examining factorial invariance (i.e., ensuring that each latent variable is measuring the same construct across groups), which, in turn, is a prerequisite for examining direct-effect invariance (i.e., invariance of direct effects between latent variables to determine moderation). Direct-effect invariance is the final step of the moderation analysis, and, if significant differences in the strength of the relationships between latent variables are found, then moderation is evident (see Kline, 2016 for a review).

Although invariance is traditionally tested by examining differences in the chi-square statistic across a series of nested models in which parameters are constrained to be equal across groups, researchers have identified that the model chi-square difference test often yields a significant result even with very modest chi-square changes (Cheung & Rensvold, 2002). As an alternative, simulation studies suggest that changes in the comparative fit index (ΔCFI) may be a useful indicator of different forms of measurement invariance (Cheung & Rensvold, 2002; Meade, Johnson, & Braddy, 2008). However, statisticians have noted that CFI values have no known sampling distribution (Cheung & Rensvold, 2002), and thus changes in CFI cannot be tested for statistical significance (Cheung & Lau, 2012).

In a recent response to these criticisms, Cheung and Lau (2012) proposed and demonstrated a direct model comparison approach for invariance testing using bias corrected bootstrap confidence intervals (Shrout & Bolger, 2002). Unlike the nested model comparison approaches, Cheung and Lau’s technique avoids the limitations of the chi-square difference test and the ΔCFI because it does not compare nested models. Instead, assuming the model passes an initial configural invariance test, different forms of invariance are examined in the same model systematically by performing a bootstrap analysis of the differences between groups on specific parameters (Cheung & Lau, 2012). Specifically, the procedure creates 1,000 bootstrap samples and derives the high and low confidence intervals for each parameter (e.g., differences across groups on factor loadings or regression coefficients). If zero falls within the confidence interval, then the differences between the groups are not statistically significant, and thus those parameters are invariant. Cheung and Lau (2012) argued several advantages of the bias corrected bootstrap confidence interval approach, including the ability to determine where statistical noninvariance exists within a model with ease and the capability to test different forms of invariance in a way that is robust to the problems associated with the chi-square and ΔCFI approaches.

In the present study, we used the bias corrected bootstrap confidence interval approach outlined by Cheung and Lau (2012) to examine sex as a moderator of the proposed associations between masculine gender role strain and dating violence attitudes. Prior to conducting invariance tests for direct effects (i.e., moderation analysis), however, we needed to examine the model for configural invariance and factorial invariance. Following the procedures outlined by Kline (2016), we first examined a measurement model to understand whether the latent variables had been adequately reflected by their respective indicators and to establish configural invariance at the measurement level. Next, we tested a structural model to estimate the regression weights of the hypothesized prediction paths and to establish factorial invariance at the structural level. Across all of our analyses, we used four goodness-of-fit indices commonly employed in SEM (Hu & Bentler, 1999): the comparative fit index (CFI; values close to .95 or greater suggest a good fit), the Tucker-Lewis index (TLI; values close to .95 or greater indicate a good fit), the root mean square error of approximation (RMSEA; .06 or less denotes a good fit) with a 90% confidence interval (CI), and the standardized root mean square residual (SRMR; .08 or less suggests an adequate fit). Across both the measurement and structural models, an acceptable fit to the data indicated configural invariance and signified that deeper levels of invariance could be examined (Cheung & Lau, 2012; Kline, 2016). All models used maximum likelihood estimation.

**Measurement model.** Because each latent variable requires a minimum of three manifest variables, we used procedures recommended by Russell, Kahn, Spoth, and Altmairer (1998) to generate three parcels of items for each of the latent acceptance of male dating violence dependent variables and the latent masculine gender role stress variable. Specifically, an exploratory factor analysis was performed on each subscale with a one-factor solution, and individual items of a given measure were then assigned to item parcels according to their loadings in an iterative fashion (Russell et al., 1998). Because the subscales of GRCS-SF consisted of only four items each, we used the individual items to model the four gender role conflict domains: SPC, RE, RABB(M), and CBWFR. After the latent constructs were formed, we performed a multigroup confirmatory factor analysis (CFA) with item intercepts and factor loadings freely estimated in both groups to examine the configural invariance measurement model. The results of the CFA indicated an acceptable fit to the data: \( \chi^2(644, \ N = 788) = 1,175, p < .001, \ CFI = .945, \ TLI = .935, \ RMSEA = .046 \) (90% CI = .042, .050), and SRMR = .052. Of note, the CFI and TLI were modestly below recommended values of .95, but it has been documented that these indices are adversely impacted in models with high degrees of freedom (Kenny & McCool, 2003). The acceptable fit to the data signified configural invariance at the measurement level. Moreover, as shown in Table 2, all of the factor loadings were statistically significant and large, indicating...
that the latent constructs were adequately represented by their indicators for both men and women.

