

# Reasons to Pretend Orgasm, Mate Retention, and Relationship Satisfaction in Brazilian Women

Evolutionary Psychology  
July-September 2021: 1–11  
© The Author(s) 2021  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/14747049211032939  
journals.sagepub.com/home/evp



Mariana C. Biermann<sup>1</sup>, Mariana G. Farias<sup>2</sup>, Glysa O. Meneses<sup>2</sup>,  
Guilherme S. Lopes<sup>3</sup>, and Todd K. Shackelford<sup>3</sup> 

## Abstract

We investigated the relationship between Brazilian women's reported reasons for pretending orgasm, their performance of mate retention behaviors, and their relationship satisfaction. Additionally, we secured evidence of the validity and reliability of a Brazilian-Portuguese adaptation of the Reasons to Pretend Orgasm Inventory (RPOI). Participants were 295 Brazilian women in a heterosexual relationship ( $M_{age} = 24.9$  years,  $SD_{age} = 5.4$  years). Participants completed a Brazilian-Portuguese adaptation of the Mate Retention Inventory-Short Form, and the translated RPOI (the Escala de Razões para Fingir Orgasmo; ERFO). The resulting 47-item ERFO represents well the original 63-item RPOI. The frequency with which Brazilian women pretend orgasm was negatively associated with their relationship satisfaction. Our sample size may not be sufficient to detect small effects. In addition, due to the exploratory nature of the study, the results should be interpreted with caution and future research may attempt to replicate these findings with larger samples and in other countries.

## Keywords

reasons to pretend orgasm, mate retention behaviors, validity, reliability, evolutionary psychology

Date received: February 17, 2021; Accepted: June 28, 2021

Over human evolutionary history, long-term mating produced benefits for both men and women (see Buss & Schmitt, 2019, for review). For men, these benefits included an increase in paternity certainty and, for women, these benefits included reliable partner investment in the woman and her children (Gallup & Frederick, 2010). Accordingly, a partner's infidelity generates costs for the betrayed partner. A man whose long-term partner is sexually unfaithful risks cuckoldry (i.e., unwitting investment in a child to whom he is genetically unrelated; Buss & Shackelford, 1997), and a woman whose long-term partner is emotionally unfaithful risks losing partner-provisioned resources (Buss, 2016).

Continued receipt of benefits associated with long-term mating may have selected for psychological mechanisms in men and women that motivate efforts to retain a long-term partner—for example, behaviors deployed to reduce the risk of partner infidelity or relationship defection (i.e., mate retention behaviors; Buss, 1988). Buss (1988) identified specific mate retention behaviors in humans, and these can be organized into two domains. Mate retention behaviors may reduce the

likelihood of partner infidelity, for example, by inflicting costs on a partner (*cost-inflicting*; e.g., “Cried in order to keep him with me”), or by increasing a partner's relationship satisfaction (*benefit-provisioning*; e.g., “Made sure that I looked nice for my partner”; Miner et al., 2009).

One class of behaviors not originally identified by Buss (1988), but that may also be associated with mate retention, is “pretending orgasm.” Frequent female copulatory orgasm is positively associated with her partner's relationship satisfaction (Brody & Weiss, 2011), and men's relationship satisfaction is negatively associated with their likelihood of

<sup>1</sup> Department of Psychology, University of Fortaleza, CE, Brazil

<sup>2</sup> Federal University of Ceará, Fortaleza, CE, Brazil

<sup>3</sup> Oakland University, Rochester, MI, USA

## Corresponding Author:

Mariana C. Biermann, PhD Student, Department of Psychology, University of Fortaleza, 1321 Washington Soares Avenue, Fortaleza, Ceará 60811-905, Brazil.

Email: marianabiermann@gmail.com



committing infidelity (Marín et al., 2014). Men who report that their partner more frequently achieves orgasm also report a lower likelihood of committing infidelity (Kaighobadi et al., 2012). The costs associated with a partner's infidelity may have selected for psychological mechanisms in women that motivate them to pretend orgasm to decrease the likelihood of their partner's infidelity and thereby continue as the sole beneficiary of his investment (McCoy et al., 2015).

Kaighobadi et al. (2012) reported that (a) women who perceived higher risk of their partner's infidelity are more likely to report pretending orgasm, (b) women who reported greater likelihood of pretending orgasm reported performing more frequently mate retention behaviors, and (c) women's perceptions of partner infidelity risk mediated the relationship between their reports of pretending orgasm and their performance of cost-inflicting mate retention behaviors. The authors used a sample of participants drawn from universities and surrounding communities in the southeastern United States. Cross-cultural research is an important avenue for accumulating evidence that might strengthen evolutionary hypotheses. Investigating whether pretending orgasm is associated with women's mate retention behaviors in different cultural contexts would offer an opportunity to assess whether the findings documented in the North American context are replicated in other cultural contexts.

Previous research has reported differences in interpretation and performance frequency of mate retention behaviors among Americans and Brazilians. These differences include, for example, that Brazilian women punish a mate's infidelity threat more frequently than do Brazilian men (e.g., "I became angry when my partner flirted too much;" Lopes et al., 2016), contrary to results reported for Americans (Buss et al., 2008). Brazilian men commit infidelity more frequently than do Brazilian women (Abdo, 2004). In addition, women in developing countries are typically more financially dependent on their male partners than are women in wealthier countries (Demirgüç-Kunt et al., 2013; Thapa & Niehof, 2013), and so women in Brazil—a developing country—may have more to lose in terms of partner investment than their American counterparts. Therefore, Brazilian women may be more sensitive to men's behaviors that may indicate infidelity relative to American women (e.g., "He flirted with another woman in front of me"). Moreover, some behaviors considered cost-inflicting in the American context are interpreted as benefit-provisioning in Brazil (Lopes et al., 2016). For example, emotional manipulation (e.g., "Pleaded that I could not live without my partner") was interpreted by Brazilians as benefit-provisioning, in that these behaviors may demonstrate commitment and devotion to the relationship. In addition, previous research has documented differences between Brazilian and British women in their performance of mate retention behaviors. Specifically, British women who rated their partners as more attractive engaged more frequently in mate retention behaviors, such as jealousy induction and emotional manipulation. In contrast, women's perception of their partner's attractiveness was unrelated to

performance frequency of mate retention behaviors among Brazilian women (Nascimento & Little, 2019).

Because there are reported differences in interpretation and performance frequency of mate retention behaviors between Brazilian samples and those from other contexts, such as American and British samples (Lopes et al., 2016; Nascimento & Little, 2019), and because previous research suggest that pretending orgasm is associated with mate retention behaviors (Kaighobadi et al., 2012), it is possible that Brazilian women differ in the reasons that motivate them to pretend orgasm.

No previous research has investigated the relationship between reasons to pretend orgasm and mate retention behaviors in Brazil (or any other South American country). We queried, in 2020, Google Scholar, PsycINFO, PubPsych, and SciELO, using the keywords "pretend orgasm," "fake orgasm," and "mate retention" (and their respective Brazilian-Portuguese translations), and the searches returned no original empirical research addressing the association of pretending orgasm and women's mate retention behaviors in the Brazilian context. In the current study, we investigate associations of reasons why Brazilian women pretend orgasm with their mate retention behaviors and their relationship satisfaction.

