

# **One of the Guys: Are Masculine Women Less of a Mating Threat?**

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### **Abstract**

Recent research on cross-sex friendships has shown that women view same-sex others who befriend men (i.e., “guys’ girls”) as being less trustworthy, more sexually promiscuous, and a greater mating threat than those who tend to befriend women (i.e., “girls’ girls”). However, no research has examined how gender expression may influence women’s judgments of same-sex others who prefer male or female friends. Based on past studies looking at biological cues of masculinity/femininity (i.e., vocal pitch), it is possible women may consider a masculine “guys’ girl” as a lesser mating threat than a feminine “guys’ girl.” Here, I conducted three studies to test this possibility in which I manipulated gender expression of the target through hobbies and interests (Study 1), clothing (Study 2), and facial sexual dimorphism (Study 3). I found that despite gender expression, women preferring male friends are typically seen as less trustworthy, more sexually unrestricted, and as greater mating threats than women preferring female friends. Only in Study 2, did gender expression seem to impact perceptions of trustworthiness and sexual restrictedness of the target. Thus, results indicate that women typically act negatively toward other women who prefer cross-sex friendships while gender expression has relatively little impact.

*Keywords: Cross-sex friendships, intrasexual competition, gender expression*

### **One of the Guys: Are Masculine Women Less of a Mating Threat?**

The ever-enthralling friends-to-lovers trope has mesmerized audiences for years. From *When Harry Met Sally* (Reiner, 2001) to *13 Going on 30* (Winick, 2004), there is something ever so captivating about the possibility of going from friends to more than friends. But how well does this this storyline play out in non-scripted human behavior? With more than half of couples reporting that they were friends before they entered a romantic relationship (Hunt et al., 2015), it is no wonder that people are suspicious about men and women being “just friends”. But would this still be the case if the woman in the friendship expressed herself more masculinely? For instance, in the media, female love interests are often portrayed as stereotypically feminine women. Why is the female love interest more often cast as Jennifer Aniston over Ellen DeGeneres?

In the current research, I explore the evolutionary rationale regarding gender expression and how it impacts mate guarding (maintaining/securing a relationship by warding off potential sexual rivals) in the cross-sex friendship context. It may be that women like DeGeneres are seen as non-gender prototypical (Goh et al., 2021); and thus, women like DeGeneres will also be seen as less of a mating threat in the cross-sex friendship context. Bradshaw et al. (2022) found that women who prefer male friends are generally seen as less trustworthy and more sexually promiscuous by other women, but will this finding be moderated by the gender expression (or gender prototypicality) of the target? Research has yet to explore how gender expression may impact these perceptions. Past research has found that when women exhibit more masculine biological characteristics (e.g., lower voice pitch), they are seen as less of a mating threat than women who exhibited more feminine biological characteristics (e.g., higher voice pitch) (O’Conner & Feinberg, 2012; Puts et al., 2011). And, as women who present more masculinely

(e.g., have stereotypically masculine hobbies, dress in masculine clothing) tend to have more cross-sex friendships (Kalmjin, 2002; Lenton & Webber, 2006; Reeder, 2003), it is important to examine if women's gender expression moderates how they are perceived by other women when preferring cross-sex friendships.

### **Cross-Sex Friendships**

Cross-sex friendships are defined as “non-romantic, nonfamilial, personal relationships between a man and a woman” (O'Meara, 1989). When exploring the evolutionary rationale for cross-sex friendships, past literature demonstrates numerous benefits of obtaining friends of the opposite sex. Heterosexual men and women alike can benefit from cross-sex friendships. For instance, in Bleske & Buss (2000), cross-sex friendships were found to trigger both men's and women's mating strategies as, through their friendship, they are showing that they appeal to the opposite sex as a potential mate. For women especially, having male friends can provide them with economic security through gifts and resources (Lewis et al., 2011) and physical protection (Buss & Schmitt, 1993; Lewis et al., 2011). Such patterns are found among non-human primates as well. Female chimpanzees often form bonds with males to avoid intrasexual aggression, aggression toward those of the same sex to inhibit mating behavior (Kahlenberg et al., 2008).

Women are often wary of trusting other women who claim to be “just friends” with men (Felmlee et al., 2012; Hart et al., 2016). This distrust is not unfounded as about half of heterosexual college students admit to having engaged in sexual activity with a cross-sex friend (Afifi & Faulkner, 2000) or at least thought about it (Bleske-Rechek et al., 2012; Kaplan & Keys, 1997; Reeder, 2000; Sapadin, 1988). In Lewis et al., 2011, when men were given budgets to create their ideal opposite-sex friend, men valued attractiveness in opposite-sex friends more than women, signaling that opposite-sex friendships could be used as a mating strategy. Given

the predictive nature of cross-sex friendships turning into romantic relationships (Hunt et al., 2015) and, in some cases, male partners leaving their romantic partner for their female friend (Lemay & Wolf, 2016), it is unsurprising that women are typically wary of other women who prefer cross-sex friendships. This offers an explanation as to why women who prefer male friends often face aggression and ostracization from their female peers (Bukowski et al., 1999; Kuttler et al., 1999), as women preferring male friends have greater mating success (Bradshaw et al., 2022; Lewis et al., 2012).

### **Intrasexual Competition**

O'Meara (1989) asserted that a challenge facing cross-sex friendships is keeping them strictly platonic, or not acting on them when sex is so readily available (Hand & Furman, 2009; Lemay & Wolf, 2016). Given that women preferring male friends often view themselves as more attractive than women who prefer female friends, it is possible that cross-sex friendships may serve as a signal of intersexual competition (Bradshaw et al., 2022; Lewis et al., 2012). Thus, women who prefer male friends are often viewed by other women as more sexually promiscuous; which, in turn, may cause these women to exhibit intrasexual aggression toward women preferring male friends (Arnocky et al., 2019).