Table 3 displays the correlations between latent variables in the model for both men and women. Most notably, masculine gender role stress was significantly related to acceptance of all forms of violence for both men and women; however, masculine gender role conflict domains evidenced differential relationships with specific dating violence attitudes. For instance, whereas the relationship between RE and acceptance of psychological and sexual violence was significant for both the male and female samples, the associations between RABBM(W) and dating violence attitudes was significant only for men. In addition, neither SPC nor CBWFR were associated with dating violence attitudes in either the male or female samples.

**Structural model.** Next, we tested a multigroup structural model by specifying directional paths from the masculine gender role stress latent variable to each of the latent dependent variables while still leaving factor loadings and item intercepts freely estimated across each group. The results yielded an acceptable fit to the data identical to the measurement model: \( \chi^2(644, N = 788) = 175, p < .001, \text{CFI} = .945, \text{TLI} = .935, \text{RMSEA} = .046 \) (90% CI = .042, .050), and SRMR = .052. The acceptable fit to the data indicated configural invariance at the structural level (i.e., the model with direct paths fit the data as a whole for men and women). As indicated in Figure 1, which illustrates the standardized structural model parameters for men and women in the model, adding direct paths to test the combined contributions of masculine gender role conflict and masculine gender role stress in relation to
dating violence acceptance attitudes provided greater clarity to the bivariate relationships in the measurement model. Whereas many of the relationships between masculine gender role conflict domains and dating violence acceptance were significant for both men and women in the measurement model, several of these associations were no longer significant in the structural model. However, the positive associations between masculine gender role stress and acceptance of physical and sexual violence remained significant in both the measurement and structural models for men and women.1 Further, masculine gender role stress emerged as a significant invariance between men and women. In addition, the nonsignificant relationship between the latent variables of SPC and acceptance of men’s sexual dating violence in the measurement model became statistically significant and negative in the structural model, suggesting the presence of a suppression effect (Kline, 2016).

Factorial invariance. Because the model evidenced factorial invariance at both the measurement and structural levels, we proceeded with tests of factorial invariance across groups. Following the procedures outlined by Cheung and Lau (2012), we created difference scores in the unstandardized factor loadings for each manifest variable on its respective latent variable between men and women. For example, the unstandardized factor loading of the second parcel on the gender role stress variable was .88 for men and .76 for women. Thus, we created a difference score (.88 – .76 = .12) for our bootstrap analysis. We performed the same procedure for each factor loading in the model and then instructed Mplus to create 1,000 bootstrap samples with which to derive the confidence interval for each difference score. Given the number of comparisons in the model between men and women, we followed the recommendations of Cheung and Lau (2012) and used the 99% CI for our analyses. The results are presented in Table 2 and illustrate that all item parcels and items in the model appeared to be measuring the same constructs between men and women. Accordingly, we proceeded by examining the structural model for invariance of direct effects.

Direct-effects invariance. To examine direct-effects invariance, we repeated the same procedures outlined by Cheung and Lau (2012) but calculated sex differences in the unstandardized regression coefficients between latent variables. The bootstrap analysis indicated that zero fell within the 99% CI for each difference score parameter (Table 4). Thus, the model evidenced direct-effects invariance between men and women, indicating that there were no significant sex differences in the path coefficients from masculine gender role strain variables to acceptance of either physical, psychological, or sexual dating violence. The model explained 11% of the variance in acceptance of psychological violence, 11% in acceptance of physical violence, and 16% in acceptance of sexual violence for the male sample. The model explained 9% of the variance in acceptance of psychological violence, 8% of the variance in acceptance of physical violence, and 11% of the variance in acceptance of sexual violence for the female sample.