McCoy et al. (2015) identified and assessed reasons that a woman might pretend orgasm. They developed the Reasons to Pretend Orgasm Inventory (RPOI), which assesses the frequency with which 63 reasons to pretend orgasm applied to a woman's sexual experiences. The reasons for pretending orgasm are organized into three factors: (a) *Improve Partner's Sexual Experience*, which reflects interest in increasing the quality of the sexual and emotional experience for her partner (e.g., "I want my partner to think I am sexy"); (b) *Deception and Manipulation*, which reflects manipulative motivations, such as hiding insecurity and a partner's poor sexual performance (e.g., "I am insecure because I do not have orgasms"); and (c) *Hiding Sexual Disinterest*, which reflects a desire to end a specific sexual event for lack of enjoyment (e.g., "I don't want my partner to know that the sex is not pleasurable").

McCoy et al. (2015) reported associations between mate retention behaviors and pretending orgasm. Specifically, RPOI scores and scores on each of the three components of the RPOI correlated positively with the total scores and with scores of the major domains (i.e., Cost-Inflicting and Benefit-Provisioning) of the Mate Retention Inventory-Short Form (McCoy et al., 2015). Reasons included in Deception and Manipulation reflect manipulative motivations—such as ending sex sooner due to a partner's poor sexual performance, and cost-inflicting mate retention behaviors are also manipulative (i.e., they reduce partner self-esteem to decrease a partner's likelihood of infidelity; Miner et al., 2009). Therefore, women who more often pretend orgasm with manipulative motivations (i.e., Deception and Manipulation) also may perform more frequently cost-inflicting mate retention behaviors. Reasons included in Improve Partner's Sexual Experience reflect an interest in increasing the quality of the experience for the partner, and, therefore, women who more often pretend orgasm to improve their partner's sexual experience may also perform more

frequently benefit-provisioning mate retention behaviors. In addition, Hiding Sexual Disinterest indicates an attempt to conceal sexual disinterest—perhaps because men’s perception of their partner’s sexual interest increases men’s relationship satisfaction (Yoo et al., 2014). Thus, women who more often pretend orgasm to hide their sexual disinterest may also perform more frequently benefit-provisioning mate retention behaviors. Moreover, cost-inflicting and benefit-provisioning mate retention behaviors are positively correlated (McCoy et al., 2015; Sela et al., 2017).

Benefit-provisioning and cost-inflicting mate retention strategies are positively and negatively associated with relationship satisfaction, respectively (Atari et al., 2017; Salkicevic et al., 2014). Women may have different reasons for pretending orgasm based on their relationship satisfaction. For instance, one of the domains of the RPOI is Improve Partner’s Sexual Experience, which includes reasons for pretending orgasm that reflect an interest in increasing the sexual and emotional experience for the male partner and, to a lesser degree, an interest in increasing the pleasure in the sexual event for both partners. Similarly, the Hide Sexual Disinterest domain includes reasons for pretending orgasm that reflect a desire to end a specific sexual event for lack of enjoyment, such that greater frequency of pretending orgasm to hide sexual disinterest may be associated with lower relationship satisfaction.

In addition, a woman’s (apparent) copulatory orgasm increases their partner’s relationship satisfaction (Brody & Weiss, 2011). Therefore, pretending orgasm may be motivated by a woman’s perception that her partner is dissatisfied with their relationship. A person’s relationship satisfaction is strongly associated with their partner’s relationship satisfaction (Gonzaga et al., 2007), and relationship satisfaction for both sexes is associated with the frequency with which the woman achieves copulatory orgasms (Brody & Weiss, 2011; Hevesi et al., 2020). Therefore, pretending orgasm may reflect a woman’s attempt to increase her own relationship satisfaction by increasing her partner’s relationship satisfaction.

Previous research indicates that the frequencies of different strategies to maintain relationships vary across cultures, as does the association of relationship satisfaction with the performance frequency of mate retention behaviors. Therefore, the current research investigates associations of reasons why Brazilian women pretend orgasm with their mate retention behaviors and their relationship satisfaction, by first adapting and validating the Reasons to Pretend Orgasm Inventory in the Brazilian context, which we refer to as the *Escala de Razões para Fingir Orgasmo (ERFO)*.

## Method

### Participants

Participants were 295 women born and residing in Fortaleza (Brazil), aged between 18 and 52 years ( $M = 24.9$ ,  $SD = 5.4$ ) and currently in a committed, long-term relationship with a man lasting at least three months (following Buss et al., 2008). The

mean relationship length was 41.2 months ( $SD = 41.7$ ). This sample size is above the minimum suggested for factor analyses (i.e., at least  $n = 100$ , and minimum of 2 participants-to-variables ratio; Kline, 1979).

### Materials

Participants completed an on-line survey that included the following parts:

**Escala de razões para fingir orgasmo (ERFO).** This is a Brazilian-Portuguese adaptation of the Reasons for Pretending Orgasm Inventory (RPOI; McCoy et al., 2015), and includes 63 items describing reasons that a woman might pretend to have an orgasm (e.g., “I want to make sex better for my partner”). The original scale ( $\alpha = 0.97$ ) indexes three factors: (1) *Improve Partner’s Sexual Experience* ( $\alpha = 0.98$ ), (2) *Deception and Manipulation* ( $\alpha = 0.92$ ) and (3) *Hiding Sexual Disinterest* ( $\alpha = 0.93$ ). Women provided self-reports of how frequently in the past month each item applied to their sexual experiences, on a 10-point Likert scale (0 = *Never* and 9 = *Every time we had sex*).

**Escala de retenção de parceiros reduzida (ERP-R; Lopes et al., 2016).** This is a Brazilian-Portuguese adaptation of the MRI-SF (Buss et al., 2008), and includes 38 items (e.g., “I performed sexual favors to keep my partner around”). The items index two domains of mate retention behavior (i.e., *Cost-inflicting*,  $\alpha = 0.89$ ; *Benefit-provisioning*,  $\alpha = 0.90$ ). Participants indicated the frequency with which they performed each act in the past six months on a 4-point Likert scale (0 = *Never* and 3 = *Often*).

**Relationship satisfaction index.** We included questions about the romantic relationship. Specifically, questions to which participants responded on a 10-point Likert scale with 1 = *Low* and 10 = *High*: “What are the odds that your relationship will exist in 12 months?” “To what extent are you satisfied with your relationship?” “What is the average level of physical intimacy in your current relationship?” and “What is the average level of emotional intimacy in your current relationship?” We used responses to these four questions to create an index of relationship satisfaction ( $\alpha = .84$ ).

**Demographic questions.** We included several demographic questions (e.g., age, sex). Finally, participants were asked to indicate the length of their current romantic relationship [“What is your relationship length (in months)?”].

### Procedure

**Translation of the RPOI.** The translation followed the guidelines suggested by Borsa et al. (2012). Specifically: (a) two bilingual translators translated the RPOI from English to Brazilian-Portuguese, resulting in two translated adaptations; (b) two new bilingual translators synthesized the adaptations by comparing them and evaluating semantic, idiomatic, conceptual, linguistic, and contextual discrepancies, resulting in a single Brazilian-

Portuguese version; (c) a fifth bilingual translator compared this adaptation and the English version, suggesting semantic adjustments; (d) we administered the translated adaptation to five residents of Fortaleza to identify abstruse terms, which were replaced with synonyms (semantic validation); (e) two new bilingual translators performed the back translation; and (f) an author of the original version (McCoy et al., 2015) compared the original and the back-translated versions, indicating minor modifications to improve the translated version.

