



## Men's risk-taking predicts their partner-directed cost-inflicting behaviors

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### ABSTRACT

Within the context of a long-term intimate relationship, men engage in a wide variety of behaviors that function to maintain a partner's investment in and reduce the risks associated with a partner's defection from that relationship. Some of these behaviors entice a partner's continued investment through the provision of benefits, while others inflict costs for defection. These cost-inflicting behaviors, while potentially valuable, are also risky, as they may ultimately increase the odds of a romantic partner's defection or retaliation. Given the riskiness of cost-inflicting behaviors, we hypothesize that men's use of these behaviors can be predicted by men's tendency toward risk-taking behavior more generally, but only when that risk-taking is indicative of lower mate value or relationship investment. To test this hypothesis, we investigated whether and how performance of behaviors within five risk-taking domains (ethical, financial, recreational, health/safety, and social) predict men's use of cost-inflicting behaviors. Using path analysis and data from partner-reports from 122 female undergraduate students in a committed, heterosexual, sexual relationship, we confirmed that men's performance of cost-inflicting behavior is predicted by men's unethical risky behavior and, to a lesser extent, financial and recreational risky behavior.

### 1. Introduction

Long-term romantic partnership between a man and a woman is the most common human mating arrangement and likely conferred benefits to both sexes over human evolutionary history, including greater paternity certainty for men and greater partner investment for women (Buss, 2015). Such partnerships, however, have potential costs. For instance, a man whose partner is unfaithful risks cuckoldry (i.e., unwitting investment in a child to whom he is genetically unrelated; Buss & Shackelford, 1997), and a woman whose partner is unfaithful risks losing partner-provisioned resources (Buss, 2015). To maximize the likelihood of receiving the benefits of monogamy while minimizing the likelihood of incurring the costs of infidelity, both men and women engage in a variety of mate retention behaviors (Buss, 1988). These behaviors prevent a partner's infidelity or defection, either by enticing the partner's continued investment in the relationship or punishing or threatening to punish the partner for infidelity or relationship defection.

Benefit-provisioning mate retention behaviors, such as complimenting a woman on her appearance or displaying love and affection (Buss, 1988; Buss & Shackelford, 1997), are a low-risk method by which men attempt to prevent infidelity or relationship defection. Because these behaviors are likely to increase a woman's self-esteem and

relationship satisfaction (Miner, Starratt, & Shackelford, 2009), they are unlikely to lead to her leaving the relationship. In contrast, cost-inflicting mate retention behaviors—such as preventing a partner from seeing her friends (Buss, Shackelford, & McKibbin, 2008), verbally insulting her (Miner et al., 2009), or sexually coercing her (Shackelford, Goetz, Buss, Euler, & Hoier, 2005; Starratt, Goetz, Shackelford, McKibbin, & Stewart-Williams, 2008)—reduce a partner's social support system and sense of self-worth and increase the likelihood of negative health consequences (e.g., depressive symptoms; Devries et al., 2013), potentially increasing the risk that she will defect the relationship or that she or her family or friends will seek costly retribution.

Because cost-inflicting behaviors are riskier to perform than are benefit-provisioning behaviors, individual differences—in particular, those associated with risk—may affect the performance of mate retention behaviors. Indeed, men who prioritize stability and security less frequently perform cost-inflicting (relative to benefit-provisioning) mate retention behaviors (Lopes, Sela, & Shackelford, 2017). It is as yet unclear, however, whether the inverse is also true. That is, whereas risk averse men appear to engage in fewer cost-inflicting behaviors, do men with a penchant for risk-taking engage in cost-inflicting mate retention with greater frequency?

In answer to this question, we hypothesize a positive relationship between men's risk-taking tendencies and cost-inflicting mate retention

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behaviors. However, risk-taking is not a unidimensional construct (Blais & Weber, 2006), and so its relationship to mate retention may be moderated by the specific type of risk-taking assessed. Specifically, we hypothesize a positive relationship between risk-taking and mate retention only when the type of risk-taking is indicative of low relative mate value (as lower value men are more likely to engage in cost-inflicting mate retention behaviors; Buss & Shackelford, 1997; Miner et al., 2009) or could hinder a man's ability to invest in his current relationship (as investment of resources to the benefit of one's partner and potential offspring is an important component of men's mate value; Buss & Schmitt, 1993; Fisher, Cox, Bennett, & Gavric, 2008). To investigate this, we consider the five separate domains of risk-taking assessed by the Domain-Specific Risk-Taking Scale (DOSPERT; Weber, Blais, & Betz, 2002): ethical, financial, recreational, health/safety, and social.

