



Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Individual differences in men's use of partner-directed insults and sexual coercion: Replication and extension in a South American sample



Guilherme S. Lopes^a, Glysa O. Meneses^b, Quésia F. Cataldo^b, Damião S.A. Segundo^b, Bernhard Fink^c, Todd K. Shackelford^{a,*}

^a Oakland University, Rochester, MI 48309, United States

^b Universidade Federal do Ceará, Fortaleza, CE 60020-181, Brazil

^c University of Göttingen, 37073 Göttingen, Germany

ABSTRACT

Previous research with North American samples indicates that men who more frequently insult their intimate partners are also more likely to coerce them sexually. We investigated the cross-cultural generality of associations between men's use of partner-directed insults and sexual coercion in Brazil, a South American country with rates of domestic violence and homicide higher than in North America, by adapting the Partner-Directed Insults Scale (PDIS) for Portuguese-speakers. Participants were 177 Brazilians ($M_{age} = 23.6$ years; 59.9% female) in an intimate relationship lasting an average of 39.4 months ($SD = 40.4$). Participants completed the PDIS, which assesses men's use of partner-directed insults, and the Sexual Coercion in Intimate Relationships Scale (SCIRS), which assesses men's use of sexual coercion against their partners. In line with previous research with North American samples, Brazilian men's use of partner-directed insults predicted their use of sexual coercion against their partners, indicating some cross-cultural generality in this pattern of findings. For example, men's accusations of a partner's sexual infidelity were associated with men's sexually coercive resource manipulation and defection threat. We addressed several limitations of the current research and highlighted the value of cross-cultural replications investigating men's partner-directed insults and sexual coercion in intimate relationships.

1. Introduction

Physical violence against women by men plagues many intimate relationships, afflicting at least one-quarter of relationships in the United States (Breiding, Chen, & Black, 2014). Intimate partner violence occurs cross-culturally (Devries et al., 2013). In some cultures, there are particularities that may exacerbate the negative impacts of partner violence on women's quality of life (World Health Organization (WHO), 2018). For example, Nepal records higher rates of sexual coercion within marriage than many other countries, perhaps accounted for by the view that it is a woman's *dharma* (i.e., moral duty) to be obedient to her husband (Puri, Tamang, & Shah, 2011). Additionally, African countries that record higher rates of domestic violence also report that sexual coercion is strongly associated with HIV infection in women (e.g., Tanzania; Maman et al., 2002).

Brazil's homicide rate is among the highest in the world, surpassing Middle Eastern and African countries (Sitta, Medeiros, Faria, & Scavone, 2011), and is 48 times higher than in the United States (Waiselfisz, 2015). Because men's partner-directed insults may portend domestic violence (Starratt, Goetz, Shackelford, & Stewart-Williams, 2008), and because domestic violence often precedes partner homicide (Juodis, Starzomski, Porter, & Woodworth, 2014), research on men's

partner-directed insults including assessments of participants from Brazil is warranted. Previous research has identified relationships between the use of partner-directed insults and other types of partner violence—such as sexual coercion—in North America (Starratt et al., 2008), but no previous research has investigated the relationships between partner-directed insults and these other types of partner violence in the Brazilian context.

Research that specifically addresses insults and verbal abuse against women is relatively scarce (e.g., McKibbin et al., 2007; Miner, Shackelford, & Starratt, 2009). Goetz, Shackelford, Schipper, and Stewart-Williams (2006) presented the first effort to identify and assess the content of verbal abuse directed by men against their female partners. They developed the Partner-Directed Insults Scale (PDIS), which assesses the performance frequency of 47 insults that men might direct at their female partners. Previous research conducted in North America has documented, for example, that men's use of sexually coercive behaviors is predicted by the frequency and content of the insults that men direct at their partner, with insults derogating a partner's value as a person and accusing a partner of sexual infidelity most useful in predicting sexual coercion (Starratt et al., 2008).

No previous research has provided a psychometrically sound assessment of the specific content of verbal abuse directed by men against

* Corresponding author at: Oakland University, Department of Psychology, Rochester, MI 48309, United States.

E-mail addresses: bfink@gwdg.de (B. Fink), shackelf@oakland.edu (T.K. Shackelford).