**Data collection.** Participants were invited to participate in this study through messages on Facebook student groups of several universities in Brazil, and through posts on Instagram from the authors' personal accounts and laboratory profiles. In addition, we encouraged participants to share the research link on their social media accounts to facilitate snowball sampling. Participation was anonymous and participants were not compensated to limit responses motivated by social desirability concerns. Only women at least 18 years old, in a heterosexual relationship for at least three months, and who provided informed consent, were allowed to participate.

The survey included several measures not related to the current study. Therefore, we did not include additional questions that could afford secondary exploratory analysis, such as investigations of associations between reported frequencies of specific reasons to pretend orgasm and perceived risk of infidelity.

**Data analysis.** We assessed the discriminative power of the items from the Brazilian-Portuguese adaptation of the RPOI via Multivariate Analysis of Variance (MANOVA) using SPSS software. We performed Exploratory Factor Analysis (EFA) to investigate the factor structure of the scale using the FACTOR software. Dimensionality testing was performed using Robust Parallel Analysis (RPA) through optimal implementation of Parallel Analysis (PA), which minimizes the common variance of residuals (Timmerman & Lorenzo-Seva, 2011). Factor extraction was conducted using Unweighted Least Squares with Promin rotation to achieve factor simplicity (Lorenzo-Seva, 1999). In addition, we assessed the goodness-of-fit index (GFI) and the adjusted goodness-of-fit index (AGFI), which indicate the proportion of variance accounted for in the estimated population covariance. GFI and AGFI range from 0 to 1 and a good model fit is indicated by values greater than .90 (Hooper et al., 2008). The Generalized GH index was also assessed, and provides an indication of the generalizability of the resulting factor structure to other populations. The Generalized GH index ranges from 0 to 1 with a cut-off of .80 (Ferrando & Lorenzo-Seva, 2017). We also assessed Cronbach's  $\alpha$  and composite reliability to verify the scale's reliability. Finally, we calculated Pearson's correlations to estimate the associations between scores on the Brazilian-Portuguese adaptation of the RPOI – ERFO and scores on the MRI-SF and the Relationship Satisfaction Index. Due to the exploratory nature of the study, we set two-tailed  $p$ -values and used bootstrapping procedures (with 1,000 re-samples) to estimate the magnitude

and significance of correlations, considering 95% confidence interval (CI) levels (see Introduction).

## Results

**Validation of the Brazilian-Portuguese adaptation of the RPOI.** We first evaluated the discriminative power of the items, considering the median score as the dividing point for each original factor of the scale, (1) *Improve Partner's Sexual Experience* ( $Mdn = 4.62$ ), (2) *Deception and Manipulation* ( $Mdn = .52$ ), and (3) *Hiding Sexual Disinterest* ( $Mdn = .75$ ). We then calculated the mean score for each of the 63 items and categorized the items into two criterion groups for each factor, i.e. those above and those below each factor's median score. We entered the items into a MANOVA to evaluate differences in mean scores of the 63 items (outcomes) between the criterion groups (predictor). The results supported rejection of the null hypothesis of no difference in mean scores of the items for the criterion groups for *Improve Partner's Sexual Experience*,  $Wilks' \Lambda = .186$ ,  $F(29, 264) = 40.083$ ,  $p < .001$ ,  $\eta_p^2 = .814$ , *Deception and Manipulation*,  $Wilks' \Lambda = .374$ ,  $F(21, 273) = 21.774$ ,  $p < .001$ ,  $\eta_p^2 = .626$ , and *Hiding Sexual Disinterest*,  $Wilks' \Lambda = .371$ ,  $F(13, 281) = 36.679$ ,  $p < .001$ ,  $\eta_p^2 = .629$ . For 62 items, we could reject the null hypothesis of no difference in mean scores of the items for the criterion groups [all  $ps < .001$ , except for item 18 ( $p = .029$ ) and item 50 ( $p = .003$ )]. Only item 43 ("My partner told me to fake an orgasm") failed to discriminate individuals who scored above the median from those who scored below the median of the *Deception and Manipulation* factor ( $p = .52$ ). We excluded this item from further analyses. Results from the MANOVA are summarized in Table 1. We verified that Kaiser-Meyer-Olkin (.93) and Bartlett's sphericity tests,  $\chi^2(1,953) = 3133.4$ ,  $p < .001$ , supported the suitability of the data for Factor Analysis (FA). The former indicates the total amount of variance that might be caused by a common factor, with .50 suggested as the minimum acceptable value (Kaiser, 1970), whereas the latter indicates the existence of correlations in the dataset by testing the null hypothesis that all variables are uncorrelated. The results of the FA with the 62 remaining items indicated 12 factors met the Kaiser criterion (eigenvalue  $\geq 1$ ), explaining 51% of the total variance. However, the scree plot (Cattell criterion, see Figure 1) suggested three factors (accounting for 46.9% of the total variance). The result of the optimal parallel analysis indicated three dimensions, explaining 49% of variance. We retained only items that loaded  $\geq .30$  on a single factor. For example, the item "I want to hide my sexual feelings toward other women" did not load  $\geq .30$  on any factor, and the item "I am no longer sexually aroused and I am unable to regain that arousal" loaded  $\geq .30$  on multiple factors, and therefore were excluded from further analysis.

Following the original version (RPOI; McCoy et al., 2015), we labeled Factor 1 *Improve Partner's Sexual Experience* ( $M = 4.24$ ;  $SD = 2.83$ ) because the 25 constituent items suggest an interest in increasing the quality of the sexual and emotional experience for the male partner (e.g., "I want my

partner to think I am sexy”). We labeled Factor 2 *Hiding Sexual Disinterest* ( $M = 1.65$ ;  $SD = 1.81$ ) because the constituent items indicate a desire to end a specific sexual event for lack of interest (e.g., “I don’t want my partner to know that he is not satisfying me sexually.”). We labeled Factor 3 *Deception and Manipulation* ( $M = .98$ ;  $SD = 1.49$ ) because it includes 6 items reflecting manipulative motivations, including hiding infidelity and homosexual attraction (e.g., “I don’t want my partner to know that I am having sex with another man.”).