In Vaillancourt and Sharma (2011), women were shown targets who dressed provocatively and dressed modestly. The provocatively dressed target had not only her appearance but also her reputation denigrated by other women. This finding has also been apparent when women are exposed to potential romantic rivals (Reynolds et al., 2018). As women in cross-sex friendships have easier sexual access than those who prefer same-sex friendships (Bleske & Buss, 2000; Bleske-Rechek et al., 2012; Hand & Furman, 2009; Lemay & Wolf, 2016), it is unsurprising that these aggressive behaviors are shown towards women in

cross-sex friendships. If the target is dressed provocatively, other women may view the target preferring male (vs. female) friends as more sexually unrestricted.

### **Potential Role of Gender Typicality**

Heterosexual men typically find feminized faces more attractive than masculinized faces (Glassenberg et al., 2010). This preference not only occurs visually but also audibly as men find feminized female voices more attractive than masculinized female voices (Feinberg et al., 2008). Femininity can be correlated with attractiveness and increased mating potential. For example, Perrett et al. (1998) found that feminine female faces can signal health and fertility, important characteristics when looking for a potential mate.

Women who consider themselves to be more masculine typically have more cross-sex friendships than their feminine peers (Kalmijn, 2002; Lenton & Webber, 2006; Reeder, 2003). Davis et al. (1985) found a relationship between participant's scores on the Bem Sex Role Inventory and a Sex-related Clothing Inventory in which women who described themselves as more masculine were more likely to wear masculine clothing than their androgynous and sex-typical counterparts. Women with phenotypically masculine qualities have also been seen as less of a mating threat than women who exhibit prototypical qualities (O'Connor & Feinberg, 2012; Puts et al., 2011). However, past research has failed to examine how gender expression and gendered interests may impact perceptions of women in cross-sex friendships. But with the past evidence in hand, it is possible that women may be more intrasexually threatened by feminine women than masculine women.

### **Current Research**

Previous research has examined the evolutionary rationale of women's perceptions of other women who prefer cross-sex friendships (Bradshaw et al., 2022) and how masculine

women are perceived by other women (O’Conner & Feinberg, 2012; Puts et al., 2011). However, no research, to my knowledge, has examined how gender expression and gender prototypicality influence perceptions of individuals preferring cross- (vs. same-) sex friendships. Following the past research surrounding perceptions of women in cross-sex friendships, the current research aims to examine if gender prototypicality of women who prefer cross-sex friendships (vs. same-sex friendships) will influence perceptions of mate guarding behaviors, trustworthiness, and sexual promiscuity of the target.

Across three studies gender expression of the target was manipulated along with her friendship preference (men vs. women). In Study 1, the college student-aged target was given a social media profile depicting her friendship preference (same- vs. cross-sex) as well as her future career plans and hobbies (typed as masculine vs. feminine). In Study 2, the target’s gender expression was manipulated via clothing. The social media post depicted the outfit (masculine typed – suit vs. feminine typed – dress) the target was planning to wear to a wedding. The participants also were provided with a short description of the target (including her friendship preferences). In Study 3, the target’s face was morphed to appear either more masculine or more feminine. Again, a short description followed the image including her friendship preferences as well as distractor variables.

I predicted the following: 1) Masculine women who prefer cross-sex friendships will be viewed as more trustworthy, less sexually promiscuous, and as less of a mating threat than feminine women who prefer cross-sex friendships. 2) Women who prefer cross-sex friendships will be viewed as less trustworthy, more sexually promiscuous, and as more of a mating threat than women who prefer same-sex friendships.

## Study 1

Study 1 examined whether expression of non-prototypical gendered interests and hobbies influenced perceptions of women who prefer same- or cross-sex friendships. Here, I created profiles for a college-aged female target which included characteristics such as her college major, her career plans, and her hobbies. These characteristics were then feminized or masculinized to manipulate gender prototypicality.

### Method

#### *Participants*

The final data analytic sample consisted of 245 female, heterosexual participants ( $M_{age} = 41.13$ ,  $SD = 15.21$ ; age range: 18-82). Prior to data analysis, six participants were excluded for reporting a non-heterosexual sexual orientation and/or failing the manipulation check.

Participants failed the manipulation check by failing to report the correct friendship preference of the target (e.g., whether the target preferred male or female friends).

#### *Design, Procedure, and Materials*

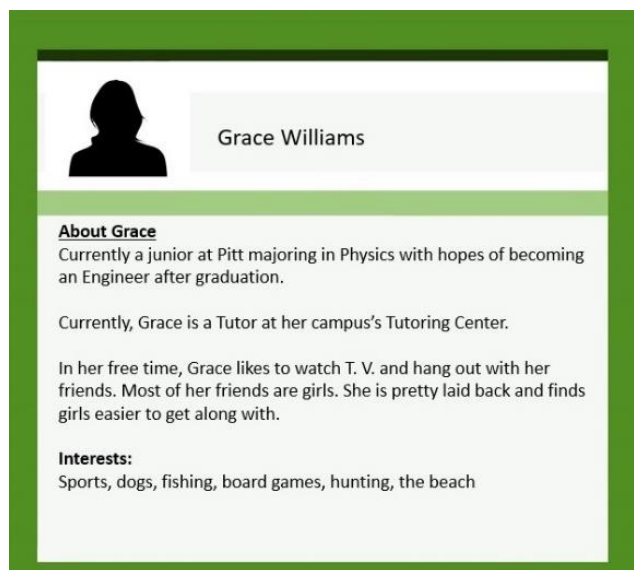
This study used a 2 (target gender expression: masculine vs. feminine) x 2 (target friendship preferences: male vs. female) between-subjects design. The informed consent document relayed the cover story that the study was examining judgements of social media profiles based on whether the profile included a photograph. In reality, all participants were told they had been assigned to view a profile without a photograph and were randomly assigned to view a profile of a female target who had masculine interests and preferred male friends ( $n = 63$ ), masculine interests and preferred female friends ( $n = 62$ ), feminine interests and preferred male friends ( $n = 61$ ), or feminine interests and preferred female friends ( $n = 59$ ).