Men who are ethical risk-takers report a greater likelihood of engaging in behaviors such as “Taking some questionable deductions on your income tax return,” “Having an affair with a married man/woman,” and “Leaving your children alone at home while running an errand.” These behaviors may be demonstrations of poor parenting skills, which is an indicator of low mate value (e.g., Buss, 2015; Fox & Benson, 2004). Additionally, these behaviors may reflect an underlying pathological personality (e.g., disinhibition, antagonism). As both low mate value (Buss & Shackelford, 1997; Miner et al., 2009) and pathological personality scores (Holden, Roof, McCabe, & Zeigler-Hill, 2015) positively correlate with men's use of cost-inflicting mate retention, we predict that men's propensity for ethical risk-taking will be related positively to men's use of cost-inflicting mate retention.

Unlike ethical risk-taking, financial and recreational risk-taking are not necessarily direct indicators of lower mate value or pathological personality. However, both forms of risk-taking are associated with a tendency toward investment of resources in endeavors other than those likely to benefit one's partner and offspring. For example, if one is more likely to express interest in “Betting a day's income on the outcome of a sporting event” (financial risk-taking) or “Piloting a small plane” (recreational risk-taking), that may indicate a willingness to squander valuable resources on things other than one's family. And as willingness to invest in one's partner and her children is valued in a mate, a willingness to invest in other risky endeavors would be considerably less valued in a potential mate (Buss, 2015). Additionally, previous research has documented relationships between both financial risk-taking (e.g., Korman et al., 2008) and recreational risk-taking (El-Bassel, Gilbert, Wu, Go, & Hill, 2005) and intimate partner violence perpetration. Intimate partner violence, in turn, is related to the use of other forms of cost-inflicting mate retention behaviors (Kaighobadi, Shackelford, & Goetz, 2009). Therefore, given their negative associations with mate value and positive associations with intimate partner violence, we predict that both financial risk-taking and recreational risk-taking will be positively related to men's use of cost-inflicting mate retention behaviors.

The final two risk-taking domains, health/safety and social risk-taking, are not indicative of the sorts of individual differences that might promote the use of cost-inflicting mate retention behaviors. In fact, behaviors such as “Disagreeing with an authority figure on a major issue” (social risk-taking) may signal traits that women find attractive in men, such as assertiveness (Buss, 2015). Similarly, behaviors such as “Drinking heavily at a social function” (health/safety risk-taking) coincide with masculine norms (Iwamoto, Cheng, Lee, Takamatsu, & Gordon, 2011), and so may indicate higher mate value rather than lower mate value. Additionally, health/safety risk-taking is unrelated to intimate partner violence (Testa, Crane, Quigley, Levitt, & Leonard, 2014). Consequently, we do not predict a direct relationship between health/safety or social risk-taking and the use of cost-inflicting mate retention behaviors.

The aim of the current study was to test the predictions that men's use of cost-inflicting mate retention behaviors would be positively

related to ethical (Prediction 1), financial (Prediction 2), and recreational (Prediction 3) risk-taking, but not to health/safety (Prediction 4) or social (Prediction 5) risk-taking. Because use of cost-inflicting mate retention behaviors and benefit-provisioning mate retention behaviors are not mutually exclusive, and may be positively correlated (Miner et al., 2009), we controlled for performance of benefit-provisioning mate retention behaviors. Additionally, because specific cost-inflicting behaviors in a romantic relationship are more often perpetrated by men than by women (e.g., physical violence; Devries et al., 2013), and because 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), we secured women's reports of their partner's behavior.