For parsimony and cohesion of the three factors, we retained only items that added unique information to the constitutive definition of each factor. The excluded items, although statistically acceptable, were not essential to the constitutive definition of the factor on which they loaded. For example, items 44 (“I want to get something from my partner”) and 49 (“I want my partner to be able to brag to his friends”) were not originally included in the factor *Improve Partner’s Sexual Experience*, and do not add unique or specific information to this factor’s constitutive definition. Some items did not load on their original factors, but we decided to retain them given their relevance to the scale. For example, on the Hiding Sexual Disinterest factor, items 1 (“I am mad at my partner”), 16 (“I am insecure because I do not have orgasms”), 34 (“I don’t want my partner to know that he is not a good sexual partner”), and 57 (“I feel ashamed because I rarely have an orgasm”) originally were included in the Deception and Manipulation factor. In addition, items 3 (“I don’t want to ruin the moment.”), 27 (“My partner expects me to have an orgasm.”), and 28 (“I want my partner to think we are having an orgasm together.”) were originally included in the Improve Partner’s Sexual Experience factor. However, we retained these items in the Hiding Sexual Disinterest factor because they reflect reasons to hide sexual disinterest that are not directly associated with the intent to manipulate or to improve the partner’s sexual experience—i.e., women may pretend orgasm because they feel ashamed if they do not orgasm (Harris et al., 2016). The remaining items’ factor loadings and each factor’s explained variance, internal consistency, and Generalized GH index are summarized in Table 2. The factors showed satisfactory Generalized GH indexes, suggesting generalizability of this factor structure to other populations (see Table 2; Ferrando & Lorenzo-Seva, 2017); and acceptable Model Fit ( $GFI = .98$ ;  $AGFI = .98$ ) of the factorial structure.

As part of the evaluation of the construct validity of the ERFO, we correlated the identified factors with the RPOI original three-factor structure identified by McCoy et al. (2015). The results indicated that the factors of the ERFO are significantly and positively correlated with the factors of the original structure of the RPOI; Improve Partner’s Sexual Experience ( $r = .99$ ;  $p < .001$ ), Deception and Manipulation ( $r = .78$ ;  $p < .001$ ) and Hiding Sexual Disinterest ( $r = .93$ ;  $p < .001$ ), suggesting that the 47-item ERFO (Cronbach’s  $\alpha = .97$ ; composite reliability = .98) represents well the 63-item scale introduced by McCoy et al. (2015).

**Table 1.** MANOVA to Evaluate Differences in Mean Scores of the 63 Items Between the Criterion Groups.

Original Factor I: Improve Partner’s Sexual Experience						
Criterion Groups						
Item	Below Median ( $n = 147$ )		Above Median ( $n = 148$ )		Contrast	
	M	SD	M	SD	F	$\eta_p^2$
2	.88	1.71	2.17	2.85	21.87*	.06
3	1.66	2.34	4.25	3.09	65.75*	.18
4	1.71	2.46	6.10	2.53	227.32*	.43
5	.69	1.68	2.42	2.81	41.02*	.12
6	2.73	3.44	8.35	1.25	346.66*	.54
11	2.32	2.85	7.91	1.53	440.03*	.60
12	2.02	2.70	7.86	1.80	476.64*	.61
13	1.41	2.97	7.06	3.36	233.89*	.44
14	1.49	2.25	6.69	2.54	345.15*	.54
15	1.26	2.01	6.09	3.03	250.05*	.46
17	3.27	3.58	8.35	1.33	261.13*	.47
22	2.13	2.69	8.09	1.41	569.07*	.66
23	1.22	2.38	6.43	3.13	257.31*	.46
27	.93	1.96	3.03	3.32	43.93*	.13
28	.81	1.80	3.09	3.19	56.80*	.16
29	2.13	3.08	8.33	1.26	510.10*	.63
32	3.24	3.59	7.47	2.50	137.02*	.31
36	2.64	3.46	6.40	2.78	105.75*	.26
37	1.77	2.64	7.92	1.68	569.51*	.66
38	1.75	2.94	6.10	2.99	160.12*	.35
39	.86	1.83	5.62	3.15	250.67*	.46
45	.69	1.87	3.13	3.18	64.32*	.18
47	.74	1.76	5.47	3.21	243.98*	.45
52	2.52	3.16	8.06	1.63	357.49*	.55
53	1.49	2.30	7.28	2.11	505.25*	.63
54	1.21	2.18	6.67	2.68	367.58*	.55
55	2.21	3.00	7.95	1.73	404.51*	.58
56	1.33	2.27	6.57	2.87	300.05*	.50
59	1.45	2.20	7.07	2.50	419.36*	.58

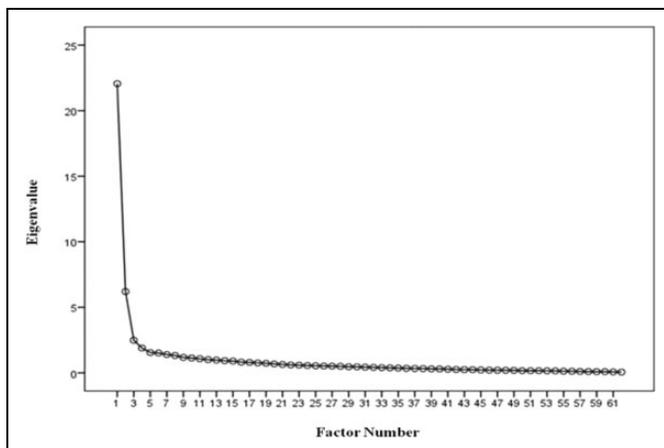
Original Factor II: Deception and Manipulation						
Criterion Groups						
Item	Below Median ( $n = 145$ )		Above Median ( $n = 150$ )		Contrast	
	M	SD	M	SD	F	$\eta_p^2$
1	.13	.44	1.26	2.14	38.70*	.11
10	.09	.62	2.25	3.58	51.33*	.14
16	.28	.97	2.93	3.24	89.62*	.23
18	.04	.42	.17	.71	3.71***	.01
20	.06	.29	1.43	2.48	43.29*	.12
21	.00	.00	1.19	2.40	35.25*	.10
24	.45	1.38	3.39	3.25	141.88*	.32
26	.08	.49	1.63	2.79	43.05*	.12
33	.01	.08	.86	2.19	21.80*	.06
34	.14	.66	1.59	2.42	47.86*	.14
35	.15	.67	2.29	3.02	69.08*	.19
40	.03	.26	2.16	3.38	57.17*	.16
41	.00	.00	.79	2.34	16.65*	.05

(continued)

**Table 1.** (continued)

Original Factor II: Deception and Manipulation						
Criterion Groups						
Item	Below Median (n = 145)		Above Median (n = 150)		Contrast	
	M	SD	M	SD	F	$\eta_p^2$
43	.04	.30	.05	.35	.01	.00
44	.06	.48	1.77	2.89	48.99*	.14
48	.03	.29	.67	1.74	18.84*	.06
49	.16	.84	1.01	2.21	18.62*	.06
50	.17	.70	.61	1.60	9.18**	.03
57	.20	.91	2.81	3.29	84.98*	.22
58	.08	.52	1.16	2.18	33.28*	.10
60	.26	1.25	2.57	3.50	55.83*	.16
Original Factor III: Hiding Sexual Disinterest						
Criterion Groups						
Item	Below Median (n = 142)		Above Median (n = 153)		Contrast	
	M	SD	M	SD	F	$\eta_p^2$
7	.12	.59	2.76	3.08	107.18*	.26
8	.11	.53	1.45	2.52	41.11*	.12
9	.13	.60	2.81	2.90	124.08*	.29
19	.41	1.07	2.91	2.83	102.58*	.25
25	.38	1.10	3.26	3.12	113.59*	.27
30	.11	.78	1.71	2.74	47.97*	.14
31	.03	.21	1.47	2.67	43.60*	.13
42	.09	.38	3.49	3.00	191.30*	.39
46	.15	.54	3.78	2.95	220.18*	.42
51	.18	.65	3.43	2.99	169.903*	.36
61	.10	.64	3.18	3.00	152.60*	.34
62	.55	1.34	4.14	3.25	156.00*	.34
63	.06	.40	1.88	2.63	70.99*	.19

Note.  $n = 295$ . The bold numbers are related to partial eta squared  $>.40$ .  
\* $p < .001$ . \*\* $p = .003$ . \*\*\* $p = .029$ .