College majors, career plans, hobbies, and interests in the profile were designated as masculine or feminine based on prior research (Glick et al., 1995; Lippa, 2005; McHale et al., 2009; Shinar, 1975; White et al., 1989; White & White; 2006). The feminized college major was education while the masculinized college major was physics. The feminized career plan was to become an elementary school teacher while the masculinized career plan was to become an engineer. Feminized interests included dancing, art, and gardening. Masculinized interests included sports, fishing, and hunting. Non-gendered hobbies and current occupations were also included to make the manipulation appear less overt; these were identical across profiles. See Figure 1 for example profile.

### Figure 1

#### *Example of Study 1 Stimulus Profile*



### *Trustworthiness*

Trustworthiness plays an important role in perceptions of the target as feelings of trust toward the target can predict overall warmth and likability of the target. To measure the target's perceived trustworthiness, a scale from Delpriore et al. (2018) was used. Participants were asked

to indicate the extent to which they agreed with the following statements: a) If we were competing for something I would expect the target to play fair; b) I would feel secure around the target; c) If I were to meet the target, she would act benevolently (or kindly) towards me; d) If given the opportunity, the target would probably exploit those around her to get what she wants; e) The target would take advantage of me or others to get ahead; f) The target would do anything to get what she wants; and g) If I were to meet the target, I would think that she is after something (1: *Strongly disagree*; 7: *Strongly agree*). Participants were also asked “How much would you trust the target’s advice or opinion?” (1: *Not at all*; 8: *Completely*).

### ***Mate Guarding Tendencies***

In women, mate guarding often takes place by denigrating women’s appearance, sexuality, or honor (Vaillancourt, 2013). As women who prefer cross-sex friendships often see themselves as more attractive than other women (Bradshaw et al., 2022), women may deploy greater mate guarding tendencies toward women who prefer cross-sex friendships. Thus, participants were asked questions to gauge their mate guarding tendencies toward the target via questions adapted from Vaillancourt & Sharma (2011): a) How likely would you be to introduce the target to your boyfriend (current or future)?; b) How likely would you be to let your boyfriend (current or future) spend time alone with the target?; and c) How likely would the target be a friend of yours? (1: *Extremely unlikely*; 7: *Extremely likely*).

### ***Sexual Restrictedness (Sociosexual Orientation Inventory-Behavior)***

Given that heterosexual women in cross-sex friendships have easier access to sex than women in same-sex friendships (Hand & Furman, 2009; Lemay & Wolf, 2016), these women may be seen as more sexually unrestricted. The Sociosexual Orientation Inventory-Behavior scale (Penke, 2011; Simpson & Gangestad, 1991) was adapted to measure sexual restrictedness

and promiscuity of the target. Participants were asked a) How many partners do you think the target has had sex with in the past 12 months?; b) How many different partners do you think the target has had sex with on one and only one occasion?; and c) How many different partners do you think the target has had sex with, without having an interest in a long-term, committed relationship? (1: *0 sexual partners*; 9: *20 or more sexual partners*).

### ***Modified Kinsey Scale***

To explore if gender expression predicted perceived sexual orientation, participants also answered the following question: If you had to guess, what is the target's sexual orientation? (0: *exclusively heterosexual*; 6: *exclusively homosexual*).

### ***Masculinity & Femininity***

Participants also were asked to indicate how masculine the target was and how feminine the target was to ensure the manipulation of gender expression was picked up by participants. Participants were specifically asked "How masculine is the target, relative to others?" and "How feminine is the target, relative to others?" (1: *not at all masculine/feminine*; 7: *very masculine/feminine*).

## **Results and Discussion**

Prior to data analysis, mean composites for perceived trustworthiness ( $\alpha = .91$ ), mate guarding tendencies ( $\alpha = .83$ ), and unrestricted sexual behavior ( $\alpha = .84$ ) were computed. To examine whether gender expression impacted perceptions of a female target based on her friendship preferences, 2 (target gender expression: masculine vs. feminine) x 2 (target friendship preference: male vs. female) between-subjects ANOVAs were conducted on all dependent variables.

Participants picked up on the manipulation of the target's gender presentation, as they rated the masculine (vs. feminine) target as more masculine  $F(1, 244) = 58.51, p < .001$ . Participants also evaluated the target preferring male (vs. female) friends as more masculine,  $F(1, 244) = 63.65, p < .001$ . However, there was no 2-way interaction between gender expression and friendship preference ( $p = .697$ ). The feminine (vs. masculine) expressing target was also perceived as more feminine  $F(1, 244) = 67.36, p < .001$ , and women preferring female (vs. male) friends were also seen as more feminine  $F(1, 244) = 59.85, p < .001$ . Similar to masculinity, no 2-way interaction emerged between gender expression and friendship preference for femininity ( $p = .787$ ).

The target described as preferring male friends was rated as significantly less trustworthy than the target that preferred female friends  $F(1, 244) = 3.73, p < .001$ . There was no main effect of target gender expression on trustworthiness ( $p = .055$ ), and no 2-way interaction between target friendship preference and target gender expression emerged ( $p = .938$ ). The target preferring male friends (vs. female friends) was also viewed as more likely to have sexually unrestricted behavior,  $F(1, 244) = 34.45, p < .001$ . Similarly, gender expression did not impact perceptions of target sexual unrestrictedness ( $p = .924$ ), and no significant 2-way interaction emerged ( $p = .479$ ). The target preferring male friends elicited more mate guarding behaviors from participants than their counterparts who preferred female friends,  $F(1, 244) = 21.36, p < .001$ . Gender expression did not impact mate guarding behaviors ( $p = .161$ ), and no significant 2-way interaction emerged ( $p = .376$ ).

Results for perceived target sexual orientation revealed the target preferring same-sex friendships was evaluated as more likely to be homosexual than the target preferring cross-sex friendships  $F(1, 244) = 7.10, p = .008$ . The masculine-typed target was also perceived as more

homosexual than the feminine-typed target,  $F(1, 244) = 11.85, p = .001$ . However, no significant 2-way interaction emerged ( $p = .553$ ).