## 2. Methods

### 2.1. Participants and procedure

Participants were 122 women ( $M_{age} = 22.2$ ,  $SD_{age} = 7.2$ ; partners:  $M_{age} = 24.2$ ,  $SD_{age} = 8.5$ ) in a committed, heterosexual relationship. The relationship length varied from 3 to 165 months ( $M = 28.9$ ;  $SD = 28.5$ ). In parallel with previous research on mate retention (e.g., Buss et al., 2008), this sample included only individuals in a heterosexual, romantic relationship for at least three months. Participants were recruited from an undergraduate participant pool at a university in the Southeastern US. All procedures were approved by the institutional review board of the university where data were collected.

### 2.2. Materials

#### 2.2.1. Domain-Specific Risk-Taking Scale (DOSPERT; Blais & Weber, 2006)

The DOSPERT is a 30-item inventory assessing risk-taking across five domains: ethical, financial, recreational, health/safety, and social. (see Introduction). Women reported the likelihood that their partner would perform each behavior, using a 7-point Likert scale, ranging from 1 = *Extremely unlikely* to 7 = *Extremely likely*.

There are several other measures of risk-taking (e.g., see Kruger, Wang, & Wilke, 2007), some of which assess domains that are arguably more directly relevant to evolutionary pressures. For example, Kruger et al. (2007) developed an evolutionarily valid domain-specific risk-taking scale that assesses the factors of fertility, between-group competition, within-group competition, mating and resource allocation for mate attraction, and environmental risks. However, some of these items are not applicable to most individuals (e.g., the item “Driving to a rival university at night and stealing the school's flag from the flagpole at the center of campus” is limited to college students) or represent a domain that is also captured by the DOSPERT (e.g., the item “Engaging in unprotected sex during a one-night stand” is captured by the health/safety domain of the DOSPERT, which includes the item “Engaging in unprotected sex”). Therefore, for the current research, we included the DOSPERT as a parsimonious and widely applicable measure of risk-taking that integrates domains from other risk-taking measures.

#### 2.2.2. Mate Retention Inventory-Short Form (MRI-SF; Buss et al., 2008)

The MRI-SF is a 38-item inventory assessing the performance of specific mate retention behaviors organized across two domains: cost-inflicting and benefit provisioning. Women reported how often their partner performed each behavior on a 4-point scale, ranging from 0 = *Never* to 3 = *Often*.

#### 2.2.3. Partner-Directed Insults Scale (PDIS; Goetz, Shackelford, Schipper, & Stewart-Williams, 2006)

The PDIS is a 47-item inventory assessing the frequency with which men said each insult to their partner in the past month. Examples of items are “My partner told me that I am ugly” and “My partner called

**Table 1**  
Means, standard deviations, skewness, and kurtosis for the observed variables (n = 122).

Variable	M	SD	Skewness	Kurtosis	SW test	$\alpha$
Financial	2.64	1.21	0.774	0.670	0.948*	0.77
Health/Safety	1.21	1.33	0.211	-0.549	0.981	0.69
Recreational	3.49	1.69	0.142	-0.956	0.964*	0.85
Ethical	1.33	1.00	1.065	1.140	0.900*	0.73
Social	3.77	1.19	-0.423	-0.248	0.975*	0.68
Cost-inflicting Mate Retention	1.69	0.58	0.904	0.201	0.924*	0.90
Benefit-provisioning Mate Retention	2.09	0.51	-0.274	-0.263	0.987	0.80
Partner-Directed Insults	1.00	0.53	3.167	11.825	0.607*	0.95
Sexual Coercion	4.31	0.63	3.560	13.668	0.480*	0.97

Note: SW test = Shapiro Wilk's test;  $\alpha$  = Cronbach's alpha.

\*  $p < 0.05$ .

me a whore or a slut." Responses are provided on a 6-point scale (0 = *Never* and 5 = *25 or more times*).

### 2.2.4. Sexual Coercion in Intimate Relationships Scale (SCIRS; Shackelford & Goetz, 2004)

The SCIRS is a 34-item inventory assessing women's report of their partner's use frequency of sexual coercion in the past month. Examples of items are "My partner hinted that he would have sex with another woman if I did not have sex with him" and "My partner told me that if I loved him I would have sex with him." Responses are provided on a 6-point scale (0 = *Never* and 5 = *11 or more times*).