<https://doi.org/10.1016/j.paid.2019.06.023>

Received 26 April 2019; Received in revised form 14 June 2019; Accepted 23 June 2019

Available online 11 July 2019

0191-8869/ © 2019 Elsevier Ltd. All rights reserved.

their female partners in Brazil, despite the associations of verbal abuse with domestic violence, and despite the fact that Brazil has among the highest rates of domestic violence and homicide in the world. To address this gap in the literature, the current research investigates the relationships between men's partner-directed insults and sexual coercion in the Brazilian context, by first adapting the PDIS for use by Portuguese-speaking Brazilians. Following previous research (Starratt et al., 2008), we hypothesize that men's performance of sexual coercion against their partners is positively associated with the frequency and content of partner-directed insults—specifically, derogation of a partner's value as a person (Hypothesis 1) and accusation of a partner of sexual infidelity (Hypothesis 2).

2. Method

2.1. Participants

Participants were 177 individuals born and residing in Fortaleza (Brazil), aged between 18 and 49 years ($M = 23.6$; $SD = 5.3$), mostly female (59.9%), in an intimate relationship lasting an average of 39.4 months ($SD = 40.4$). Fortaleza is a large, relatively poor city with three million residents and one of the highest homicide rates in Brazil and the seventh highest homicide rate in the world, for cities with at least 300,000 residents (Dillinger, 2019). A majority of participants (74.2%) responded “N/A (Not Applicable)” to a question related to ethnicity (see Materials). This sample size ($n = 177$) is above the minimum suggested for factor analyses (i.e., factor analysis can yield reliable results for $n > 50$, especially when data indicate high factor loadings, low number of factors, and high number of items; de Winter, Dodou, & Wieringa, 2009). In parallel with previous research on partner-directed insults (e.g., Goetz et al., 2006), this sample included only individuals in a heterosexual, romantic relationship for at least three months.

2.2. Materials

Participants completed an on-line survey on the Qualtrics platform that included the following sections:

1. *Escala de Insultos Direcionados ao Parceiro* (EIDP). This is a Brazilian-Portuguese version of the PDIS (Goetz et al., 2006), and includes 47 items. These insults are organized into four components: Derogating Physical Attractiveness (e.g., “My partner told me that I am ugly”), Derogating Value as a Partner/Mental Competency (e.g., “My partner told me that I make his life miserable”), Derogating Value as a Person (e.g., “My partner called me a nobody”), and Accusations of Sexual Infidelity (e.g., “My partner called me a whore or a slut”). Men provided self-reports of their partner-directed insults, whereas women provided reports of insults that their male partner directed against them. Participants indicated the frequency with which they said each insulting thing to their partner (male version), or their partner said to them (female version), in the past six months, on a 6-point Likert scale (0 = *Never* and 5 = *25 or more times*).
2. *Escala de Coerção Sexual em Relacionamentos Amorosos* (ECSRA; Lopes, Holanda, DeLecce, Holub, & Shackelford, in press), a Brazilian-Portuguese version of the SCIRS (Shackelford & Goetz, 2004). The ECSRA includes nine items organized into three factors: Violence (e.g., “My partner threatened violence against someone or something I care about if I did not have sex with him”); Commitment Manipulation (e.g., “My partner hinted that it was my obligation or duty to have sex with him”); and Defection Threat (e.g., “My partner hinted that he would have sex with another woman if I did not have sex with him”). Men provided self-reports of their sexually coercive behaviors against their partners, whereas women provided reports of their partner's sexually coercive behaviors against them in the past month using a 6-point Likert scale (0 = *Act*

did not occur in the past month and 5 = *Act occurred 11 or more times in the past month*).

3. *Demographic questions*. We included demographic questions (e.g., age, sex), as well as questions about the romantic relationship. Specifically, we asked 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?”. Finally, participants were asked to indicate the length of the relationship [“What is your relationship length (in months)?”] and their ethnicity [“What is your ethnicity (select all that apply)?”, in which participants selected one or more of several options, such as “White,” “Mulato” (conceptually equivalent to “dark brown”), “Pardo” (conceptually equivalent to “light brown”), and “Black”].

2.3. Procedure

All procedures were approved by the institutional review board of the university where the Brazilian researchers were employed. We invited participants through messages to several Brazilian Facebook groups, such as university communities, political groups, and hobbies, in an attempt to secure data from participants from a range of contexts. Only individuals at least 18 years old who provided informed consent were allowed to participate. Participants were compensated by entry into a R\$50 gift card lottery (equivalent to approximately US\$15).