Due to the wide range of participant ages in Study 1, exploratory analyses investigated the correlation between age and perceptions of the target. Within each combination of the independent variables, correlational analyses were conducted. For the masculine target preferring male friends, older participants viewed the target as less sexually unrestricted,  $r = -.25, p = .050$ , as a greater mating threat,  $r = .31, p = .015$ , and as less masculine,  $r = -.29, p = .022$ . There were no significant relationships between age and perceptions of trustworthiness, target sexual orientation, and target femininity ( $ps \geq .091$ ). For the masculine target preferring female friends, older participants viewed the target as more likely to be homosexual,  $r = .32, p = .012$ . There were no significant relationships between participant age and perceptions of target trustworthiness, sexual unrestrictedness, mate guarding, masculinity, and femininity ( $ps \geq .141$ ). For the feminine target preferring male friends, older participants viewed the target as less sexually unrestricted,  $r = -.34, p = .008$ , and as a greater mating threat,  $r = .30, p = .020$ . There were no significant relationships between participant age and perceptions of target trustworthiness, sexual orientation, masculinity, and femininity ( $ps \geq .155$ ). For the feminine target preferring female friends, no significant relationships between participant age and perceptions of the target occurred ( $ps \geq .065$ ).

Despite participants being aware of the gender manipulation, gender expression did not significantly impact perceptions of the target while friendship gender preference did. These results, in turn, replicate the findings of Bradshaw et al. (2022). There was no evidence to suggest that gender expression, at least, in abstract stereotypes, has an influence on perceptions of women who prefer cross-sex friendships. However, it is possible as the manipulations of the

target were abstract and not visible, participants may feel more/less threatened when given a visual stimulus versus an abstract idea, as attractiveness of the target may be better understood through a pictorial stimulus (Sojka & Giese, 2006).

**Table 1**

*Descriptive statistics for perceptions of Trustworthiness, Sociosexual Orientation-Behavior, Mate Guarding, and Modified Kinsey Scale by target friendship preference (cross-sex vs. same-sex) and gender expression (feminine vs. masculine).*

	Cross-Sex, <u>Masculine Target</u>	Same-Sex, <u>Masculine Target</u>	Cross-Sex, <u>Feminine Target</u>	Same-Sex, <u>Feminine Target</u>
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Femininity	3.08 (.85)	4.16 (1.41)	4.23 (1.15)	5.39 (1.07)
Masculinity	4.56 (1.10)	3.31 (1.64)	3.36 (1.38)	1.98 (.90)
Trustworthiness	4.93 (.91)	5.49 (.82)	5.14 (1.10)	5.72 (.71)
SOI-Behavior	3.03 (1.51)	2.22 (.90)	3.15 (1.34)	2.12 (1.07)
Mate Guarding	4.08 (1.60)	4.77 (1.46)	4.17 (1.56)	5.19 (1.08)
Kinsey	3.02 (1.54)	3.42 (1.72)	2.23 (1.43)	2.86 (1.37)

## Study 2

Study 2 was designed to mirror Study 1, but instead of manipulating abstract gender stereotypes, the target's clothing was manipulated. Typically, women who prefer to wear masculine clothing have more male friends (Davis, 1985), so this manipulation was likely to carry out in participants' daily lives. Specifically, for the study, I showed participants a social media post of an outfit the target planned to wear to their best friend's wedding (a suit or a dress) and added additional context to the social media post (including the target's friendship preferences). Outfits shown were pre-rated using a pilot study to determine if the clothing was considered masculine or feminine.

## Method

### *Participants*

The final data analytic sample consisted of 256 female, heterosexual participants ( $M_{age} = 25.3$ ,  $SD = 3.31$ ; age range 18-30). Prior to data analysis, 25 participants were excluded for reporting a non-heterosexual sexual orientation and/or failing the manipulation check (wrongly indicating the target's friendship preference).

### *Design, Procedure, and Materials*

The study again used a 2 (target clothing: masculine vs. feminine) x 2 (target friendship preference: male vs. female) between-subjects design. Participants were told they would be judging the target's social media post with or without additional context and then would answer questions about their perceptions of the individual. In reality, all participants viewed a short story regarding a female target preparing for her best friend's wedding (best friend was either a man or a woman) and were told if the target preferred male/female friends. Participants were also shown a social media post depicting what the target planned to wear to the wedding, either a suit (masculine-typed) or a dress (feminine-typed). See Figure 2 for example.

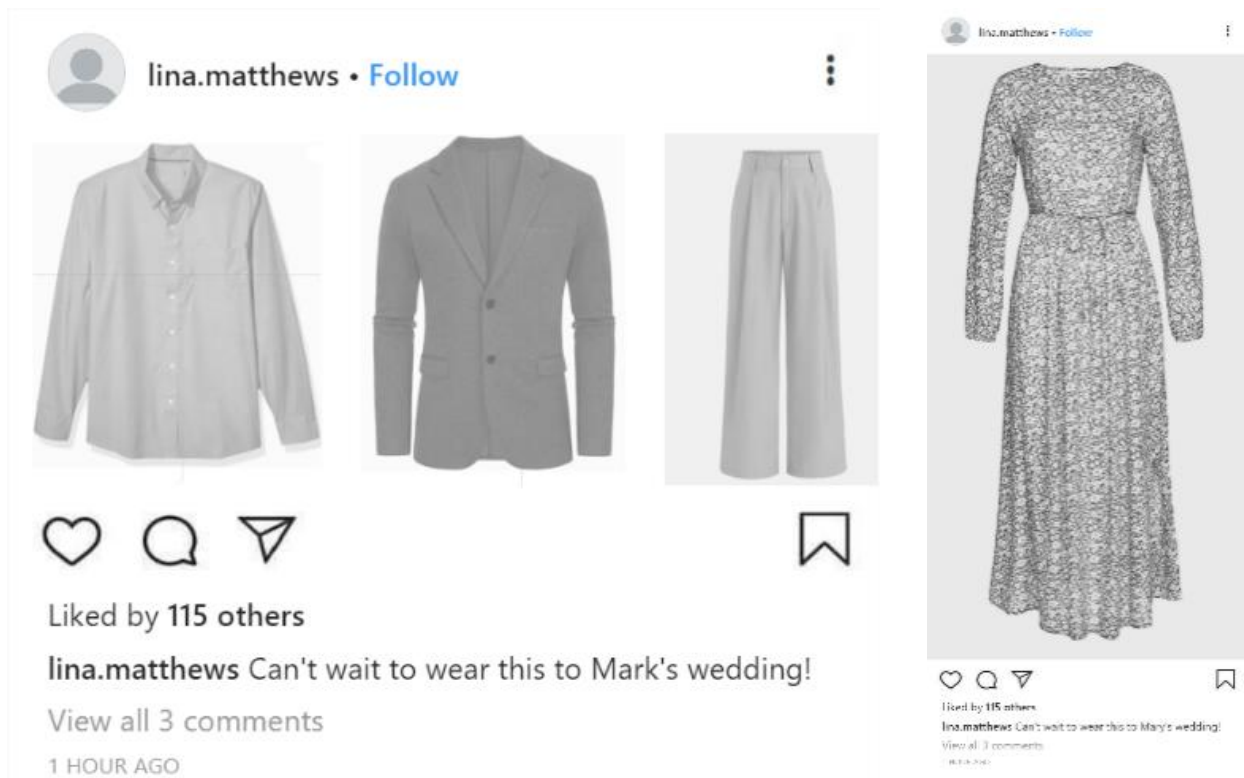
All dependent measures were identical to Study 1, but a new measure, attractiveness (Vaillancourt & Sharma, 2011) was added as participants now had pictorial stimuli to evaluate. Specifically, participants were asked how fitting the following descriptions were a) The target is cute; and b) The target is sexy (1: *Not at all descriptive*; 7: *Extremely descriptive*).