Table 1 summarizes the internal consistencies.

### 2.3. Data analysis

We conducted a path analysis to investigate the effects of men's likelihood of engaging in the five domains of risk-taking behavior on their performance of cost-inflicting mate retention behaviors as assessed by the MRI-SF, PDIS, and SCIRS. Because individuals often use both benefit-provisioning and cost-inflicting mate retention behaviors (Miner et al., 2009), we estimated the parameters using the residual covariance matrix after statistically controlling for performance of benefit-provisioning mate retention behaviors. We did not estimate covariances between the risk-taking domains (or between the cost-inflicting behaviors as assessed by the MRI-SF, PDIS, and SCIRS) because these constructs are relatively independent (Blais & Weber, 2006; Miner et al., 2009), and the addition of parameters would cause the model to be under-identified (i.e.,  $df_m < 0$ ; Hooper, Coughlan, & Mullen, 2008). Additionally, we did not add a latent variable of cost-inflicting behavior because we intended to investigate the unique effects of the risk-taking domains on partner-directed insults, sexual coercion, and cost-inflicting behaviors as captured by the MRI-SF. The conceptual model is depicted in Fig. 1.

## 3. Results

### 3.1. Preliminary analysis

We first identified and removed outlying cases for each variable (i.e., case-wise deletion). We considered an outlier any data point  $> 3.0$  standard deviations from the mean. Participants with missing data for at least one variable (n = 69) were excluded from analyses. We excluded these participants because variables constructed from the mean scores of items may be biased when calculated from data containing several missing values (Schafer & Graham, 2002). The remaining n = 122 (described in Participants) is appropriate for a path analysis with 21 parameters (e.g., minimum subjects-to-parameter ratio of 5, Bentler & Chou, 1987). We next conducted a Shapiro-Wilk's test and

assessed skewness and kurtosis to investigate the distribution for each observed variable. The overall pattern of results indicated that seven (of nine) variables were non-normally distributed (see Table 1).

For reportorial completeness, we correlated the variables included in the model. Cost-inflicting mate retention behaviors positively correlated with partner-directed insults ( $r = 0.62$ ;  $p < 0.001$ ) and sexually coercive behaviors ( $r = 0.57$ ;  $p < 0.001$ ), corroborating previous research documenting that men use sexual coercion and partner-directed insults as cost-inflicting mate retention behaviors (e.g., Kaighobadi et al., 2009). Additionally, performance along the five domains of risk-taking was moderately inter-correlated ( $r$  varied from 0.15 to 0.50;  $p$ -value varied from 0.12 to  $< 0.001$ ), suggesting that the domains are relatively independent (Blais & Weber, 2006). Table 2 presents the residual correlation matrix.

### 3.2. Path analysis

To investigate the global fit of the model ( $df_m = 3$ ), we calculated four global fit indexes, with the threshold for good model fit shown in parenthesis (Hooper et al., 2008): (1) Chi-square -  $\chi^2$  ( $p > 0.05$ ), (2) Root-Mean-Square Error of Approximation (RMSEA  $< 0.06$ ), (3) Standardized Mean Square Residual (SMSR  $< 0.10$ ), and (4) Comparative Fit Index (CFI  $\geq 0.95$ ). We used Robust Maximum Likelihood Estimation because it is resilient to non-normal distributions (Hooper et al., 2008).

Global fit indexes did not indicate an excellent fit to the data ( $\chi^2 = 1538.78$ ,  $df = 3$ ,  $p < 0.05$ ; RMSEA = 0.65; SMSR = 0.12; CFI = 0.39)—an expected result given that we included path coefficients predicted to *not* be significant (e.g., Predictions 4 and 5). The results indicated that the ethical domain is the only domain of risk-taking that strongly and positively predicted cost-inflicting mate retention behaviors, partner-directed insults, and sexually coercive behaviors. Specifically, the coefficients for the ethical risk-taking domain were large and significant (standardized  $\beta$  varied from 0.45 to 0.56;  $p < 0.001$ ), supporting Prediction 1. The coefficients for the financial risk-taking domain reflected negative, but small effect sizes (standardized  $\beta$  varied from -0.02 to -0.09;  $p = 0.45$  to  $p < 0.001$ ), not supporting Prediction 2. Similarly, the coefficients for the recreational risk-taking domain reflected negative, but small effect sizes (standardized  $\beta$  varied from -0.03 to -0.07;  $p = 0.25$  to  $p = 0.02$ ), not supporting Prediction 3. The coefficients for the health/safety and social risk-taking domains were not significant, supporting Predictions 4 and 5. Table 3 summarizes the path coefficients.