**Figure 1.** Scree plot of the items of the Escala de Razões para Fingir Orgasmo.

*Correlations between reasons to pretend orgasm, mate retention behaviors, and relationship satisfaction.* Additionally, we correlated scores on the ERFO factors with performance frequency for cost-inflicting and benefit-provisioning mate retention behaviors. The results indicated non-significant correlations between the ERFO factors and mate retention behaviors (see Table 3).

We correlated scores on the Relationship Satisfaction Index with scores on the ERFO factors and with performance frequency for cost-inflicting and benefit-provisioning mate retention behaviors. The results indicated a negative correlation between a woman's relationship satisfaction and her scores on the total 47-item ERFO ( $r = -.24$ ;  $p < .001$ ), Improve Partner's Sexual Experience ( $r = -.13$ ;  $p = .029$ ), Deception and Manipulation factor ( $r = -.28$ ;  $p < .001$ ), and Hiding Sexual Disinterest factor ( $r = -.40$ ;  $p < .001$ ). Finally, a woman's relationship satisfaction was positively correlated with performance frequency of benefit-provisioning mate retention behaviors ( $r = .19$ ;  $p = .002$ ), but not significantly correlated with performance frequency of cost-inflicting mate retention behaviors ( $r = -.10$ ;  $p = .11$ ). The correlation matrix is presented in Table 3.

## Discussion

We investigated associations of reasons why Brazilian women pretend orgasm with their mate retention behaviors and their relationship satisfaction, by first adapting and psychometrically validating a Brazilian-Portuguese adaptation of the Reasons for Pretending Orgasm Inventory (RPOI; McCoy et al., 2015), which we label the *Escala de Razões para Fingir Orgasmo* (ERFO). Similar to McCoy et al. (2015), the results suggested a three-factor structure, with the factor contents of the Brazilian-Portuguese adaptation (ERFO) resembling the factor contents of the RPOI. For example, both the ERFO and the original RPOI include a factor labeled Improve Partner's Sexual Experience that reflects an interest in increasing the quality of the sexual and emotional experience for the male partner (e.g., "I want my partner to feel confident"). Additionally, the factors in the shorter Brazilian-Portuguese adaptation (ERFO) were significantly and positively correlated with their respective factors in the longer original version (see McCoy et al., 2015), suggesting that the 47-item ERFO (see Table 4) reliably represents the original version (RPOI; 63 items) in the Brazilian context.

The ERFO is more parsimonious than alternative assessments. For example, the Pretending Orgasm Reasons Measure (Goodman et al., 2017) includes six factors: Feels Good, For Partner, Not into Sex, Manipulation/Power, Insecurity, and Emotional Communication. However, the factors identified by Goodman et al. (2017) are well represented by the RPOI factors—for example, the RPOI factor Improve Partner's Sexual Experience captures the factors *Feels Good* and *For Partner*, and the RPOI factor Deception and Manipulation captures the factors *Manipulation/Power* and *Insecurity*. The Motives for Feigning Orgasms Scale (Séguin et al., 2015) includes six

**Table 2.** Factor Structure and Loadings of the Reasons to Pretend Orgasm.

Item	Factor loadings		
	I	II	III
4. I want to appear sexier for my partner	<b>.71</b>	.13	-.07
6. I want to maintain a healthy sexual relationship with my partner	<b>.91</b>	-.09	.01
11. I want my partner to feel good about his sexual performance	<b>.91</b>	.00	-.04
12. I want to relax my partner	<b>.87</b>	.02	.01
13. I don't want my partner to have sex with another woman (i.e., cheat on me)	<b>.69</b>	-.18	.21
14. I want my partner to feel masculine	<b>.83</b>	.07	-.05
15. I don't want to disappoint my partner	<b>.58</b>	.29	.06
17. I want my partner to have an orgasm	<b>.80</b>	.08	-.03
22. I want my partner to feel confident	<b>.97</b>	-.07	-.01
23. I don't want to embarrass my partner	<b>.65</b>	.02	.20
29. I want to keep the relationship with my partner harmonious	<b>.91</b>	-.12	.11
32. I already had an orgasm and want my partner to have an orgasm	<b>.78</b>	-.24	.11
36. I think it is normal for other women to experience orgasm	<b>.61</b>	-.01	.01
37. I want my partner to feel better about himself	<b>.93</b>	-.08	.05
38. I think I should have an orgasm because that is what is supposed to happen during sex	<b>.51</b>	.23	.01
39. I want to appear normal to my partner	<b>.59</b>	.23	-.04
45. I want to boost my partner's ego	<b>.45</b>	.22	-.11
47. I want to avoid conflict in the relationship with my partner	<b>.59</b>	.12	.18
49. I want my partner to be able to brag to his friends	<b>.32</b>	-.07	.04
52. I want to make my partner sexually excited	<b>.92</b>	-.08	-.01
53. I want my partner to feel better about his sexual ability	<b>.92</b>	-.03	-.02
54. I don't want to hurt my partner's self-esteem	<b>.72</b>	.08	.09
55. I want my partner to think I am sexy	<b>.90</b>	-.11	.08
56. I don't want my partner to have performance anxiety	<b>.65</b>	.11	.09
59. I want to make sex better for my partner	<b>.80</b>	.06	-.02
1. I am mad at my partner	-.01	<b>.55</b>	-.02
3. I don't want to ruin the moment	-.16	<b>.65</b>	.23
7. I don't want my partner to know that I don't feel emotionally connected enough to him to have an orgasm	.18	<b>.64</b>	-.05
9. I don't want my partner to know that the sex is not pleasurable	.27	<b>.57</b>	-.09
16. I am insecure because I do not have orgasms	-.10	<b>.72</b>	.02
19. I have other things to do, and I want my partner to have an orgasm sooner	.21	<b>.41</b>	.12
25. I am not having a good time	-.08	<b>.80</b>	.01
27. My partner expects me to have an orgasm	-.14	<b>.89</b>	-.02
28. I want my partner to think we are having an orgasm together	-.15	<b>.73</b>	.11
34. I don't want my partner to know that he is not a good sexual partner	.22	<b>.49</b>	-.11
46. I don't want my partner to know that the sex doesn't feel good	.12	<b>.63</b>	.03
51. I don't want my partner to know that I am not sexually aroused	.26	<b>.61</b>	.00
57. I feel ashamed because I rarely have an orgasm	-.14	<b>.71</b>	.08
61. I don't want my partner to know that he is not satisfying me sexually	.10	<b>.68</b>	-.06
62. My partner is not hitting the right areas for me to have an orgasm	-.05	<b>.69</b>	.03
63. I don't want my partner to know that the sex is painful for me	.29	<b>.34</b>	-.02
10. I don't want my partner to think that I am having sex with another man	.24	-.12	<b>.44</b>
21. I don't want my partner to know that I have feelings for another man	.13	-.11	<b>.51</b>
24. I don't want my partner to know that something is making him less attractive to me that day	.30	.16	<b>.38</b>
40. I don't want my partner to think that I have feelings for another man	.19	-.19	<b>.65</b>
41. I don't want my partner to know that I am having sex with another man	.05	-.12	<b>.54</b>
48. I want to hide my homosexual feelings	-.05	.13	<b>.38</b>
Explained variance (%)	36.6	10.3	4.1
Internal consistency (Cronbach's $\alpha$ )	.97	.93	.72
Generalized GH Index	.98	.95	.85