The translation of the PDIS from English to Brazilian-Portuguese followed six steps: 1) two bilingual translators translated the measure from English to Portuguese, resulting in two translated versions; 2) two different bilingual translators synthesized the versions by comparing them and evaluating semantic and contextual discrepancies, resulting in a single Portuguese version; 3) a fifth bilingual translator compared this version and the English version, suggesting semantic adjustments; 4) trained Brazilian research assistants administered the translated version to five residents of Fortaleza to identify abstruse terms, which were replaced with synonyms (semantic validation; residents were randomly recruited in the surroundings of a university in Brazil); 5) a seventh and eighth bilingual translators performed the back translation; and 6) a researcher with expertise in the romantic relationships literature compared the original and the back-translated versions, suggesting minor modifications to improve correspondence of the translated version with the original version.

3. Results

Although previous research on partner-directed behaviors has documented a relatively high correspondence between self-reports (men's reports of their own behaviors) and partner-reports (women's report of their partner's behaviors) (Goetz et al., 2006; Shackelford & Goetz, 2004), there may still be important differences between self-reports and partner-reports (e.g., women relative to men are more likely to report, and to report more accurately, men's violent behaviors in a relationship; Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006). Therefore, we first calculated Pearson's correlation coefficients among the observed variables for male and female participants *separately*. The overall pattern of results revealed similar results for the data provided by men about their own behaviors and the data provided by women about their partner's behaviors. Therefore, we combined men's reports and women's reports of men's insults directed against their female partners to secure appropriate statistical power.

Next, we evaluated the discriminative power of the items, considering the median total score as the dividing point. We calculated the total score across the 47 PDIS items for each participant, then divided these scores into two criterion groups, i.e. those above and those below

the median ($Mdn = 1.05$). We entered the items into a MANOVA to identify differences in mean scores of the 47 items between the criterion groups. That is, we separated individuals above and below the median of *all items*, and investigated whether the criterion groups differed in the means of *each item*, while controlling for all other items. The results indicated differences in mean scores of the items for the criterion groups [$Wilks' \Lambda = 0.21$, $F(47, 95) = 7.85$, $p < .001$]. However, MANOVA results do not identify which items differ. We therefore performed univariate tests. The results indicated that, for 36 items, we could reject the null hypothesis of no difference in mean scores of the items for the criterion groups ($ps \leq 0.01$), suggesting that 11 items (out of 47) failed to discriminate individuals who scored above the median from those who scored below the median. Examples of the non-discriminative items are “My partner told me that I don't deserve to live” and “My partner told me that I don't have any real friends.” We excluded these items from further analyses.

Kaiser-Meyer-Olkin (0.57) and Bartlett's sphericity tests [$\chi^2(630) = 3327.10$, $p < .001$] supported the suitability of the data for Factor Analysis (FA). The former indicates the total amount of variance that might be accounted for by a common factor, with 0.50 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. We then performed a FA with the 36 remaining items. The results indicated 12 factors meeting the Kaiser (1970) criterion (eigenvalue ≥ 1), explaining 73.1% of total variance. However, the scree plot [Cattell, 1966 criterion] suggested six factors (52.1% of total variance), and the results of a parallel analysis (Horn (1965) criterion) suggested eight factors (60.6% of total variance). The parallel analysis generates randomized data with the same parameters as the observed data (i.e., 177 participants and 36 variables). The Horn criterion suggests retention of factors for which the eigenvalue in the observed data is greater than the associated eigenvalue in the randomized data.

Factor extraction criteria suggested different numbers of factors for extraction, but because the Cattell (1966) criterion suggested (1) the retention of the fewest factors and (2) the structure that is most similar to the original version (Goetz et al., 2006), we performed another FA, setting the number of factors to six, and following with *oblimin* rotation (as in Goetz et al., 2006). We implemented *oblimin* rotation to allow the PDIS factors to correlate with each other, in line with previous reports of positive correlations among the PDIS factors (Goetz et al., 2006). We retained only items that (1) loaded > 0.30 on a single factor or (2) loaded > 0.30 on more than one factor, but loaded > 0.40 on only one factor. The item allocation of the six-factor structure, however, did not produce consistently interpretable results. For example, the items “My partner accused me of wanting to have sex with another man” and “My partner accused me of having sex with many other men” are similar in content, but loaded highest on different factors, and the items “My partner told me that my family is worthless” and “My partner told me that I look old” loaded on the same factor, but their contents do not represent the same factor (the former derogates a partner's value as a person, and the latter derogates a partner's physical attractiveness; Goetz et al., 2006).