Participants were randomly assigned to view the profile of a female masculine target preferring female friends ( $n = 64$ ), masculine target preferring male friends ( $n = 62$ ), feminine target preferring female friends ( $n = 64$ ), or feminine target preferring male friends ( $n = 66$ ).

## Figure 2

### *Example of Study 2 Stimulus Social Media Post*

Meet Lina. Lina is 24 years old and is planning on attending Mary and Mark's wedding next weekend. **Mark (Mary) and Lina are best friends.** Most of Lina's friends are guys (*girls*). She is pretty laid back and finds guys (*girls*) easier to get along with. Before the wedding, Lina posts a picture of the outfit she plans to wear to the wedding on social media.



## Results and Discussion

Mean composites of ratings of the target's perceived trustworthiness ( $\alpha = .91$ ), mate guarding tendencies ( $\alpha = .80$ ), and sexually unrestricted behavior ( $\alpha = .83$ ) were computed by averaging across all items in each measure. To examine whether gender-typed clothing influenced perceptions of the target based on her friendship preferences, 2 (target clothing: masculine vs. feminine)  $\times$  2 (target friendship preference: male vs. female) between-subject ANOVAs were conducted on all dependent variables.



The masculinely (vs. femininely) dressed target was evaluated as more masculine  $F(1, 255) = 185.37, p < .001$ . The target preferring male (vs. female) friends was also seen as more masculine,  $F(1, 255) = 25.89, p < .001$ . For evaluations of masculinity, a significant 2-way interaction between target friendship preference and gender expression emerged,  $F(1, 255) = 5.52, p = .020$ . Simple effects tests revealed ratings of masculinity differed for the feminine target, where the target preferring male friends was rated as more masculine than the target preferring female friends,  $F(1, 252) = 28.09, p < .001$ . However, ratings of masculinity did not significantly differ for the masculine target ( $p = .056$ ).

For femininity evaluations, the femininely (vs. masculinely) dressed target was evaluated as more feminine,  $F(1, 255) = 208.57, p < .001$ . The target preferring female (vs. male) friends was also perceived as more feminine,  $F(1, 255) = 18.36, p < .001$ . A significant 2-way interaction emerged between target friendship preference and gender expression for femininity,  $F(1, 255) = 8.47, p = .004$ . Simple effects tests revealed ratings of femininity differed for the feminine target, where the target preferring male friends was rated as less feminine than the target preferring female friends,  $F(1, 252) = 26.29, p < .001$ . However, ratings of femininity did not significantly differ for the masculine target ( $p = .336$ ).

The target preferring cross-sex friendships was perceived as less trustworthy than the target preferring same-sex friendships,  $F(1, 255) = 13.41, p < .001$ ; however, gender expression did not significantly impact perceptions of target trustworthiness ( $p = .642$ ). More importantly, a significant 2-way interaction emerged between target friendship preference and gender expression,  $F(1, 255) = 8.90, p = .003$ . Simple effects tests revealed ratings of trustworthiness differed for the feminine target, where the target preferring male friends was rated as less

trustworthy than the target preferring female friends,  $F(1, 252) = 22.31, p < .001$ . However, ratings of trustworthiness did not significantly differ for the masculine target ( $p = .626$ ).

The target preferring male friends was also seen as more sexually promiscuous than the target preferring female friends,  $F(1, 255) = 12.75, p < .001$ , but gender expression did not significantly impact perceptions of sexual promiscuity ( $p = .538$ ). A significant 2-way interaction emerged,  $F(1, 255) = 4.24, p = .041$ . Simple effects tests revealed ratings of promiscuity differed for the feminine target, where the target preferring male friends was rated as more promiscuous than the target preferring female friends,  $F(1, 252) = 16.10, p < .001$ . However, ratings of promiscuity did not significantly differ for the masculine target ( $p = .290$ ).

Replicating Study 1, participants indicated more subversive mate guarding behaviors toward the target preferring cross-sex friendships,  $F(1, 255) = 8.10, p = .005$ . Gender expression did not significantly impact perceptions of target's mate guarding tendencies ( $p = .405$ ), and no significant 2-way interaction emerged ( $p = .077$ ).

For sexiness, results did not reveal a significant main effect of gender expression ( $p = .380$ ), friendship preference ( $p = .054$ ), and no significant 2-way interaction emerged ( $p = .487$ ). For cuteness, results revealed a significant main effect of gender expression,  $F(1, 255) = 13.05, p < .001$ , where the femininely dressed target was viewed as cuter than the masculinely dressed target. The effect of friendship preference was not significant ( $p = .451$ ). However, a significant 2-way interaction between gender-expression and friendship preference emerged for cuteness,  $F(1, 255) = 3.90, p = .049$ . Simple effects tests revealed no significant differences for the feminine target ( $p = .053$ ) or the masculine target ( $p = .393$ ).