Note.  $n = 295$ . The bold numbers refer to the loading of each item in its respective factor. I—Improve Partner's Sexual Experience; II—Hiding Sexual Disinterest; III—Deception and Manipulation.

factors: *Intoxication*, *Partner Self-Esteem*, *Poor Sex/Partner*, *Desireless Sex*, *Timing*, and *Insecurity*. The factors identified by Séguin et al. (2015), however, are captured by the RPOI—for example, the RPOI factor Deception and Manipulation

captures the factors *Intoxication* and *Insecurity*, and the RPOI factor Hiding Sexual Disinterest captures the factors *Desireless Sex* and *Poor Sex/Partner*. Future research may compare the goodness of fit of these measures in the Brazilian context.

**Table 3.** Correlation Matrix of Reasons to Pretend Orgasm, Mate Retention Behaviors, and Relationship Satisfaction.

	1		2		3		4		5		6	
	r	95% CI	r	95% CI	r	95% CI	r	95% CI	r	95% CI	r	95% CI
1. Escala de Razões para Fingir Orgasmo	—	—	—	—	—	—	—	—	—	—	—	—
2. Improve Partner's Sexual Experience	.96**	.95;.97	—	—	—	—	—	—	—	—	—	—
3. Deception and Manipulation	.64**	.60;.69	.56**	.50;.61	—	—	—	—	—	—	—	—
4. Hiding Sexual Disinterest	.76**	.72;.80	.57**	.50;.63	.46**	.26;.57	—	—	—	—	—	—
5. Cost-Inflicting Behaviors	-.04	-.16;.08	-.06	-.19;.05	.04	-.08;.15	.02	-.10;.14	—	—	—	—
6. Benefit-Provisioning Behaviors	-.10	-.22;.03	-.10	-.21;.02	-.02	-.14;.10	-.08	-.19;.03	.77**	.72;.82	—	—
7. Relationship Satisfaction Index	-.24**	-.36;-.12	-.13*	-.24;-.02	-.28**	-.42;-.16	-.40**	-.52;-.26	-.10	-.23;.02	.19**	.29;.07

Note. n = 295. two-tailed p values.  
 \*p = .029. \*\*p < .001. \*\*\*p = .002.

The results indicated possible cross-cultural differences, including, for example, that Brazilian women's reports of reasons to pretend orgasm to hide sexual disinterest is not correlated with their performance frequency of mate retention behaviors, contrary to previous findings using reports from American women (Kaighobadi et al., 2012).

Our results also showed similarities with the research using American samples. For example, both Brazilian and American women pretend orgasm to increase the quality of the sexual and emotional experience for her and their male partner (McCoy et al., 2015)—a finding that supports an evolutionary hypothesis that women evolved psychological mechanisms to keep their partner invested in the relationship (Buss, 2016).

Scores on the Improve Partner's Sexual Experience factor were not associated with performance frequency of benefit-provisioning mate retention behaviors. Although some reasons for pretending orgasm may be benevolent (e.g., improving a partner's sexual experience), pretending orgasm is a deceptive behavior in that a woman is willfully displaying false signals to her partner. Therefore, it is possible that some women perform deceptive behaviors (i.e., pretending orgasm), while rationalizing these as motivated by conflict-avoidance intentions (e.g., women may pretend orgasm to hide their relationship dissatisfaction from their partners). Because intentions and behaviors are not always consistent (e.g. women may perform deceptive behaviors with benefit-provisioning intentions; Montano & Kasprzyk, 2015), future research might investigate women's behaviors and intentions with regard to pretending orgasm.

Scores on the Deception and Manipulation factor did not correlate with performance frequency nor with the domains of mate retention, in contrast to the results reported by McCoy et al. (2015) for an American sample. Some reasons for pretending orgasm may not be accounted for by the reasons that motivate the performance of mate retention behaviors. For example, the cost-inflicting mate retention behavior "Told other women that my partner was stupid" thwarts intrasexual competition, but the deceptive and manipulative reasons to pretend orgasm do not include thwarting intrasexual competition—the ERFO items constituting Deception and Manipulation are mostly related to attempts to hide sexual disinterest or infidelity, e.g., "I don't want my partner to know that I am having sex with another man" and "I don't want my partner to know that I have feelings for another man". Individuals who perceive that they could easily replace their partner less frequently perform mate retention behaviors (Sela et al., 2017). Consistent with this interpretation, women's sexual disinterest is associated with a disengaged strategy of mate retention (i.e., infrequent use of both benefit-provisioning and cost-inflicting behaviors; Lopes & Shackelford, 2019).

Similar to the results for the Deception and Manipulation factor, scores on the Hiding Sexual Disinterest factor did not correlate with performance frequency of mate retention behaviors, differing from results reported by McCoy et al. (2015) for an American sample. One possible explanation is that sexual disinterest may indicate relationship dissatisfaction (Yoo et al., 2014), and relationship dissatisfaction is related to less

frequent performance of benefit-provisioning behaviors (Sela et al., 2017). For example, individuals who perceive their partner to have lower mate value—a predictor of relationship dissatisfaction (Conroy-Beam et al., 2016)—also less frequently perform benefit-provisioning mate retention behaviors (Sela et al., 2017).

Our results also demonstrated that relationship satisfaction positively correlated with benefit-provisioning behaviors. In addition, the results revealed that women's frequency of use of reasons to pretend orgasm is negatively associated with their relationship satisfaction. Specifically, we found moderate correlations between relationship satisfaction and scores on the factors Deception and Manipulation and Hiding Sexual Disinterest. Previous research documents that orgasmic difficulty and orgasmic pleasure for women are predicted by women's relationship satisfaction (Hevesi et al., 2020). Therefore, women with lower relationship satisfaction may have more difficulty achieving an orgasm during sexual intercourse. Alternatively, women might not have the sexual stimulation required to achieve orgasm during sexual intercourse (Mahar et al., 2020). Insufficient or poor sexual stimulation has been suggested to be accounted for by one or more cultural factors—e.g., lack of women's sexual pleasure entitlement, alongside a poor sexual education system (Mahar et al., 2020).

Our findings indicate that women who more frequently pretend orgasm are less satisfied with their relationship. Therefore, it is possible that Brazilian women pretend orgasm to hide their sexual dissatisfaction from their partner, a benefit-provisioning behavior that may be perceived as less costly than other benefit-provisioning behaviors (e.g., “Had a physical relationship with my partner to deepen our bond”). In addition, the Improve Partner's Sexual Experience factor showed the highest scores in our sample, suggesting that Brazilian women pretend orgasm to increase their partner's relationship satisfaction *in addition to* attempting to avoid conflict (by hiding their relationship dissatisfaction). Future research may investigate the efficacy of pretending orgasms as a conflict avoidance strategy considering additional demographic characteristics (e.g., age and past relationships) and psychological features (e.g., personality traits).