Discussion

The present study addressed several important gaps in the masculine gender role strain and dating violence literature, first by examining the combined contributions of masculine gender role conflict and masculine gender role stress as predictors of acceptance attitudes of male-perpetrated dating violence, and second by testing sex as a moderator of these associations. The following hypotheses were advanced: (a) masculine gender role conflict domains and masculine gender role stress would be positively associated with acceptance of men’s violence toward women, (b) the model would demonstrate configural invariance, (c) the model would demonstrate factorial invariance, and (d) the model would demonstrate invariance of direct effects.

The results partially supported our hypotheses. Regarding the proposed relationships between masculine gender role strain and acceptance of dating violence attitudes, for instance, different patterns of associations emerged in the measurement and structural models. Specifically, masculine gender role stress was related to attitudes accepting of psychological, physical, and sexual dating violence in both the male and female samples in the measurement

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1 The same pattern of results (i.e., the associations between masculine gender role conflict and dating violence acceptance becoming nonsignificant in the structural model) occurred in an alternative model in which the total scores for masculine gender role conflict and masculine gender role stress were modeled, respectively. Additional information is available by request from the lead author.
model, as well as positively related to acceptance of physical and sexual violence for both samples in the structural model. These findings are consistent with our predictions and with previous research connecting men’s masculine gender role stress to sexist ideologies promoting violence against women (e.g., Moore & Stuart, 2005; Schwartz et al., 2012).

Contrary to our predictions, however, masculine gender role conflict domains were differentially associated with specific dating violence attitudes. Of note, restrictive same-sex affectionate behavior in the measurement model was the only gender role conflict domain consistently associated with acceptance of each form of male-perpetrated dating violence in both the male and female samples. These findings suggest that certain domains of masculine gender role conflict may be more closely associated with attitudes promoting violence against women than other domains, especially SPC and CBWFR, which were not significantly related to dating violence in the measurement model. The null finding for SPC is especially interesting, because studies of men’s dating violence behaviors and attitudes suggest that male roles emphasizing power and prowess are a primary predictor (e.g., Hill & Fischer, 2001). However, Robinson and Schwartz (2004) found a similar pattern of results when examining gender role conflict domains in relation to men’s negative attitudes toward women. The authors suggested that RABBM is likely linked to negative attitudes toward women because of its connections to heterosexist ideologies. Consistent with Robinson and Schwartz (2004) conclusions, one logical possibility is that men and women in the present study who avoid same-sex affection may also endorse more traditional, sexist views of dating relationships where men use violence to control their partners.

Although several gender role strain variables were significantly associated with dating violence acceptance in the measurement model, some of these links became nonsignificant in the structural model, particularly with respect to masculine gender role conflict.

Figure 1. Structural model with standardized regression coefficients. Women’s coefficients are in parentheses. Correlations between the exogenous variables, as well as correlations between disturbance terms of the endogenous variables are not depicted for readability. MGRS-A = Abbreviated Masculine Gender Role Stress Scale; SPC-SF = Success, Power, and Competition subscale of the Short-Form Gender Role Conflict Scale; RE-SF = Restrictive Emotionality subscale of the Short-Form Gender Role Conflict Scale (GRCS-SF); RABBM(W)-SF = Restrictive Affectionate Behavior Between Men (Women) subscale of the GRCS-SF; CBWFR-SF = Conflict Between Work and Family Relations subscale of the GRCS-SF. ns p > .05, * p < .05, ** p < .01, *** p < .001.
It is important to note that correlations at the measurement model level are similar to bivariate, zero-order relationships (i.e., they do not take into account the contributions of other variables on a criterion). By contrast, the present structural model is akin to a simultaneous regression in which all gender role strain variables are entered as a block. Because masculine gender role stress generally emerged as a positive predictor of dating violence attitudes even when combined with masculine gender role conflict domains, our results indicate that it may be the more dominant predictor of dating violence acceptance. Relatedly, the relationship between SPC and men’s acceptance of physical violence evidenced a suppression effect, suggesting that some aspects of masculine gender role conflict may actually be negatively associated with dating violence acceptance attitudes when the effects of all other gender role strain variables are factored into the equation.

Both masculine gender role stress and masculinity gender role conflict are believed to be driven by rigid internalizations of traditional masculine norms (O’Neil, 2008a; Eisler & Skidmore, 1987). However, there are important conceptual differences which may explain the present findings. For example, a distinguishing feature of the Masculine Gender Role Conflict Scale is that it is primarily a measure of the consequences of adhering to traditional roles (O’Neil, 2008a, 2015), whereas masculine gender role stress is best conceptualized as the distress associated with having to violate traditional male roles, often by acting in ways socially constructed as feminine (Eisler & Skidmore, 1987).