Because the purpose of the FA is to identify factors underlying a construct, and because the original version proposed a four-factor structure—a number of factors that is similar to the number suggested by Cattell's (1966) criterion—we conducted a final FA with the 36 remaining items, setting the number of factors to four, and following with *oblimin* rotation. The four factors explained 40.8% of the total variance. Twelve items did not meet the factor loading requirements and were excluded. For example, the items “My partner told me that I make his life miserable” and “My partner accused me of wanting to have sex with one of his friends” loaded > 0.40 on more than one factor.

Following the original version (Goetz et al., 2006), we labeled Factor 1 “Accusations of Sexual Infidelity” because it includes insults related to the partner's sexual fidelity (e.g., “My partner accused me of

having sex with another man”). We labeled Factor 2 “Derogating Value as a Partner” because it includes insults amounting to verbal attacks on the qualities that make one a good partner (e.g., “My partner told me that I am a bad sex partner”). We labeled Factor 3 “Derogating Physical Attractiveness” because it includes insults in which men denigrate their partner's physical appearance (e.g., “My partner told me that most women are more attractive than I am”). We labeled Factor 4 “Derogating Value as Person” because the insults refer to denigration of a partner's worth as a person (e.g., “My partner told me that my family is worthless”).

For parsimony, we excluded four items that were redundant in content. The excluded items, although statistically acceptable, were not essential to the constitutive definition of the factor on which they loaded. That is, their exclusion did not cause loss of valuable information for the factor. For example, we excluded the item “My partner told me that he is too good for me” because it showed a lower factor loading on the factor “Derogating Physical Attractiveness,” relative to an item similar in content (“My partner told me that I am not good enough for him;” $r = 0.76$; $p < .001$). The 20 remaining items' factor loadings and communalities (h^2), and the four factors' eigenvalues, explained variance, and internal consistency values are displayed in Table 1.

As part of the evaluation of the construct validity of the EIDP, we correlated its factors with the PDIS factors identified by Goetz et al. (2006). The results indicated that the factors of the EIDP are significantly and positively correlated with their respective factors in the PDIS (see Table 2). These findings suggest that the EIDP represents well the 47-item PDIS introduced by Goetz et al. Next, we created an index of relationship satisfaction by averaging responses to four variables (Cronbach's $\alpha = 0.61$): “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 found no correlations between the relationship satisfaction index and the factors of the EIDP (Pearson's $r < |0.08|$, and p -values $> .32$). We then correlated the relationship satisfaction index with the factors as defined in the original version (Goetz et al., 2006), and also found no correlations (Pearson's $r < |0.10|$, and p -values $> .18$), suggesting that the 20-item Brazilian-Portuguese EIDP reliably reflects the content assessed by the 47-item English PDIS. We therefore used the 20-item EIDP in further analyses.

We hypothesized that men's derogation of a partner's value as a person is positively associated with men's performance of sexual coercion against their partners (Hypothesis 1). We correlated men's performance of the EIDP factors with men's performance of the ECSRA factors. Hypothesis 1 was partially supported: the results indicated that men's derogation of a partner's value as a person positively correlated with the ECSRA factor “Violence,” but not with the factors “Commitment Manipulation” and “Resource Manipulation/Defection Threat.” We also hypothesized that the frequency of men's accusation of a partner of sexual infidelity is positively associated with the frequency of men's performance of sexual coercion against their partners (Hypothesis 2). Hypothesis 2 was also partially supported: men's accusation of a partner's sexual infidelity positively correlated with the ECSRA factor “Resource Manipulation/Defection Threat,” but not with the factors “Violence” and “Commitment Manipulation.” Additionally, the EIDP factor “Derogating Value as a Partner” was positively correlated with all ECSRA factors. Table 3 summarizes these results.

4. Discussion

We developed a Brazilian-Portuguese adaptation of the Partner-Directed Insults Scale (PDIS; Goetz et al., 2006) for use in Brazil, which we term the *Escala de Insultos Direcionados ao Parceiro* (EIDP). Brazil has one of the highest rates of domestic violence and homicide in the world (e.g., Waiselfisz, 2015), and Brazilian couples (relative to couples from

Table 1
Factor structure and loadings for the items of the EIDP (n = 161).

