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BRIEF REPORT



## A bidimensional examination of machismo in relation to risky sexual cognitions and behavior among Latino college men

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### ABSTRACT

**Objective:** College students and Latina/o individuals are disproportionately affected by adverse consequences related to risky sex, highlighting the importance of examining sociocultural factors related to risky sexual variables among Latina/o college students. We explored the link between machismo (a bidimensional form of masculinity often ascribed to Latino men) and risky sexual outcomes among Latino college men. **Methods:** Latino college men responded to an online study assessing two dimensions of machismo, and risky sexual cognitions (eg, risky sexual intentions) and behavior (eg, condom use). **Results:** Among our findings, a hypermasculine dimension of machismo predicted greater intentions to engage in risky sex, and more positive condom use attitudes. A dimension of machismo characterized by respect and chivalry predicted more frequent condom use. **Conclusions:** These findings indicate the relation between machismo and risky sex among Latino college men is complex, underscoring the need for sociocultural considerations in culturally tailored collegiate sexual-risk prevention programs.

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### KEYWORDS

Condom attitudes; condom use; Latino; machismo; risky sex

### Introduction

National data indicate that college students use condoms when engaging in sexual activity about half of the time, and these rates are even lower during oral or anal sexual intercourse.<sup>1,2</sup> College students also participate in sexual-risk taking through other methods, such as having multiple partners either concurrently or consecutively.<sup>3,4</sup> College age adults are disproportionately affected by risky sex-related adverse consequences.<sup>5,6</sup> Furthermore, research suggests health disparities related to risky sex for some racial/ethnic minority groups. For example, Latina/os in the US are overrepresented in cases of HIV, STIs, and unintended pregnancy.<sup>7,8</sup> Given this, it is imperative that researchers examine the correlates of risky sexual behavior among college-aged Latina/os.

Research highlights the importance of considering cognitions in relation to risky sex. For instance, the theory of planned behavior proposes condom use behavior is predicted by condom use intentions, which are partly a function of attitudes about barriers to and benefits of condom use.<sup>9</sup> This is supported in the literature demonstrating that condom attitudes are associated with condom use.<sup>10</sup> From a socioecological perspective, environmental norms shape a person's behavior and socially transmitted masculine norms may influence the perceptions regarding what constitutes gender appropriate behavior, which in turn influences engagement in a behavior.<sup>11</sup> With this in mind, some researchers posit that engaging in sexual-risk taking is an expression of masculinity.<sup>12</sup> Supporting research shows a positive correlation of

masculine attitude endorsements among college men with reported risky sexual behavior.<sup>13</sup> Other research suggests endorsement of some aspects of masculinity relates to less favorable attitudes toward condom use.<sup>14,15</sup>

Some research suggests that, although there are many commonalities, the exact expressions of masculine norms may differ across cultures. Masculine prescriptions among Latino men are typically referred to as machismo. Historically, machismo was depicted as hypermasculine and unidimensional, but contemporary research characterizes machismo by two dimensions.<sup>16</sup> The first is *traditional* machismo and encompasses the traits often associated with previous conceptualizations of the machismo construct (eg, aggressive, dominant, and risk-taking). The second is *caballerismo* and encompasses traits such as chivalry and respect.<sup>16</sup> One recent study examined machismo as a unidimensional construct in relation to condom use and found no relationship.<sup>17</sup> Research examining machismo as a bidimensional construct in relation to risky sex among Latino college men is lacking; however, research on other risky behaviors (eg, binge drinking) in this population has shown a positive association for traditional machismo but a negative one for caballerismo.<sup>18</sup>

In response, this study examined the separate relations of traditional machismo and caballerismo to risky sexual cognitions and behaviors. Although these analyses are largely exploratory, we tentatively advanced the following hypotheses given theoretical conceptualizations of masculinity: In

general, we expected traditional machismo to be positively related to cognitions promoting risky sexual behavior, and risky sexual behavior itself, while expecting the reverse to be true for caballerismo.

## Methods

### Participants and procedure

These data are from a subset of a larger project that assessed sexual health literacy among undergraduates from a Southwestern US University ( $N = 1108$ ; 43.3% Latina/o; 37% male) collected in the fall of 2016 via an online study for course credit. All participants gave informed consent before participation, and data were collected in accordance to IRB guidelines. For this analysis, only participants who were male and either Hispanic or Latino were included, restricting the present sample to 198 ( $M_{\text{age}} = 19.25$ ,  $SD = 2.11$ ).