The masculinely dressed target was seen as more homosexual than the feminine target,  $F(1, 255) = 91.66, p < .001$ , but friendship preference did not significantly impact perceptions of homosexuality ( $p = .111$ ), and no significant 2-way interaction emerged ( $p = .145$ ).

**Table 2**

*Descriptive statistics for Target Trustworthiness, Sociosexual Orientation-Behavior, Mate Guarding, Attractiveness, and Modified Kinsey Scale by target friendship preference (cross-sex vs. same-sex) and target clothing (feminine vs. masculine).*

	<u>Cross-</u> <u>Sex/Masculine</u> <u>Target</u> <i>M (SD)</i>	<u>Same-</u> <u>Sex/Masculine</u> <u>Target</u> <i>M (SD)</i>	<u>Cross-</u> <u>Sex/Feminine</u> <u>Target</u> <i>M (SD)</i>	<u>Same-</u> <u>Sex/Feminine</u> <u>Target</u> <i>M (SD)</i>
Femininity	2.89 (1.15)	3.09 (1.24)	4.62 (1.30)	5.70 (1.11)
Masculinity	5.00 (1.20)	4.55 (1.43)	3.14 (1.45)	1.91 (1.19)
Trustworthiness	4.82 (1.13)	4.92 (1.02)	4.49 (1.30)	5.38 (.90)
SOI-Behavior	3.10 (1.28)	2.94 (1.03)	3.34 (1.60)	2.40 (1.38)
Mate Guarding	4.13 (1.55)	4.32 (1.14)	3.69 (1.43)	4.48 (1.33)
Cuteness	3.53 (1.46)	3.30 (1.49)	3.85 (1.63)	4.37 (1.59)
Sexiness	2.95 (1.18)	2.50 (1.37)	2.68 (1.28)	2.47 (1.36)
Kinsey	4.34 (1.60)	4.31 (1.39)	2.79 (1.48)	2.20 (1.64)

In terms of friendship preference, all results were replicated from Study 1 excluding the Kinsey scale as friendship preference did not impact views of the target's sexuality. With 2-way interactions emerging for target trustworthiness and sexual promiscuity, there is evidence to suggest that gender expression of the target does have some influence on how the masculine target is viewed. Specifically, the masculine target appears to be less of a threat due to their nonprototypical gender expression. Interestingly, the feminine target preferring opposite-sex (vs. same-sex) friends was perceived as more masculine and less feminine.

### Study 3

Similarly to Study 2, Study 3 also used pictorial stimuli. However, Study 3 used faces to indicate phenotypical cues of masculinity and femininity. Given O’Conner and Feinberg (2012) found that women were more comfortable with having a woman with a lower pitched voice (masculinized voice) accompany their romantic partner on a weekend trip than a woman with a higher pitched voice (feminized voice), I was curious to see if this would replicate with other gendered biological cues. Specifically I wondered how facial sexual dimorphism or feminized/masculinized female faces would be evaluated by participants. To do so, I used facial stimuli from Boykin et al. (in press) in which they provided feminized and masculinized versions of female faces to complete Study 3.

### Method

#### *Participants*

The final data analytic sample consisted of 236 female, heterosexual participants ( $M_{age} = 25.1$ ,  $SD = 3.29$ ; age range: 18-30). Prior to data analysis, 25 participants were excluded for reporting a non-heterosexual sexual orientation and/or failing the manipulation check (wrongly indicating the target’s friendship preference).

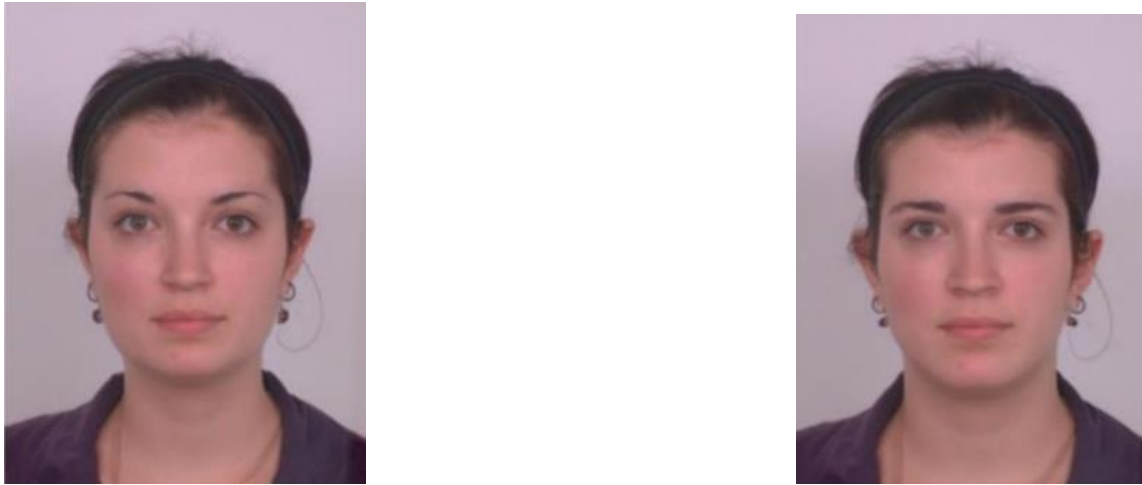
#### *Design, Procedure, and Materials*

This study used a 2 (facial dimorphism: masculine vs. feminine) x 2 (target friendship preference: male vs. female) between-subjects design. Participants were told that they would be evaluating black & white or color I.D. photos, when in reality all stimuli were in color. See Figure 3 for example. Participants were also given a short description about the target and who she likes to hang out with in her time away from work (men or women). All dependent measures were identical to Study 2. Participants were randomly assigned to view the profile of a female

masculine target preferring female friends ( $n = 54$ ), masculine target preferring male friends ( $n = 63$ ), feminine target preferring female friends ( $n = 61$ ), or feminine target preferring male friends ( $n = 58$ ).