## 4. Discussion

We investigated whether and how men's likelihood of engaging in risk-taking behaviors predicts their cost-inflicting mate retention behaviors. Consistent with Prediction 1, cost-inflicting mate retention behaviors were predicted by ethical risk-taking. This result is consistent with previous research showing that ethical risk-taking may be a manifestation of lower mate value and that lower mate value is related to the use of cost-inflicting mate retention behaviors. Additionally, some ethical risk-taking behaviors, such as "Having an affair with a married man/woman" may conceptually overlap with cost-inflicting mate retention behaviors reported by women (e.g., "Talked to another woman at a party to make my partner jealous", "My partner told me that he wants to have sex with one of my female friends", "My partner threatened to pursue a long-term relationship with another woman if I did not have sex with him").

Prediction 2 was not supported, as financial risk-taking negatively predicted cost-inflicting mate retention behaviors as assessed by the MRI-SF and the SCIRS, but not the PDIS. The results contrast with the results of previous research documenting, for example, links between gambling, a form of financial risk taking, and intimate partner violence (Korman et al., 2008) and poor parenting skills (Suomi et al.,

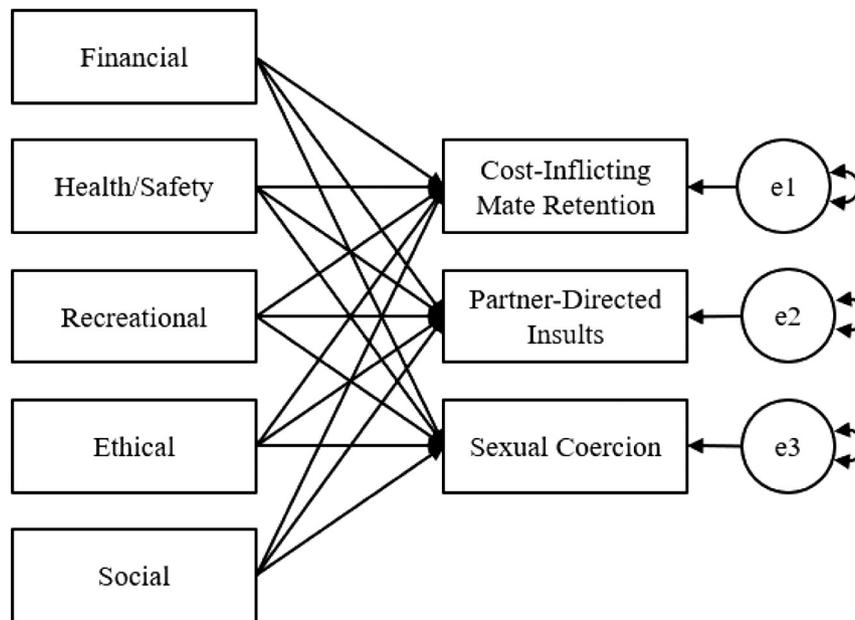


Fig. 1. Conceptual model of risk-taking domains and cost-inflicting behaviors.

**Table 2**  
Residual correlation matrix of risk-taking domains and cost-inflicting behaviors (n = 122).

	C	P	SC	E	F	H/S	R
Cost-inflicting Mate Retention (C)	1						
Partner-Directed Insults (P)	0.62***	1					
Sexual Coercion (SC)	0.57***	0.82***	1				
Ethical (E)	0.52***	0.49***	0.43***	1			
Financial (F)	0.10	0.17	0.07	0.34***	1		
Health/Safety (H/S)	0.23*	0.20*	0.24**	0.50***	0.18*	1	
Recreational (R)	-0.02	0.01	0.09	0.15	0.21*	0.27**	1
Social	0.04	0.07	0.11	0.23*	0.26**	0.41***	0.40***

Note: Estimates are Pearson's *r* after controlling for Benefit-provisioning Mate Retention Behaviors.