### Measures

#### Machismo

We measured traditional machismo (10 items, eg, “It is important not to be the weakest man in the group.”) and caballerismo (10 items, eg, “It is important to respect your elders.”) with the Traditional Machismo and Caballerismo Scale.<sup>16</sup> Items are rated on a 7-point scale (1 = strongly disagree) and the means were calculated within each traditional machismo ( $M = 2.96$ ,  $SD = 1.25$ ) and caballerismo subscale ( $M = 6.23$ ,  $SD = 0.66$ ). Originally developed with a heterogeneous sample of Latino adult men, this scale has also been found to be reliable in Latino college samples and demonstrated excellent reliability in the present sample (traditional machismo  $\alpha = 0.91$ ; caballerismo  $\alpha = 0.90$ ).<sup>18</sup>

#### Risky sexual cognitions

We measured intentions to engage in risky sexual behavior using the sum of the corresponding 2-item subscale from the Sexual Risk Survey.<sup>19</sup> On a 5-point scale (ie, 0 = 0 times, 1 = 1–3 times, 2 = 4–14 times, 3 = 15–50 times, and 4 = 51+ times), participants endorsed how often they have attended public gatherings (eg, parties) with the intent of “hooking up” with someone via nonintercourse sexual activity and sexual intercourse, respectively ( $M = 0.68$ ,  $SD = 1.21$ ).

We used the Multidimensional Condom Attitudes Scale (MCAS) to measure five dimensions of condom attitudes (5 items each, 7-point scaling, average within each subscale): reliability and effectiveness (eg, “Condoms are an effective measure of birth control”;  $M = 12.57$ ,  $SD = 4.78$ ), pleasure (eg, “Condoms are uncomfortable for both partners”;  $M = 18.03$ ,  $SD = 4.22$ ), identity stigma (eg, “A woman who suggests using a condom does not trust her partner”;  $M = 10.99$ ,  $SD = 4.40$ ), embarrassment about negotiation and use (eg, “When I suggest using a condom I am almost always embarrassed”;  $M = 11.14$ ,  $SD = 4.96$ ), and embarrassment about purchase (eg, “I always feel really uncomfortable when I buy condoms”;  $M = 16.86$ ,  $SD = 1.46$ ).<sup>20</sup> Some items were reverse-scored, and higher scores indicate more

positive condom attitudes. The MCAS was developed using ethnically diverse college student samples and demonstrated adequate internal consistency across subscales ( $\alpha$  ranged from 0.66–0.84) for the present study.

#### Risky sexual behavior

Among only those participants who reported having sexual intercourse ( $n = 114$ ), we measured three aspects risky sexual behavior with the Condom Use History (CUH) Scale: number of lifetime sexual partners, number of sexual partners in the last three months, and the number of times participants engaged in anal, oral, or vaginal sex without a condom in the last three months (ie, failure to use condoms).<sup>21</sup> Participants responded with whole numbers. Scores were summed to yield a total score for each measure of risky sexual behavior.

**Demographic controls.** Relationship status was a covariate in analyses assessing risky sexual behavior and intentions to engage in risky sexual behavior.

#### Analytic strategy

We tested our hypotheses with path analytic techniques using Mplus version 8. Models with a dependent variable that approximated a normal distribution (eg, condom attitudes) were assessed using a linear regression strategy. Models with a dependent variable characterized by a negative binomial distribution (eg, risky sexual behavior) were assessed with negative binomial regression. Only participants who reported ever having sex were included in models assessing risky sexual behavior. Altogether we assessed three models during primary hypothesis testing. The first regressed risky sexual intentions onto relationship status and both traditional machismo and caballerismo. The second regressed each of the five condom attitudes subscales on both traditional machismo and caballerismo. The third regressed number of sexual partners (two variables, one for lifetime, the other for last three months) and failure to use condoms onto relationship status and both traditional machismo and caballerismo.

## Results

### Analytic sample description

Fifty-three participants were screened out for careless or inattentive responding, resulting in an analytic sample of 145 (mean age = 19.29,  $SD = 2.21$ ). Of the 145, 78% reported ever having sex. The majority of the sample reported being either single (49.7%) or in a committed relationship (36.5%), while 11.7% reported casually dating. Two of the participants reported being married. Among participants who reported ever having sex, most (60.5%) reported having between 1 and 4 sexual partners in their lifetime, while 17.5% reported having more than 10 sexual partners in their lifetime. The range for lifetime sexual partners was 1–45. Participants who reported ever having sex also primarily endorsed having 1 (57%) or 2 (12.3%) sexual partners within the last three months, while 19.3% reported having no sexual partners

**Table 1.** The relations between traditional machismo, caballerismo, and risky sexual cognitions and behavior.

Models predicting risky sexual cognitions												
Independent variables	Dependent variables											
	Reliability and effectiveness		Pleasure		Identity stigma		Embarrassment about negotiation and use		Embarrassment about purchase		Risky sexual intentions	
	$\beta$	$p$	$\beta$	$p$	$\beta$	$p$	$\beta$	$p$	$\beta$	$p$	$\beta$	$P$
Traditional Machismo	0.18	0.024	0.27	<0.001	0.37	<0.001	0.12	0.168	-0.07	0.428	0.17	0.033
Caballerismo	-0.03	0.637	0.06	0.484	-0.12	0.090	-0.14	0.082	-0.07	0.364	0.08	0.770
$r^2$	0.03		0.08		0.15		0.03		0.01		0.23	

Model predicting risky sexual behavior						
Independent variables	Dependent variables					
	Number of lifetime sexual partners		Number of sexual partners in last three months		Failure to use condoms in last three months	
	$\beta$	$p$	$\beta$	$p$	$\beta$	$p$
Traditional Machismo	0.67	0.72	-0.44	0.94	0.12	0.48
Caballerismo	0.15	0.71	0.19	0.93	-0.21	<0.001

Note. Models predicting risky sexual cognitions ( $N = 145$ ), model assessing condom attitudes tested separately from model assessing risky sexual intentions. Model predicting risky sexual behavior ( $N = 114$ ).