Therefore, because both men and women appraised acting “feminine” as stressful, one possibility is that individuals with high levels of masculine gender role stress accept violence toward women potentially due to internalized, patriarchal views devaluing women. Indeed, men and women in countries with greater patriarchal value systems reported significantly higher levels of masculine gender role stress than individuals in countries with more egalitarian systems (Arrindell et al., 2013), suggesting that masculine gender role stress may be engendered by broader, sexist societal messages about women. By contrast, the consequences of behaving in ways socially constructed as masculine (i.e., masculine gender role conflict) may not be as strongly related to dating violence because such consequences may, in part, be driven by factors unrelated to broader societal messages about women. For example, Tokar, Fischer, Schaub, and Moradi (2000) identified that the associations between masculine gender role conflict and certain intrapersonal outcomes were explained by variations in Big Five personality characteristics. However, we were unable to locate any investigations examining the relative contributions of both masculine gender role conflict and masculine gender role stress to men or women’s partner violence attitudes or behaviors. Thus, additional research is needed to further elucidate differences between specific forms of masculine gender role strain in relation to violence acceptance.

Although our hypotheses regarding specific forms of gender role strain were only partially supported, the present study provides further support for the small but growing literature examining women’s masculine gender role strain (e.g., McCreaery et al., 1996; Parent & Smiler, 2013; Zamarripa et al., 2003). Certain forms of masculine gender role strain were significantly—albeit modestly—connected to attitudes accepting of men’s violence against women regardless of one’s sex. Indeed, three important forms of invariance between men and women were evident in the present model, thus confirming our hypotheses of configural invariance, factorial invariance, and direct-effects invariance. Such findings indicate that (a) the observed data fit well with the hypothesized model for both male and female samples (i.e., configural invariance), (b) refined measures of masculine gender role strain appear to be tapping the same constructs in both men and women (i.e., measurement invariance), and (c) that sex does not moderate the associations between gender role strain variables and dating violence acceptance (i.e., direct effects invariance).
The latter finding of direct effects invariance is particularly noteworthy, because some relationships between gender role strain variables and acceptance of dating violence evidenced clear differences between men and women in terms of their statistical significance. By traditional definitions of moderation (i.e., that the strength of the relationship is different for each group; cf. Frazier, Tix, & Barron, 2004), the present gender differences are intriguing. The difference in statistical significance fits the traditional definition of moderation; however, the bootstrap confidence intervals indicate that the magnitude of differences in the strength of each relationship are statistically non-significant. Thus, sex did not moderate the associations in the present model from a direct-effects invariance perspective (e.g., Cheung & Lau, 2012; Kline, 2016). In order to understand these complicated and somewhat equivocal findings, it is important to note that the difference between a nonsignificant finding and a significant finding is itself often not statistically significant (Gelman & Stern, 2006). One possibility, therefore, is that some of the present sex differences in statistical significance may simply be due to chance. Alternatively, such differences could mean that, although men and women do not differ statistically in the magnitude of the relationships between masculine gender role strain constructs and dating violence acceptance attitudes, some aspects of masculine gender role strain may be better predictors of male-perpetrated dating violence attitudes for men than for women.

Said another way, it is possible that, although men and women are both capable of behaving in ways which are socially constructed as masculine, these behaviors could have different correlates or even different consequences. For example, RE was a significant predictor of acceptance of sexual violence in the final structural model for men but not for women. Considering that decades of research have connected masculinity to men’s perpetration of sexual assault (McDermott, McKelvey, & Kridel, 2015), it makes sense that certain aspects of rigid, traditional masculinity would be associated with men’s acceptance of sexual assault. In the present sample, men who perform masculinity in such a way that they have difficulty expressing vulnerable emotions may be especially drawn to perspectives of dating which emphasize sexual gratification without intimacy. However, even if women perform masculinity in ways that lead to certain problems, such as emotional restrictions, these outcomes may not have the same consequences in terms of shaping their ideological perspectives of dating relationships.