### Figure 3

*Example of Feminized Photo (left) and Masculinized Photo (right)*



### Results and Discussion

Mean composites of ratings of the target's trustworthiness ( $\alpha = .93$ ), mate guarding tendencies ( $\alpha = .77$ ), and sexually unrestricted behavior ( $\alpha = .80$ ) were computed by averaging across all items in each measure. To examine if facial sexual dimorphism impacted perceptions of the target based on her friendship preferences, 2 (facial sexual dimorphism: masculine vs. feminine) x 2 (target friendship preference: male vs. female) between-subject ANOVAs were conducted on all dependent variables.

The masculine (vs. feminine) target was viewed as more masculine  $F(1, 235) = 6.12, p = .014$ . The target preferring male (vs. female) friends was also seen as more masculine,  $F(1, 235) = 42.54, p < .001$ . However, no significant 2-way interaction emerged ( $p = .910$ ).

The feminine (vs. masculine) target was evaluated as more feminine,  $F(1, 235) = 17.36, p < .001$ . The target preferring female (vs. male) friends was also perceived as more feminine,  $F(1, 235) = 53.88, p < .001$ . Again, no significant 2-way interaction emerged ( $p = .719$ ).

The target who preferred male friends was again seen as less trustworthy than the target who preferred female friends,  $F(1, 235) = 35.88, p < .001$ . The target's facial sexual dimorphism did not significantly impact perceptions of the target's trustworthiness ( $p = .189$ ), and no significant 2-way interaction emerged ( $p = .245$ ). The target preferring cross-sex (vs. same-sex) friendships was perceived as more sexually unrestricted  $F(1, 235) = 30.74, p < .001$ . However, facial sexual dimorphism did not significantly influence perceptions of sexual restrictedness ( $p = .477$ ), and no significant 2-way interaction emerged ( $p = .873$ ). The target preferring male friends was viewed as more of a mating threat in comparison to the target preferring female friends  $F(1, 235) = 27.57, p < .001$ . Facial sexual dimorphism did not influence perceptions of the target's mate guarding tendencies ( $p = .201$ ), and no significant 2-way interaction emerged ( $p = .568$ ).

Attractiveness was examined by calculating scores of "cuteness" and "sexiness" independently. The feminized target was seen as cuter  $F(1, 235) = 11.16, p = .001$ , and sexier  $F(1, 235) = 5.71, p = .018$ , than the masculine target. However, while the women preferring female friends were seen as cuter  $F(1, 235) = 6.62, p = .011$ , friendship preference did not influence participant's ratings of the target's sexiness ( $p = .581$ ). No significant 2-way interaction emerged for cuteness ( $p = .852$ ) or sexiness ( $p = .790$ ). Perceived sexual orientation was not significant based on friendship preferences ( $p = .698$ ) or facial sexual dimorphism ( $p = .837$ ). No significant 2-way interaction emerged ( $p = .944$ ).

It is possible that the female participants were less inclined to call the target "sexy" based on friendship preference as calling attention to a woman's sexiness (like the question, "How sexy

is the target?" does) often leads to negative attention from other women (Keys & Bhogal, 2016).

Otherwise, results replicated Study 1 in finding that gender expression did not impact perceptions of women who prefer cross-sex friendships.

**Table 3**

*Descriptive Statistics for perceptions of Trustworthiness, Sociosexual Orientation-Behavior, Mate Guarding, Attractiveness, and Modified Kinsey Scale by target friendship preference (cross-sex vs. same-sex) and facial sexual dimorphism (feminine vs. masculine).*

	<u>Cross-</u> <u>Sex/Masculine</u> <u>Target</u> <i>M (SD)</i>	<u>Same-</u> <u>Sex/Masculine</u> <u>Target</u> <i>M (SD)</i>	<u>Cross-</u> <u>Sex/Feminine</u> <u>Target</u> <i>M (SD)</i>	<u>Same-</u> <u>Sex/Feminine</u> <u>Target</u> <i>M (SD)</i>
Femininity	3.48 (1.12)	4.50 (1.1)	4.03 (1.18)	5.16 (1.13)
Masculinity	3.90 (1.30)	2.78 (1.34)	3.47 (1.44)	2.38 (1.11)
Trustworthiness	4.63 (1.07)	5.50 (.80)	4.93 (1.05)	5.52 (.77)
SOI-Behavior	3.47 (1.15)	2.57 (1.02)	3.55 (1.49)	2.71 (1.07)
Mate Guarding	3.87 (1.57)	4.65 (0.93)	3.56 (1.41)	4.54 (1.06)
Cuteness	3.89 (1.54)	4.41 (1.43)	4.55 (1.55)	5.00 (1.23)
Sexiness	2.54 (1.41)	2.59 (1.33)	2.93 (1.59)	3.08 (1.31)
Kinsey	3.02 (1.34)	3.07 (1.36)	2.97 (1.31)	3.06 (1.47)

### General Discussion

The purpose of this work was to see if gender expression had an influence on perceptions of women who prefer same- or cross-sex friendships. I hypothesized that women preferring male friends would be seen as less trustworthy, more sexually unrestricted, and eliciting more mate guarding behaviors from participants than women preferring female friends, as in line with previous work (Bradshaw et al., 2022). I also predicted that masculine women would be

considered less of a mating threat, more trustworthy, and less promiscuous than feminine women.

In all three studies, women preferring cross-sex (vs. same-sex) friendships were seen as less trustworthy, more sexually unrestricted and more of a mating threat, replicating prior work by Bradshaw et al. (2022). To test these predictions, I conducted three studies in which the target was categorized as preferring male (vs. female) friends. In each of the studies, gender expression of the target was manipulated via interests and hobbies (Study 1), clothing (Study 2), and biological cues (Study 3).

