

Personality and Social Psychology

Individual differences in preference for risky behaviors during courtship

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Engaging in risky behaviors is a sexual signalling strategy that men use to procure mates. The present study investigates men's preferences for engaging in risky behaviors (along with women's preferences for their male partner's risky behavior) within dating couples. We investigated associations between relationship length, self-perceived attractiveness, sociosexuality orientation, and preference for risky behaviors in a sample of 256 couples. Results indicated that men had stronger preferences for risky behaviors than their partner's ideal preference. Furthermore, relationship length was associated with a decline in women's preference for their partner's risk-taking, but not men's preference for their own risk-taking. Self-perceived attractiveness was negatively associated with risk preference, and sociosexuality orientation was not directly related to risk preference. Female preferences for less intense male risky behaviors could reflect the need of paternal investment which is required for offspring care. Decreased male sexual signalling could account for lower preferences of risky behaviors in females who are involved in longer lasting romantic relationships.

Key words: Attractiveness, human mating, mate preference, sociosexuality.

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INTRODUCTION

Individual differences in engaging in risky behaviors have been given substantial empirical attention over the years. Perhaps the most consistent findings are that men engage in riskier behavior than women (Byrnes, Miller & Schafer, 1999), and that women have a stronger preference for risk-taking in a male partner than men have for a female partner (Farthing, 2005; Kelley & Dunbar, 2001). Additionally, risk-taking by men is more pronounced under mating contexts, particularly when females are attractive (Baker & Maner, 2008), romantically receptive, and when these females would directly observe males' performance (Baker & Maner, 2009). For example, when men were exposed to images of highly attractive female faces, they were more prone to engage in risky decisions in a blackjack task compared with those who were exposed to unattractive female faces (Baker & Maner, 2008).

Individual differences in preference for risk-taking are translated to female preferences for risk-prone heroes at a cultural level (Kelly & Dunbar, 2001). Importantly, men are aware of these female preferences, which suggests that engaging in risky behaviors may be a strategy that men use to procure mates. For example, the ability to withstand detrimental effects of alcohol consumption could be a signal of male quality in modern society. In line with this reasoning, empirical research has shown that male binge drinking rates were higher in environments with male-biased sex ratios, where male-male competition is higher, compared with female-biased sex ratio environments (Aung, Hughes, Hone & Puts, 2019). Male skateboarders performed risky tricks in the presence of female observers, even at the expense of physical harm (Ronay & von Hippel, 2010), and men have been shown to cross busy roads more often in the presence of women, relative to in the presence of other men (Pawlowski, Atwal &

Dunbar, 2008). Similar results were obtained in traditional societies. For instance, Apicella, Crittenden, and Tobolsky (2017) showed that the number of mating opportunities available to reproductive-age men positively influenced men's risk-taking.

Searching for food and shelter was riskier in our ancestral environment than today. Thus, male risk-taking may have evolved as a signal of good genes that hunter-gatherer females used to select mates (Diamond, 1992; Petraitis, Lampman, Boeckmann & Falconer, 2014). In line with costly signaling theory (Zahavi, 1975), men who engage in risky behaviors are more sexually attractive to females, particularly for short-term relationships (Apalkova, Butovskaya, Bronnikova, Burkova, Shackelford & Fink, 2018). If risky behaviors indeed serve to attract mates (Greitemeyer, 2013; Petraitis *et al.*, 2014), then women should prefer their mate to engage in these behaviors. In other words, men's preference for engaging in risky behaviors should match women's preferences for men's risky behavior within dating couples. Furthermore, sex differences in parental investment have led women to seek potential for resources and commitment in a partner (Li, Kenrick, Bailey & Linsenmeier, 2002). Thus, women may prefer costly courtship as a way to secure commitment from men (Sylwester & Pawłowski 2011). Engaging in risky behaviors at the expense of potential physical harm should signal men's commitment to courtship early on. However, once commitment is established, risky behaviors may be detrimental due to the potential for injury. As a result, women's expectations of men's risky behaviors should be higher earlier in the courtship phase, where confidence in commitment is relatively low. Men should also be more willing to engage in risk-taking earlier in relationship development as a means to display potential commitment. Thus, we predicted that for couples in longer relationships, men's preference for risky behaviors (and women's

preference for their partner's risky behaviors) would be lower than those for couples in newer relationships.

Physical attractiveness is desirable in a mate (Sugiyama, 2005; Symons, 1979) and positively correlates with mating success (Jokela, 2009; Prokop & Fedor, 2013; Rhodes, Simmons & Peters, 2005). The mate value of men with low physical attractiveness may be compensated with wealth (Buss, 1989; Chu, Hardaker & Lycett, 2007) or creativity (Watkins, 2017). We suggest risky behaviors may also compensate for cues to lower biological quality. Thus, less physically attractive men may prefer to engage in riskier behaviors than their more attractive counterparts.