The current study has several limitations. First, our sample size may not be sufficient to detect small effects. Due to the exploratory nature of our study, our results should be interpreted with caution. Future research might secure a larger sample and samples from different contexts—for example, newly post-partum mothers (e.g., 9-months postpartum couples report decreased relationship satisfaction compared to 1-month postpartum couples; Don & Mickelson, 2012). Some of the questions comprising “relationship satisfaction” may not be excellent proxies for relationship satisfaction, e.g., a person may report a high level of physical intimacy but be dissatisfied with their relationship. However, the Relationship Satisfaction Index items showed good internal consistency (Cronbach's  $\alpha = .84$ ), and physical intimacy is an important aspect of couples' overall relationship (Montesi et al., 2011). The current study did not assess perceived risk of infidelity, and previous

**Table 4.** Escala de Razões Para Fingir Orgasmo— Brazilian-Portuguese Version.

Item
1. Eu finjo orgasmos quando estou irritada com meu parceiro.
2. Eu não quero estragar o momento.
3. Eu quero parecer mais sensual para o meu parceiro.
4. Eu quero manter uma vida sexual saudável com meu parceiro.
5. Eu não quero que o meu parceiro saiba que eu não me sinto emocionalmente conectada o suficiente para ter um orgasmo com ele.
6. Eu não quero que meu parceiro saiba que a relação sexual não é prazerosa.
7. Eu não quero que meu parceiro pense que eu estou tendo relações sexuais com outro homem.
8. Eu quero que meu parceiro se sinta bem em relação ao seu desempenho sexual.
9. Eu quero deixar meu parceiro relaxado.
10. Eu não quero que meu parceiro tenha relações sexuais com outra mulher (isto é, me trair).
11. Eu quero que o meu parceiro se sinta viril.
12. Eu não quero desapontar meu parceiro.
13. Eu me sinto insegura porque eu não tenho orgasmos.
14. Eu quero que meu parceiro tenha um orgasmo.
15. Eu tenho outras coisas pra fazer, então eu quero que o meu parceiro tenha um orgasmo logo.
16. Eu não quero que meu parceiro saiba que eu nutro sentimentos por outro homem.
17. Eu quero que meu parceiro se sinta confiante.
18. Eu não quero constranger meu parceiro.
19. Eu não quero que meu parceiro saiba que há algo que está deixando-o menos atraente naquele dia.
20. Eu finjo orgasmos quando não estou me divertindo.
21. Eu finjo orgasmos porque meu parceiro espera que eu tenha orgasmos.
22. Eu quero que o meu parceiro pense que estamos tendo um orgasmo juntos.
23. Eu quero manter a nossa relação harmoniosa.
24. Eu já tive um orgasmo e quero que meu parceiro tenha orgasmo também.
25. Eu não quero que meu parceiro saiba que ele não é ‘bom de cama’.
26. Eu acho que é normal para outras mulheres vivenciar um orgasmo.
27. Eu quero que meu parceiro se sinta melhor consigo mesmo.
28. Eu acho que eu deveria ter orgasmo porque é isso que deve acontecer durante o sexo.
29. Eu quero parecer normal para o meu parceiro.
30. Eu não quero que meu parceiro pense que eu estou nutrindo sentimentos por outro homem.
31. Eu não quero que meu parceiro saiba que eu estou tendo relações sexuais com outro homem.
32. Eu quero ‘inflar o ego’ do meu parceiro.
33. Eu não quero que o meu parceiro saiba que o sexo não está legal.
34. Eu quero evitar conflitos na nossa relação.
35. Eu quero esconder meus sentimentos homossexuais.
36. Eu quero que meu parceiro possa se gabar para os seus amigos.
37. Eu não quero que meu parceiro saiba que eu não estou excitada.
38. Eu quero deixar meu parceiro excitado.
39. Eu quero que meu parceiro se sinta melhor em relação às suas habilidades sexuais.

(continued)

**Table 4.** (continued)

Item
40. Eu não quero ferir a autoestima do meu parceiro.
41. Eu quero que meu parceiro me ache sexy.
42. Eu não quero que meu parceiro se sinta ansioso em relação à sua performance sexual.
43. Eu me sinto envergonhada porque raramente tenho orgasmos.
44. Eu quero deixar a relação sexual melhor para o meu parceiro.
45. Eu não quero que meu parceiro saiba que ele não está me satisfazendo sexualmente.
46. Meu parceiro não está estimulando as áreas certas para que eu tenha um orgasmo.
47. Eu não quero que o meu parceiro saiba que o sexo está sendo doloroso pra mim.

Note. Improve Partner's Sexual Experience: 03, 04, 08 – 12, 14, 17, 18, 23, 24, 26 – 29, 32, 34, 36, 38 – 42, 44.

Hiding Sexual Disinterest: 01, 02, 05, 06, 13, 15, 20, 21, 22, 25, 33, 37, 43, 45 – 47. Deception and Manipulation: 07, 16, 19, 30, 31, 35.

research has found that women's perceptions of partner infidelity risk mediate the relationship between pretending orgasm and performance frequency of cost-inflicting mate retention behaviors (Kaighobadi et al., 2012). Future research may test the role of perceived risk of partner infidelity as a mediator of the relationship between frequency of pretending orgasm and deployment of mate retention behaviors in different contexts—for example, domestic violence against women is socially tolerated in some cultures, provided that the cause is considered “legitimate” (e.g., wife's sexual infidelity; Hackett, 2011).

The current study may have applied value. For example, the results of research addressing the links between mate retention behaviors, relationship satisfaction, and reasons to pretend orgasms may be useful in practical contexts such as in developing educational programs, marital counseling, and marital therapy. The current study documents reasons for pretending orgasm in the Brazilian context and suggests that relationship satisfaction is an important factor underlying the frequency and reasons to pretend orgasm among Brazilian women, highlighting the importance of cross-cultural research addressing women's sexual psychology and behavior.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported with funding from the Brazilian Council for Scientific and Technological Development (CNPq).