Relationship status included as a covariate in models predicting risky sexual intentions and risky sexual behavior, respectively.

within the last three months. Responses ranged to up to 15 partners in the last three months. Also, among those who reported ever engaging in sex, many did not engage in unprotected sex (40.4%). Standardized beta coefficients for primary hypothesis testing can be found in Table 1.

### **Machismo and risky sexual cognitions**

Traditional machismo was positively related to risky sexual intentions ( $B = 0.17$ ,  $SE = 0.08$ ,  $p = 0.035$ ). Caballerismo was unrelated to risky sexual intentions. We assessed the relation between traditional machismo and caballerismo and each of the 5 dimensions of condom attitudes within a single path analysis using a linear regression strategy. Traditional machismo had positive associations with attitudes that condoms were reliable ( $B = 0.68$ ,  $SE = 0.29$ ,  $p = 0.020$ ), pleasurable ( $B = 0.91$ ,  $SE = 0.25$ ,  $p < 0.001$ ), and that condom use was not stigmatized ( $B = 1.31$ ,  $SE = 0.30$ ,  $p < 0.001$ ). There was no relation between traditional machismo and condom attitudes pertaining to embarrassment, and no relation between caballerismo and any of the 5 condom attitudes assessed by the MCAS.

### **Machismo and risky sexual behavior**

We used a single path model whereby traditional machismo and caballerismo predicted each risky sexual behavior while controlling for relationship status. Due to the count distribution of the dependent variables, a negative binomial strategy was specified. Results showed that neither traditional machismo nor caballerismo were related to number of lifetime sexual partners or number of sexual partners in the last three months. Traditional machismo was unrelated to failure to use a condom but caballerismo was inversely related to failure to use a condom ( $B = -0.30$ ,  $Exp(B) = 0.74$ ,  $SE = 0.12$ ,  $p = 0.015$ ).

### **Comment**

Our hypotheses were partially supported. Traditional machismo was positively related to intentions to engage in risky

sex but was unrelated to any of the risky sexual behavior variables. Caballerismo was related to increased condom use but unrelated to number of sexual partners. Contrary to predictions, traditional machismo and *not* caballerismo was related to more favorable attitudes toward condom use across several dimensions (ie, reliability, pleasure, and stigma). These findings suggest that, although individuals with higher traditional machismo endorsements are interested in potential risky sexual encounters, they are also interested in protecting themselves against harmful consequences of such encounters. Some qualitative research suggests self-protection motivated by familial responsibilities is part of the complex machismo script.<sup>22</sup> Additional research suggests Latina/o college students hold more conservative attitudes toward some risky sexual behaviors.<sup>23</sup> Perhaps the desire for self-protection and the increased conservative sexual attitudes within this population contributed to safer sex attitudes and practices for men in this study.

Some of these results were in contrast to previous findings suggesting masculinity is linked to risky sexual behaviors.<sup>13,14</sup> However, these previous studies assessed general masculine norms rather than culturally-specific masculinity. Thus, the present study highlights the importance of investigating culture-specific gender norms such as machismo, as they may differentially impact risky sexual cognitions and behaviors.

### **Limitations**

This study must be considered in light of several limitations. First, these data are cross-sectional, and we cannot infer the directionality of the effects. Also, data were self-report and therefore subject to bias. In addition, this sample size could not power a more complex model whereby we could assess the incremental effects of machismo and risky sexual cognitions on risky sexual behavior. Future studies should examine these variables in a larger sample with a more complex design.

## Conclusion

Our findings indicate the relations between machismo and risky sexual cognitions and behaviors among Latino college men are more complex than current discourse on masculinity and sexual outcomes might suggest. This underscores the need to move away from stereotypical depictions of Latino masculinity noted in the literature to better understand how different aspects of cultural gender roles relate to risky sex.<sup>24</sup> While this area is yet relatively underdeveloped, this study suggests culturally responsive prevention and intervention practices related to risky sexual behavior on college campuses may benefit from considering some aspects of gendered norms of Latino culture. Additional studies are needed to further support this conclusion.

## Conflict of interest disclosure

The authors have no conflicts of interest to report. The authors confirm that the research presented in this article met the ethical guidelines, including adherence to the legal requirements, of United States and received approval from the University of Texas at San Antonio.

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