Item	Factor loadings				h ²
	I	II	III	IV	
<i>Read: My partner...</i>					
...accused me of having sex with another man	0.91	0.04	-0.03	-0.14	0.39
...called me a whore or a slut	0.89	0.08	-0.11	-0.15	0.85
...told me that it is my fault when something bad happens	0.82	-0.14	-0.12	0.27	0.45
...told me that I deserve everything bad that happens to me	0.66	-0.09	0.05	0.18	0.77
...called me a bitch	0.66	0.02	0.08	0.09	0.81
...told me that I am stupid	0.54	0.20	0.17	-0.11	0.48
...told me that he wants to have sex with one of my female friends	0.14	0.82	0.00	-0.14	0.54
...told me that I will never find someone better than him	0.04	0.73	-0.03	-0.05	0.69
...told me that no man would ever treat me better than he treats me	0.11	0.73	-0.01	-0.05	0.54
...told me that I am a bad sex partner	-0.03	0.55	0.02	0.02	0.29
...told me that I could never make it without him	-0.07	0.52	-0.02	0.09	0.31
...told me that I am sexually abnormal	-0.07	0.30	-0.03	0.19	0.14
...told me that most women are more attractive than I am	-0.06	-0.01	0.83	0.00	0.69
...told me that my breasts are ugly	-0.01	0.06	0.76	0.00	0.49
...told me that I am not good enough for him	0.14	-0.11	0.67	-0.01	0.42
...told me that the time he has spent in a relationship with me has been "wasted time"	-0.01	-0.03	0.65	0.00	0.58
...told me that I am getting old	-0.07	0.09	0.16	0.33	0.15
...told me that I give him nothing	0.05	0.00	-0.04	0.82	0.68
...told me that our family is a failure because of me	0.05	0.00	-0.06	0.77	0.61
...told me that my family is worthless	0.13	-0.06	-0.06	0.77	0.59
Eigenvalue	5.92	3.38	2.98	2.42	
Explained variance (%)	16.45	9.39	8.27	6.72	
Internal consistency (Cronbach's alpha)	0.69	0.68	0.71	0.56	

Note: The bold numbers refer to the loading of each insult in its respective factor. The items cited in this table are from the female version of the EIDP. The items administered to male participants were identical to the items in the female version, except that they were written in the first person (e.g., female version: "My partner accused me of...", and male version: "I accused my partner of..."). Descriptive statistics of the EIDP items are available upon request.

the United States) report that they are more satisfied with their romantic relationship (e.g., Heiman et al., 2011). Conceptually replicating previous research with North American samples, Brazilian men's use of partner-directed insults predicted their use of sexual coercion against their partners. Contrary to previous findings with North American samples, our results indicated no correlation between relationship satisfaction and Brazilian men's use of partner-directed insults.

Similar to Goetz et al. (2006), the results suggested a four-factor structure for the EIDP, with the factors' contents for the EIDP resembling the factors' contents for the PDIS. For example, both the EIDP and the PDIS contain a factor named "Accusations of Sexual Infidelity" which includes insults related to the partner's sexual fidelity (e.g., "My partner called me a whore or a slut"). Additionally, the factors in the shorter Brazilian-Portuguese version were significantly correlated with their respective factors in the longer English version (see Goetz et al., 2006), suggesting that the EIDP reliably represents the original version (PDIS; 47 items) in the Brazilian context. Moreover, the four factors

Table 2
Correlation matrix of the factors from the EIDP (20 items) and the PDIS (47 items) (n = 177).

		EIDP (20 items)				PDIS (47 items)			
		DPA	DVP	DVPe	ACS	DPA	DVP	DVPe	ACS
EIDP (20 items)	DPA	1.00							
	DVP	0.07	1.00						
	DVPe	0.03	0.13	1.00					
	ACS	0.19*	0.27**	0.10	1.00				
PDIS (47 items)	DPA	0.30**	0.73**	0.44**	0.27**	1.00			
	DVP	0.24**	0.40**	0.24**	0.55**	0.46**	1.00		
	DVPe	0.05	-0.05	0.17*	0.42**	0.05	0.30**	1.00	
	ACS	0.13	0.34**	0.35**	0.46**	0.39**	0.37**	0.22**	1.00

Note: DPA = "Derogating Physical Attractiveness"; DVP = "Derogating Value as a Partner"; DVPe = "Derogating Value as Person"; ACS = "Accusations of Sexual Infidelity". The bold numbers refer to the Pearson's coefficient of each factor of the EIDP (20 items) and their respective factor in the PDIS (47 items).