\* *p* < 0.05.  
\*\* *p* < 0.01.  
\*\*\* *p* < 0.001.

2013)—both of which are associated with cost-inflicting mate retention behaviors (Miner et al., 2009). One possible explanation is that, though significant, the effect size associated with the relationship between financial risk-taking and cost-inflicting mate retention was small. The financial risk-taking domain of the DOSPERT includes behaviors such as “Investing 10% of your annual income in a moderate growth mutual fund.” Although this may represent imprudent resource expenditure, it does not represent a direct threat of infidelity, injury, or death—characteristics observed in partner-directed insults, for example (e.g., “My partner told me that I don’t deserve to live”; Goetz et al., 2006).

Prediction 3 was not supported, with recreational risk-taking negatively predicting cost-inflicting mate retention behaviors as assessed with the MRI-SF and the PDIS, but not the SCIRS. Recreational risk-taking may be life-threatening to the performer, with the main benefit being entertainment to the performer (e.g., “Bungee jumping off a tall bridge”), which may conflict with what is expected of a high value mate and good parent. Alternatively, life-threatening behaviors may “test” a man’s quality as a long-term partner (e.g., handicap hypothesis; Zahavi,

**Table 3**  
Path coefficients of risk-taking domains and cost-inflicting behaviors (n = 122).

Path coefficients	Unst. $\beta$ (SE)	Stand. $\beta$ (SE)	<i>p</i> -Value
Financial → Cost-inflicting Mate Retention	-0.030 (0.013)	-0.064 (0.026)	0.016
Financial → Partner-Directed Insults	0.009 (0.012)	0.021 (0.027)	0.449
Financial → Sexual Coercion	-0.048 (0.015)	-0.091 (0.028)	0.001
Health/Safety → Cost-inflicting Mate Retention	-0.002 (0.013)	-0.005 (0.030)	0.881
Health/Safety → Partner-Directed Insults	-0.015 (0.012)	-0.037 (0.031)	0.238
Health/Safety → Sexual Coercion	0.007 (0.015)	0.015 (0.032)	0.648
Recreational → Cost-inflicting Mate Retention	-0.023 (0.009)	-0.067 (0.027)	0.013
Recreational → Partner-Directed Insults	-0.020 (0.009)	-0.064 (0.028)	0.019
Recreational → Sexual Coercion	0.012 (0.011)	0.033 (0.028)	0.249
Ethical → Cost-inflicting Mate Retention	0.324 (0.017)	0.564 (0.026)	< 0.001
Ethical → Partner-Directed Insults	0.269 (0.016)	0.509 (0.027)	< 0.001
Ethical → Sexual Coercion	0.283 (0.020)	0.449 (0.029)	< 0.001
Social → Cost-inflicting Mate Retention	-0.024 (0.014)	-0.050 (0.028)	0.079
Social → Partner-Directed Insults	-0.004 (0.013)	-0.009 (0.029)	0.766
Social → Sexual Coercion	0.004 (0.016)	0.008 (0.030)	0.791
Residual variances			
Cost-inflicting Mate Retention	0.237 (0.010)	0.715 (0.022)	
Partner-directed Insults	0.212 (0.009)	0.757 (0.021)	
Sexual Coercion	0.322 (0.013)	0.806 (0.020)	

1975), which may explain the negative results. Moreover, none of the recreational risk-taking behaviors assessed by the DOSPERT address sexual coercion or are strongly associated with predictors of sexual coercion (e.g., intimate partner violence; Shackelford & Goetz, 2004). This may explain why recreational risk-taking was associated with cost-inflicting mate retention generally, but did not predict sexual coercion. Furthermore, some recreational risk-taking behaviors (e.g., “Going camping in the wilderness”) do not conflict with expectations of a high value mate or good parent, and may reflect characteristics in men that are attractive to women, such as ability to survive under harsh conditions (Buss, 2015).