### ORCID iD

Todd K. Shackelford  <https://orcid.org/0000-0001-8101-4292>

### References

- Abdo, C. H. N. (2004). *Estudo da vida sexual do brasileiro* [Studies of sexual life of Brazilians]. Bregantini.
- Atari, M., Barbaro, N., Shackelford, T. K., & Chegeni, R. (2017). Psychometric evaluation and cultural correlates of the Mate Retention Inventory—short form (MRI-SF) in Iran. *Evolutionary Psychology, 15*(1), 1–11.
- Borsa, J. C., Damásio, B. F., & Bandeira, D. R. (2012). Adaptação e validação de instrumentos psicológicos entre culturas: Algumas considerações [Cross-cultural adaptation and validation of psychological instruments: Some considerations]. *Paidéia (Ribeirão Preto), 22*, 423–432.
- Brody, S., & Weiss, P. (2011). Simultaneous penile–vaginal intercourse orgasm is associated with satisfaction (sexual, life, partnership, and mental health). *The Journal of Sexual Medicine, 8*, 734–741.
- Buss, D. M. (1988). The evolution of human intrasexual competition: Tactics of mate attraction. *Journal of Personality and Social Psychology, 54*, 616.
- Buss, D. M. (2016). The evolution of desire. In T. K. Shackelford & V. Weekes-Shackelford (Eds.), *Encyclopedia of evolutionary psychological science*. Springer.
- Buss, D. M., & Schmitt, D. P. (2019). Mate preferences and their behavioral manifestations. *Annual Review of Psychology, 70*, 77–110.
- Buss, D. M., & Shackelford, T. K. (1997). From vigilance to violence: Mate retention tactics in married couples. *Journal of Personality and Social Psychology, 72*, 346.
- Buss, D. M., Shackelford, T. K., & McKibbin, W. F. (2008). The Mate Retention Inventory-Short Form (MRI-SF). *Personality and Individual Differences, 44*, 322–334.
- Conroy-Beam, D., Goetz, C. D., & Buss, D. M. (2016). What predicts romantic relationship satisfaction and mate retention intensity: Mate preference fulfillment or mate value discrepancies? *Evolution and Human Behavior, 37*, 440–448.
- Demirgüç-Kunt, A., Klapper, L. F., & Singer, D. (2013). *Financial inclusion and legal discrimination against women: Evidence from developing countries* [World Bank Policy Research Working Paper. 6416]. World Bank Group.
- Don, B. P., & Mickelson, K. D. (2012). Paternal postpartum depression: The role of maternal postpartum depression, spousal support, and relationship satisfaction. *Couple and Family Psychology: Research and Practice, 1*, 323.
- Ferrando, P. J., & Lorenzo-Seva, U. (2017). Program FACTOR at 10: Origins, development and future directions. *Psicothema, 29*(2), 236–240. <https://doi.org/10.7334/psicothema2016.304>
- Gallup, G. G. Jr, & Frederick, D. A. (2010). The science of sex appeal: An evolutionary perspective. *Review of General Psychology, 14*, 240.
- Gonzaga, G. C., Campos, B., & Bradbury, T. (2007). Similarity, convergence, and relationship satisfaction in dating and married couples. *Journal of Personality and Social Psychology, 93*(1), 34–48. <https://doi.org/10.1037/0022-3514.93.1.34>
- Goodman, D. L., Gillath, O., & Haj-Mohamadi, P. (2017). Development and validation of the pretending orgasm reasons measure. *Archives of Sexual Behavior, 46*, 1973–1991.

- Hackett, M. T. (2011). Domestic violence against women: Statistical analysis of crimes across India. *Journal of Comparative Family Studies*, 42, 267–288.
- Harris, E. A., Hornsey, M. J., & Barlow, F. K. (2016). On the link between benevolent sexism and orgasm frequency in heterosexual women. *Archives of Sexual Behavior*, 45, 1923–1931.
- Hevesi, K., Hevesi, B. G., Kolba, T. N., & Rowland, D. L. (2020). Self-reported reasons for having difficulty reaching orgasm during partnered sex: Relation to orgasmic pleasure. *Journal of Psychosomatic Obstetrics & Gynecology*, 41(2), 106–115.
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modeling: Guidelines for determining model fit. *Electronic Journal on Business Research Methods*, 6(1), 53–60.
- Kaighobadi, F., Shackelford, T. K., & Weekes-Shackelford, V. A. (2012). Do women pretend orgasm to retain a mate? *Archives of Sexual Behavior*, 41, 1121–1125.
- Kaiser, H. F. (1970). A second generation little jiffy. *Psychometrika*, 35, 401–416.
- Kline, P. (1979). *Psychometrics and psychology*. Academic Press.
- Lopes, G. S., & Shackelford, T. K. (2019). Disengaged, exhaustive, benevolent: Three distinct strategies of mate retention. *Journal of Social and Personal Relationships*, 36(9), 2677–2692.
- Lopes, G. S., Shackelford, T. K., Santos, W. S., Farias, M. G., & Segundo, D. S. (2016). Mate retention inventory-short form (MRI-SF): Adaptation to the Brazilian context. *Personality and Individual Differences*, 90, 36–40.
- Lorenzo-Seva, U. (1999). Promin: A method for oblique factor rotation. *Multivariate Behavioral Research*, 34, 347–356. [https://doi.org/10.1207/s15327906mbr3403\\_3](https://doi.org/10.1207/s15327906mbr3403_3)
- Mahar, E. A., Mintz, L. B., & Akers, B. M. (2020). Orgasm equality: Scientific findings and societal implications. *Current Sexual Health Reports*, 12(1), 24–32.
- Marin, R. A., Christensen, A., & Atkins, D. C. (2014). Infidelity and behavioral couple therapy: Relationship outcomes over 5 years following therapy. *Couple and Family Psychology: Research and Practice*, 3, 1.
- McCoy, M. G., Welling, L. L., & Shackelford, T. K. (2015). Development and initial psychometric assessment of the reasons for pretending orgasm inventory. *Evolutionary Psychology*, 13, 129–139.
- Miner, E. J., Starratt, V. G., & Shackelford, T. K. (2009). It's not all about her: Men's mate value and mate retention. *Personality and Individual Differences*, 47, 214–218.
- Montano, D. E., & Kasprzyk, D. (2015). Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. In K. Glanz (Ed.) *Health behavior: Theory, research and practice* (5th ed.). Jossey-Bass (Wiley).
- Montesi, J. L., Fauber, R. L., Gordon, E. A., & Heimberg, R. G. (2011). The specific importance of communicating about sex to couples' sexual and overall relationship satisfaction. *Journal of Social and Personal Relationships*, 28(5), 591–609.
- Nascimento, B. S., & Little, A. C. (2019). Mate retention strategies, self-esteem, mate value and facial attractiveness disparity in Brazil and in the UK. *Journal of Sex & Marital Therapy*, 45(6), 461–472.
- Salkicevic, S., Stanic, A. L., & Grabovac, M. T. (2014). Good mates retain us right: Investigating the relationship between mate retention strategies, mate value, and relationship satisfaction. *Evolutionary Psychology*, 12(5), 1038–1052.
- Séguin, L. J., Milhausen, R. R., & Kukkonen, T. (2015). The development and validation of the motives for feigning orgasms scale. *The Canadian Journal of Human Sexuality*, 24, 31–48.
- Sela, Y., Mogilski, J. K., Shackelford, T. K., Zeigler-Hill, V., & Fink, B. (2017). Mate value discrepancy and mate retention behaviors of self and partner. *Journal of Personality*, 85, 730–740.
- Thapa, D. K., & Niehof, A. (2013). Women's autonomy and husbands' involvement in maternal health care in Nepal. *Social Science & Medicine*, 93, 1–10.
- Timmerman, M. E., & Lorenzo-Seva, U. (2011). Dimensionality Assessment of Ordered Polytomous Items with Parallel Analysis. *Psychological Methods*, 16, 209–220. doi:10.1037/a0023353
- Yoo, H., Bartle-Haring, S., Day, R. D., & Gangamma, R. (2014). Couple communication, emotional and sexual intimacy, and relationship satisfaction. *Journal of Sex & Marital Therapy*, 40, 275–293.