* p < .01.
** p < .001.

Table 3
Correlation matrix of the factors from the EIDP and the ECSRA (n = 177).

		ECSRA		
		V	CM	RD
EIDP	DPA	0.10	-0.07	0.09
	DVP	0.43**	0.15*	0.35**
	DVPe	0.18	-0.03	0.06
	ACS	0.08	0.12	0.17*

Note: DPA = "Derogating Physical Attractiveness;" DVP = "Derogating Value as a Partner;" DVPe = "Derogating Value as Person;" ACS = "Accusations of Sexual Infidelity;" V = "Violence;" CM = "Commitment Manipulation;" RD = "Resource Manipulation/Defection Threat."

* p < .05.
** p < .001.

explained 40.8% of the total variance, a result similar to the result (52.0%) found by Goetz et al. Future research may investigate the variables contributing to residual error cross-culturally (e.g., social desirability concerns). The factors also generated internal consistency values similar to Goetz et al. Cronbach's α for the factors of the EIDP were slightly below the minimum recommended (0.70). However, each factor of the shorter version is comprised of a few items only, and the number of items interferes with calculation of Cronbach's α . Internal consistency indexes < 0.70 are expected for scales with very few items (a high α with very few items indicates item redundancy; Eisinga, TeGrotenhuis, & Pelzer, 2013).

The adaptation of the PDIS to the Brazilian context afforded the exclusion of 27 items. For example, items describing insults that derogate a partner's mental capability were excluded from the EIDP. For example, the item "My partner told me that I am mentally ill" loaded > 0.40 on multiple factors. Similar to Goetz et al. (2006), this item loaded on the factor "Derogating Value as a Partner." In the Brazilian sample, however, it also loaded on the factor "Derogating Value as a Person." Because domestic violence against women can negatively affect women's social, physical, mental, and sexual health (WHO, 2018), and because the Brazilian rate of domestic violence against women is among the highest in the world (Waiselfisz, 2015), it is possible that insults regarding a partner's mental well-being were interpreted by Brazilians (more so than English-speaking participants) as directed to one's quality as a person, in addition to one's quality as a partner. The potential ambiguity in the interpretation of the insults directed towards one's mental well-being in the Brazilian context therefore may have caused these insults to be excluded from the EIDP.

Although some items loaded on the same factor in both versions—for example, the item "My partner told me that my breasts are ugly" loaded on the factor "Derogating Physical Attractiveness" in both the EIDP and PDIS, other items loaded on different factors. For example, the item "My partner called me a bitch" loaded on "Derogating Value as a Partner/Mental Competency" in the PDIS but on "Accusations of Sexual Infidelity" in the EIDP. One possible explanation for this discrepancy is that "vadia" (the Brazilian-Portuguese translation of the word "bitch") is associated with a pattern of sexual behavior (e.g., sexual promiscuity), whereas the word "bitch" may be interpreted as a negative feature of personality (e.g., belligerence, malice) in the American context. The item "My partner told me that I am getting old" loaded on "Derogating Physical Attractiveness" in the PDIS, but on "Derogating Value as Person" in the EIDP. A possible explanation for this discrepancy is that "velha" (the Brazilian-Portuguese translation of the word "old") may be interpreted as a personality characteristic (e.g., grouchy, crabby), whereas the word "old" in the American context may be interpreted as reflecting fertility decline, suggesting a direct derogation of physical attractiveness (Buss, 2015).

North American men's use of sexually coercive behaviors are predicted by the frequency and content of the insults they direct at their intimate partner (e.g., insults derogating a partner's value as a person and accusing a partner of sexual infidelity; Starratt et al., 2008), and men's use of sexually coercive behaviors is negatively associated with relationship satisfaction (Katz & Myhr, 2008). Previous research with North American samples has also documented negative associations between relationship satisfaction and intimate partner abuse (e.g., Shackelford & Goetz, 2004; Shackelford, Goetz, Buss, Euler, & Hoier, 2005). Contrary to previous findings, our results indicated no correlation between relationship satisfaction and the components from both the shorter and longer versions of the EIDP. Brazil has one of the highest rates of domestic violence in the world (e.g., Waiselfisz, 2015), and Brazilian couples (relative to couples from the United States) report that they are more satisfied with their romantic relationship (e.g., Heiman et al., 2011). It is therefore possible that Brazilians do not interpret frequency and content of partner-direct insults as a proxy of the quality of a romantic relationship as much as do individuals from countries in which previous research was conducted (e.g., United

States). Future research might investigate the associations between relationship satisfaction and broader measures of intimate partner violence (such as sexual coercion and cost-inflicting mate retention behaviors) in the Brazilian context.