Consistent with Predictions 4 and 5, health/safety and social risk-taking behaviors did not positively predict the performance of cost-inflicting behaviors when accounting for the other risk-taking domains. Generally, the behaviors associated with health/safety and social risk-taking are not unethical, violent, or threatening—characteristics commonly seen in cost-inflicting mate retention behaviors (Miner et al., 2009). In fact, “Admitting that your tastes are different from those of a friend,” a social risk-taking behavior, may be perceived as attractive to women in a long-term context, as it may signal industriousness and assertiveness (Buss, 2015). Health/safety risk-taking was positively correlated with cost-inflicting behaviors when not accounting for the other risk-taking domains (see Table 2), suggesting that the effect of health/safety risk-taking on cost-inflicting behaviors is suppressed by the other risk-taking domains. This may be because some health/safety risk-taking behaviors, such as excessive alcohol use (e.g., “Drinking heavily at a social function”) can result in both negative (e.g., sexual coercion; Caetano, Schafer, & Cunradi, 2017) and positive effects in a romantic context (e.g., there are positive and immediate effects of alcohol consumption on couple interaction behaviors; Testa et al., 2014). These conflicting effects of such behaviors may also explain the low effect sizes for the health/safety risk-taking domain. Additionally, men who engage in high-risk activities may be attractive to women in a long-term context because a man who engages in risk-taking may incur risks that “test” his quality as a long-term partner (Zahavi, 1975; see Buss, 2015).

One limitation of the current study is that the DOSPERT does not capture the sum total of possible risk-taking behaviors. For example, sexual risk-taking—such as having unprotected anal sex—is positively associated with violence against a partner (Stephenson, de Voux, & Sullivan, 2011), and threats of violence against a partner may serve as a cost-inflicting mate retention behavior (Miner et al., 2009). The health/safety domain of the DOSPERT includes the item “Engaging in unprotected sex,” but it also includes items that do not overlap with sexual risk-taking (e.g., “Riding a motorcycle without a helmet”), which may have hindered identification of any small effects of sexual risk-taking. Future research might investigate whether men more prone to sexually risky behaviors also deploy more cost-inflicting mate retention behaviors. Moreover, our results relied on women's partner-reports, which may not reflect the actual frequency of the behaviors about which women reported. Although women (relative to men) are more likely to report, and to report more accurately, men's violent behaviors in a relationship (Garcia-Moreno et al., 2006), future research might secure assessments of men's reports of their risky behaviors, along with women's reports of their partner's risky behaviors. Additionally, we did not investigate the relationships between women's risk-taking and partner-directed cost-inflicting behaviors. Although specific cost-inflicting behaviors in a romantic relationship are more often perpetrated by men than by women (e.g., Devries et al., 2013), future research may profitably investigate the relationships between women's risk-taking and several partner-directed cost-inflicting behaviors.

The current study provides evidence that men's likelihood of engaging in certain risk-taking behaviors predicts men's performance of a variety of cost-inflicting mate retention behaviors. Although previous research suggests that men are more likely to perform cost-inflicting behaviors when they cannot afford to engage in benefit-provisioning behaviors (Lopes et al., 2017; Miner et al., 2009), the current research indicates that some men—in particular, men prone to ethical risk-taking—deploy cost-inflicting mate retention behaviors regardless of their ability to provide benefits to their partners. These findings are not only academically interesting, but may have applied value. Understanding how a person's propensity for risk-taking interacts with that person's performance of cost-inflicting behaviors may be useful in developing educational programs, marital counseling, and marital therapy (e.g., by helping counselors to identify individual differences that might affect marital satisfaction).