However, only in Study 2, in which clothing was manipulated, did I find evidence that masculine (vs. feminine) women preferring cross-sex (vs. same-sex) friendships, were seen as more trustworthy and less sexually unrestricted. This provides evidence that masculine women, at least, in regard to masculine clothing, may be deemed as less of a mating threat than feminine women who prefer cross-sex friends. Thus, I have partial evidence to suggest that masculine women, at least, in the cross-sex friendship context, may be seen as less of a mating threat than feminine women.

Exploring gender expression, masculine women may be deemed as less of a mating threat because they may be deemed androgynous – or having both masculine and feminine characteristics. Masculine women and androgynous individuals often incorporate both behaviors appropriate for the opposite sex and their assigned sex (Bem, 1974). Individuals that dress more androgynously are often not able to create close friendships with opposite-sex others (Barth & Kinder, 1988). Due to their non-feminine appearance, men may be less likely to consider androgynous women attractive, in turn, causing other women to view them as less of a mating threat. Interestingly, masculine women were also seen as more likely to be homosexual in



Studies 1 & 2, but not in Study 3. If masculine women are viewed as more likely to be homosexual than their feminine counterparts, women may exhibit less mate guarding behaviors against masculine women as, if they are homosexual, they may not be sexually attracted to their current/potential male romantic partner.

Interestingly, when examining attractiveness, women were likely to admit that the feminine (vs. masculine) target was cuter but were not willing to give the target sexiness scores above the middle of the Likert scale. It is unsurprising that the prototypically feminine target was viewed as cuter than the masculine target, as stereotypically feminine women are typically viewed as more attractive than masculine women (Glassenberg et al., 2010). Participants were probably less likely to label the target as “sexy” as admitting sexual attractiveness could trigger intrasexual competition strategies (Keys & Bhogal, 2016; Vaillancourt & Sharma, 2011).

However, it is also possible that “cuteness” and “sexiness” ratings differed due to different connotations prescribed to these descriptors. The word “cute” tends to be related to innocence, purity, and childlikeness – not necessarily how one would describe a woman they viewed as a mating threat (Granot et al., 2014); while the word “sexy” connotes sex–seductiveness, desirability, and provocativeness, exactly what the participants might fear of a female rival.

I predicted that women expressing stereotypically masculine (vs. feminine) traits would be perceived as more trustworthy, less sexually promiscuous, and as eliciting fewer mate guarding behaviors; however, an interaction between gender expression and friendship only emerged in Study 2 when clothing was manipulated. However, participants picked up on the gender expression cues across studies, as all targets were considered significantly more masculine/feminine when exhibiting their assigned masculine/feminine gendered traits.

Interestingly, across studies, women preferring cross-sex (vs. same-sex) friendships were considered more masculine and women preferring same-sex (vs. cross-sex) friendships were perceived as more feminine. It is possible that stereotypical interests (as found in Study 1) and facial sexual dimorphism (as found in Study 3) manipulations were seen as uncontrollable in comparison to the clothing manipulation, possibly leaving the participants to have stronger impulses when evaluating the target who elicited control in their gender prototypicality (i.e., clothing) (Weiner et al., 1988).

In Study 1, an interaction may not have found as it is becoming increasingly common for women to take up historically male occupations, with millennials being the least occupationally segregated by gender, ever (Weeden, 2019). The majority of college students are now women (Belkin, 2021) and a whopping 72% of women are in the work force (Ridout, 2020). Many of the sources used to extract the manipulations for Study 1 were from sources that may have been outdated, not accurately reflecting the current decrease in gender discrimination in the workplace. In Study 3, there may not have been an interaction as the changes to facial structure were somewhat minute, causing participants to evaluate the sexually dimorphic faces similarly. As for the facial sexual dimorphism, the changes to facial structure may not have been enough for participants to find the feminized face as more threatening than the masculinized face.

A limitation of these studies was that all participants were pooled from an online pool (Prolific) in which they were compensated for taking the survey. Thus, participants may not have been attentive to certain qualities of the stimuli in the study. Participant inattention is inherent in data collection; however, participants were excluded for failing the manipulation check (in which they did not properly answer if the target preferred male or female friends) and/or a lure question asking about distractor variables included in the stimuli. Only those who answered both

questions correctly were included in the analyses. It is also possible that participants sped through the questions and did not take their time answering in order to receive their compensation. Future studies should consider not letting participants move on to another question for a set amount of time to help ensure attention to the questions and stimuli.

In Study 1 specifically, participants were not pooled from a specific age pool and thus the ages of participants ranged from 18-82. Women above 30 years of age were intentionally not recruited for Studies 2 and 3 as I intentionally only wanted to include women of reproductive age. Postmenopausal women are more less likely to be actively searching for mates and thus, less likely to exhibit mate guarding tendencies (Coxworth et al., 2015). As mentioned previously, the manipulation of gender expression for Studies 1 and 3 may not have been clear, leading to the mismatched findings between those studies and Study 2. Future research may use more overt stimuli in order to elicit stronger responses from participants.

Participants were also not asked if they preferred male or female friends or how masculine/feminine they viewed themselves. Perhaps having some pseudo-relationship with the target may have led to participants rating them less harshly. Future research should examine if self-perceived gender expression impacts perceptions of masculine and feminine women. In order to get a sample of female participants who prefer same-sex friendships, future research should ask participants if they prefer to be friends with men or women and exclude participants who indicate they prefer male friends. Future research examining gender expression may also benefit from examining men's perceptions of masculinized/feminized men who prefer same- (vs. cross-) sex friendships. Hypermasculine heterosexual men typically show aggression toward men who exhibit feminized traits (Parrot, 2009) and find them to be less sexually competitive

(O’Conner & Feinberg, 2012); however, they may also exhibit aggression toward a masculinized figure that they perceive as a mating threat.

## **Conclusion**

With more women taking up historically masculine jobs (Weeden, 2019) and the rise of gender-less fashion (Jairath & Daima, 2021), the blurring of historical gendered stereotypes may influence the way humans evaluate potential mating threats. With this influx of women expressing themselves differently than their ancestors, continuing to research gender expression and its influence on mating strategies is vital. As women who dress more stereotypically masculine are perceived as less of a potential mating threat than their feminine counterparts, there is evidence that gender expression and its impact on mating should continue to be explored.

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