Moreover, the frequency of men's derogation of a partner's value as a person positively correlated with men's scores on the ECSRA factor "Violence," partially supporting Hypothesis 1. Derogating a partner's value as a person (e.g., "My partner called me a nobody") facilitates the perpetration of violent behaviors (i.e., "dehumanization;" Smith, 2011) and may also facilitate less subtle forms of sexual coercion [i.e., Violence; "My partner initiated sex with me when I was unaware (for example, I was asleep, drunk, or on medication) and continued against my will"]. Additionally, the frequency of men's accusations of a partner's sexual infidelity positively correlated with men's scores on the ECSRA factor "Resource Manipulation/Defection Threat," partially supporting Hypothesis 2. Sexual coercion may serve as an alternative tactic that may increase paternity certainty for men, and the interruption of a man's investment in his partner can be reproductively costly for a woman and her offspring (Buss, 2015). Therefore, men who perceive high risk of partner infidelity—as suggested by frequent accusations of a partner's sexual infidelity—may attempt to increase paternity certainty by threatening to interrupt investments in his partner and her offspring (i.e., Resource Manipulation; "My partner threatened to withhold benefits that I depend on if I did not have sex with him").

The current study has several limitations. Participants were a non-random sample from a single city in Brazil, which restricts the generalizability of the results to other Brazilian regions. For instance, Rio de Janeiro has higher infidelity rates than other states (Abdo, 2004), so it is possible that residents of Rio de Janeiro (relative to residents of other states) use more partner-direct insults that serve as a mate expulsion tactic (rather than as a mate retention tactic; McKibbin et al., 2007). Future research might investigate the frequency and content of partner-directed insults in specific samples from Brazil. In addition, future research may investigate associations between partner-directed insults and sexual coercion among South American minorities (e.g. *Quechua* people). Additionally, many participants (74.2%) responded "N/A (Not Applicable)" to questions related to ethnicity. Brazilians are reportedly resistant to answering self-classification questions regarding ethnicity, perhaps due to their considerable ethnic and racial diversity (Lesser, 1999). We therefore could not control for ethnicity in our analyses. Future research might secure assessments of ethnicity other than by self-report.

Investigating cross-cultural differences is central to accumulating evidence that might strengthen hypotheses regarding intimate partner violence. The current study identified several possible cross-cultural differences, such as that Brazilians may be more likely to interpret insults regarding a partner's mental capability as derogating the partner's value as a person, and that Brazilians, in contrast to Americans, may not interpret some items as insults, such as "My partner told me that I don't have any real friends." Finally, the results of the current study may have applied value. For example, the results of research investigating partner-directed insults may be useful in practical contexts such as in developing educational programs, marital counseling, and marital therapy.

References

- Abdo, C. H. N. (2004). *Estudo da vida sexual do brasileiro [Studies of sexual life of Brazilians]*. São Paulo, Brazil: Bregantini.
- Beiding, M. J., Chen, J., & Black, M. C. (2014). *Intimate partner violence in the United States — 2010*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Buss, D. M. (2015). *Evolutionary psychology: The new science of the mind* (5th ed.). New York: Psychology Press.
- Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, 1, 245–276.
- de Winter, J. D., Dodou, & Wieringa, P. A. (2009). Exploratory factor analysis with small sample sizes. *Multivariate Behavioral Research*, 44, 147–181.