## References

- Bentler, P. M., & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods & Research*, 16, 78–117.
- Blais, A.-R., & Weber, E. U. (2006). A Domain-Specific Risk-Taking (DOSPERT) scale for adult populations. *Judgment and Decision Making*, 1, 33–47.
- Buss, D. M. (1988). From vigilance to violence: Tactics of mate retention in American undergraduates. *Ethology and Sociobiology*, 9, 291–317.
- Buss, D. M. (2015). *Evolutionary psychology* (5th ed.). New York, NY: Psychology Press.
- Buss, D. M., & Schmitt, D. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, 100, 204–232.
- Buss, D. M., & Shackelford, T. K. (1997). From vigilance to violence: Mate retention tactics in married couples. *Journal of Personality and Social Psychology*, 72, 346–361.
- 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.
- Caetano, R., Schafer, J., & Cunradi, C. B. (2017). Alcohol-related intimate partner violence among white, black, and Hispanic couples in the United States. In M. Natarajan (Ed.), *Domestic violence: The five big questions*. New York, NY: Routledge.
- 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.
- El-Bassel, N., Gilbert, L., Wu, E., Go, H., & Hill, J. (2005). Relationship between drug abuse and intimate partner violence: A longitudinal study among women receiving methadone. *American Journal of Public Health*, 95, 465–470.
- Fisher, M., Cox, A., Bennett, S., & Gavric, D. (2008). Components of self-perceived mate value. *Journal of Social, Evolutionary, and Cultural Psychology*, 2, 156–168.
- Fox, G. L., & Benson, M. L. (2004). Violent men, bad dads? Fathering profiles of men involved in intimate partner violence. In R. D. Day, & M. E. Lamb (Eds.), *Conceptualizing and measuring father involvement*. Mahwah, NJ: Lawrence Erlbaum Associates.
- 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.
- Holden, C. J., Roof, C. H., McCabe, G., & Zeigler-Hill, V. (2015). Detached and antagonistic: Pathological personality features and mate retention behaviors. *Personality and Individual Differences*, 83, 77–84.
- Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6, 53–60.
- Iwamoto, D. K., Cheng, A., Lee, C. S., Takamatsu, S., & Gordon, D. (2011). “Man-ing” up and getting drunk: The role of masculine norms, alcohol intoxication and alcohol-related problems among college men. *Addictive Behaviors*, 36, 906–911.
- Kaighobadi, F., Shackelford, T. K., & Goetz, A. T. (2009). From mate retention to murder: Evolutionary psychological perspectives on men's partner-directed violence. *Review of General Psychology*, 13, 327.
- Korman, L. M., Collins, J., Dutton, D., Dhayanathan, B., Littman-Sharp, N., & Skinner, W. (2008). Problem gambling and intimate partner violence. *Journal of Gambling Studies*, 24, 13–23.
- Kruger, D. J., Wang, X. T., & Wilke, A. (2007). Towards the development of an evolutionarily valid domain-specific risk-taking scale. *Evolutionary Psychology*, 5, 555–568.
- Lopes, G. S., Sela, Y., & Shackelford, T. K. (2017). Endorsement of existence values predicts mate retention behaviors. *Personality and Individual Differences*, 113, 184–186.
- 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.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7, 147.
- 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. *Personal Relationships*, 12, 447–463.
- Starratt, V. G., Goetz, A. T., Shackelford, T. K., McKibbin, W. F., & Stewart-Williams, S. (2008). Men's partner-directed insults and sexual coercion in intimate relationships. *Journal of Family Violence*, 23, 315–323.
- Stephenson, R., de Voux, A., & Sullivan, P. S. (2011). Intimate partner violence and sexual risk-taking among men who have sex with men in South Africa. *The Western Journal of Emergency Medicine*, 12, 343.
- Suomi, A., Jackson, A. C., Dowling, N. A., Lavis, T., Patford, J., Thomas, S. A., ... Cockman, S. (2013). Problem gambling and family violence: Family member reports of prevalence, family impacts and family coping. *Asian Journal of Gambling Issues and Public Health*, 3, 13.
- Testa, M., Crane, C. A., Quigley, B. M., Levitt, A., & Leonard, K. E. (2014). Effects of administered alcohol on intimate partner interactions in a conflict resolution paradigm. *Journal of Studies on Alcohol and Drugs*, 75, 249–258.
- Weber, E. U., Blais, A. R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors. *Journal of Behavioral Decision Making*, 15, 263–290.
- Zahavi, A. (1975). Mate selection—A selection for a handicap. *Journal of Theoretical Biology*, 53, 205–214.