Additional research is needed to continue to clarify the role of sex in the possible consequences of different gendered expressions. The instruments used in the present study, although widely used in gender role strain research, do not explicitly address the underlying reasons why individuals perform masculinity in rigid and dysfunctional ways. Therefore, although sex did not clearly emerge as a moderator in the present study, this does not preclude the possibility that masculine gender role strain is related to dating violence acceptance for different gendered reasons. Future research is needed to build upon the present findings and test the moderating role of sex on important variables which may explain the connections between gender role strain and dating violence acceptance. Given the explicit emphasis on the socializing force of sexism within masculine gender role conflict and masculine gender role stress theories, a model in which the present associations are mediated by internalized sexist attitudes and then tested for gender invariance (i.e., moderated mediation) is especially warranted.

Limitations and Additional Directions for Future Research

The present findings should be interpreted with respect to a variety of important limitations. First, the study used a correlational and cross-sectional design with self-report measures, thus precluding the ability to determine directionality of the effects, as well as any temporal order of these variables or self-selection biases. Indeed, the same indices of fit for the structural model would be present regardless of whether the independent and dependent variables were switched in their order. Future researchers should examine the connections between men’s and women’s masculine gender role strain and dating violence acceptance attitudes using experimental or longitudinal designs to better ascertain the true relationships between these variables. Second, the masculine gender role strain measures used in the present study were originally intended for men and were developed in the 1980s. Although investigators have identified that these instruments yield important information in samples of both men and women (McCreary et al., 1996; Zamarripa et al., 2003), future research should examine the construct of women’s masculine gender role strain in more detail by developing assessments specifically for women, as well as addressing the potential changes in conceptions of masculinity to have a more current perspective. Third, it is important to note that the present study explained only a modest amount of variance in dating violence attitudes. More research is needed to identify other variables which, when combined with masculine gender role strain constructs, help to explain additional variance in dating violence attitudes. Third, the present study did not examine other expressions of gender, and additional research is needed to understand how masculinities are enacted in individuals who identify in ways outside of the male-female binary.

Lastly, the present study could have benefited from additional information regarding participants’ characteristics. Although the purpose of the study was to examine general attitudes toward dating violence evident in the broad population, it is highly possible that individuals who are currently or previously in a dating relationship, especially one that is abusive, may provide a different perspective of the present variables than individuals who are single or in nonabusive relationships. Future investigations should consider examining current relationship status or the degree of perpetration and victimization as potential moderators. Likewise, considering previous evidence that women in masculine-dominated fields may experience additional pressure to perform traditional masculinity in rigid ways (Steinfeldt et al., 2011), future investigations could benefit from exploring participants’ majors or extracurricular activities in relation to their level of dating violence acceptance attitudes and masculine gender role strain.

Implications for Prevention

Despite the aforementioned limitations, the present findings raise some interesting possibilities for future prevention-related research. In particular, several bystander prevention programs have emerged in the past decade that target attitudes and behaviors which prevent individuals from intervening when they observe
dating violence. Evidence-based programs such as Bringing in the Bystander (Banyard, Moynihan, & Plante, 2007) or Live the Green Dot (see Coker et al., 2011 for a review) are designed for both male and female participants and are geared toward changing the culture that tolerates violence on college campuses, in part, by addressing harmful attitudes and beliefs. In addition, several programs exist specifically for men, many of which address issues of gender role socialization, sexism, and acceptance of violence toward women (see Garrity, 2011 for a review).

Despite a focus on masculinity in many programs, masculine gender role strain is absent from all known mixed-gender programs, as well as from most single-gender programs. However, the present study offers evidence for the inclusion of masculine gender role strain within existing prevention programs focused on changing the culture which tolerates violence against women. Given the pattern of relationships in the present study, for instance, prevention programs could include a brief self-assessment about gender role stress (either on paper or as a conversation topic) to help men gain more self-knowledge about how their desire to avoid behaviors socially constructed as feminine might potentially contribute to beliefs which rationalize men’s violence against women. In addition, the invariance between men and women identified in the present study indicates that both male and female participants may benefit from including discussions of masculinity. For example, helping participants identify how they express masculinity, with the explicit understanding that all individuals are capable of enacting male roles regardless of their biological sex, could potentially help male and female participants think more critically about their perspectives of dating relationships. Indeed, despite several advancements in the science of preventing dating violence or changing violence acceptance attitudes, the problem continues to be a pervasive one (Campbell & Wasco, 2005; Shorey et al., 2008). Novel perspectives, such as those tested in the present study, are still needed.

References


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Received November 13, 2015
Revision received February 28, 2016
Accepted March 17, 2016