- Devries, K. M., Mak, J. Y., Garcia-Moreno, C., Petzold, M., Child, J. C., Falder, G., ... Pallitto, C. (2013). The global prevalence of intimate partner violence against women. *Science*, *340*, 1527–1528.
- Dillinger, J. (2019). The most dangerous cities in the world. *World atlas* <https://www.worldatlas.com/articles/most-dangerous-cities-in-the-world.html> (retrieved April 25, 2019).
- Eisinga, R., TeGrotenhuis, M., & Pelzer, B. (2013). The reliability of a two-item scale: Pearson, Cronbach, or Spearman-Brown? *International Journal of Public Health*, *58*, 637–642.
- Garcia-Moreno, C., Jansen, H. A., Ellsberg, M., Heise, L., & Watts, C. H. (2006). Prevalence of intimate partner violence: Findings from the WHO multi-country study on women's health and domestic violence. *The Lancet*, *368*, 1260–1269.
- Goetz, A. T., Shackelford, T. K., Schipper, L. D., & Stewart-Williams, S. (2006). Adding insult to injury: Development and initial validation of the partner-directed insults scale. *Violence and Victims*, *21*, 691–706.
- Heiman, J. R., Long, J. S., Smith, S. N., Fisher, W. A., Sand, M. S., & Rosen, R. C. (2011). Sexual satisfaction and relationship happiness in midlife and older couples in five countries. *Archives of Sexual Behavior*, *40*, 741–753.
- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, *30*, 179–185.
- Juodis, M., Starzomski, A., Porter, S., & Woodworth, M. (2014). A comparison of domestic and non-domestic homicides: Further evidence for distinct dynamics and heterogeneity of domestic homicide perpetrators. *Journal of Family Violence*, *29*, 299–313.
- Kaiser, H. F. (1970). A second generation little jiffy. *Psychometrika*, *35*, 401–416.
- Katz, J., & Myhr, L. (2008). Perceived conflict patterns and relationship quality associated with verbal sexual coercion by male dating partners. *Journal of Interpersonal Violence*, *23*, 798–814.
- Lesser, J. (1999). *Negotiating national identity: Immigrants, minorities, and the struggle for ethnicity in Brazil*. Durham, NC: Duke University Press.
- Lopes, G. S., Holanda, L. C., DeLecce, T., Holub, A. M., & Shackelford, T. K. (2019). Sexual coercion, mate retention, and relationship satisfaction in Brazilian and American relationships. *Journal of Interpersonal Violence* (in press).
- Maman, S., Mbwapo, J. K., Hogan, N. M., Kilonzo, G. P., Campbell, J. C., Weiss, E., & Sweat, M. D. (2002). HIV-positive women report more lifetime partner violence: Findings from a voluntary counseling and testing clinic in Dar es Salaam, Tanzania. *American Journal of Public Health*, *92*, 1331–1337.
- McKibbin, W. F., Goetz, A. T., Shackelford, T. K., Schipper, L. D., Starratt, V. G., & Stewart-Williams, S. (2007). Why do men insult their intimate partners? *Personality and Individual Differences*, *43*, 231–241.
- Miner, E. J., Shackelford, T. K., & Starratt, V. G. (2009). Mate value of romantic partners predicts men's partner-directed verbal insults. *Personality and Individual Differences*, *46*, 135–139.
- Puri, M., Tamang, J., & Shah, I. (2011). Suffering in silence: Consequences of sexual violence within marriage among young women in Nepal. *BMC Public Health*, *11*, 29.
- Shackelford, T. K., & Goetz, A. T. (2004). Men's sexual coercion in intimate relationships: Development and initial validation of the sexual coercion in intimate relationships scale. *Violence and Victims*, *19*, 541–556.
- Shackelford, T. K., Goetz, A. T., Buss, D. M., Euler, H. A., & Hoier, S. (2005). When we hurt the ones we love: Predicting violence against women from men's mate retention tactics. *Personal Relationships*, *12*, 447–463.
- Sitta, A. C., Medeiros, C., Faria, F., & Scavone, M. (2011). *Percepções sobre a violência doméstica contra a mulher no Brasil [Perceptions about domestic violence against women in Brazil]*. São Paulo, Brazil: Instituto Avon.
- Smith, D. L. (2011). *Less than human: Why we demean, enslave, and exterminate others*. New York, NY: St. Martin's Press.
- Starratt, V. G., Goetz, A. T., Shackelford, T. K., & Stewart-Williams, S. (2008). Men's partner-directed insults and sexual coercion in intimate relationships. *Journal of Family Violence*, *23*, 315–323.
- Waiselfisz, J. J. (2015). *Mapa da violência 2015: Homicídios e juventude no Brasil [Map of the violence 2015: Homicides and youth in Brazil]*. Brasília, DF: Secretaria-Geral da Presidência da República. Retrieved from www.mapadaviolencia.org.br/pdf2015/MapaViolencia_2015_mulheres.pdf.
- World Health Organization (2018). Violence against women. Retrieved from <http://www.who.int/mediacentre/factsheets/fs239/en/>.