Finally, humans show considerable variability in sociosexuality orientation, defined as an individual's willingness to engage in uncommitted sexual relations (Schmitt, 2005; Simpson & Gangestad, 1991). For example, sexually unrestricted individuals engage in both online dating to search for casual sexual partners (Sevi, Aral & Eskenazi, 2018), have a higher number of lifetime sexual partners (Lukaszewski, Larson, Gildersleeve, Roney & Haselton, 2014; Prokop & Fedor, 2013), consume pornography (Prokop, 2015; Zheng & Zheng, 2014) and engage in extrapair sex (McIntyre, Gangestad, Gray *et al.*, 2006) more often than their sexually restricted counterparts. We sought to examine whether risky behaviors in sexual contexts typical for individuals scoring high on sociosexuality scale might translate into preferences toward physical risky behaviors during courtship.

The present study examined these potential individual differences in preferences for risky behaviors within dating couples, focusing on how differences across couples (*i.e.*, relationship length) and across people within couples (*i.e.*, sex, physical attractiveness, and sociosexuality orientation) related to these preferences.

METHOD

Participants

The research was carried out during the Winter Semester of 2016 (October–December) at a university in Slovakia. Roughly 350 freshman students were asked to participate in the experiment for extra course credit. Participants were asked to recruit their romantic partner to participate in the study. Those who were not involved in romantic relationships were excluded, but were given the option to participate in a different study. A total of 593 responses were received, but 81 responses were removed because these could not be paired with responses from the opposite sex. A total of 256 heterosexual pairs comprised the final sample (age range = 18–50 yrs). The mean age of men was 22.9 ($SD = 4.7$), and the mean age of women was 20.2 ($SD = 23.7$). The majority of men (90%) and women (97%) fell into the age range between 18 and 31 years. All participants were Caucasian.

Measures

Preferences for risky behaviors. We created a set of pictures depicting 10 risky behavior situations to assess participants' preferences for physical risk (biking, watersurfing, whip, motorbike, mountaineering, inliner, skydiving, skating, snowboarding, and parkouring). Our stimuli focused on physical risk-taking because perception of non-physical risks (*e.g.*, financial risky behaviors, gambling, etc.) is qualitatively different than perception of physical risks (Farthing, 2005). Furthermore, physical risk is a category which is well-suited to depict from static imagery. Each situation

contained three black and white pictures (30 pictures in total) differing in the level of risk-taking (Fig. 1). Participants were instructed to choose one picture for each situation (10 pictures in total). Men were asked to choose pictures which represent the most attractive behavior they could perform. Women were asked to choose pictures they considered to be most physically attractive for their partner to perform. Reliabilities of selection pictures were acceptable both for men and women ($\alpha = 0.83$ and 0.75 , respectively).

Self-perceived attractiveness. Participant's self-perceived attractiveness was assessed with a single item, "How attractive are you?" on a scale ranging from 1 (very unattractive) to 10 (very attractive) (Little, Burt, Penton-Voak & Perrett, 2001).

Sociosexuality. Sociosexuality was assessed with the Revised Sociosexual Orientation Inventory (SOI-R; Penke & Asendorpf, 2008). The 9-item SOI-R provides an overall assessment of sociosexual orientation. A high SOI-R score indicates unrestricted sociosexual orientation – a propensity to engage in more short-term sexual relationships. After data collection finished, we found that there were missing instructions for the SOI-Attitude subscale. Thus, these data were not included in analyses. SOI-Behavior and SOI-Desire had high reliabilities ($\alpha = 0.76$ and 0.81 , respectively), and were combined to form a global measure of sociosexuality orientation.

Procedure

The research was conducted via an online survey. Prior to completing the experiment, each couple received an ID code to establish their dyadic identity, but participants were instructed to complete the experiment independently. Participants were initially asked demographic questions (age, sex, relationship length), then responded to the risky behavior scenarios, self-perceived attractiveness and sociosexuality scale.

RESULTS

Due to the nested nature of our data, we used multilevel modeling (HLM 6.0) to test the extent to which participant sex, relationship length, self-perceived attractiveness, and sociosexuality would predict a preference for risky behaviors within dating couples. We created a two-level model in which sex (dummy coded; 1 = male, 0 = female), attractiveness, and sociosexuality were modeled at level 1. Relationship length was modeled at level 2. All continuous variables were grand-mean centered. The intercept at level 2 was treated as a random effect (see equations below).

Level 1 model

$$Y = p_0 + p_1(\text{sex}) + p_2(\text{attractiveness}) + p_3(\text{SOI}) + E.$$

Level 2 model

$$p_0 = b_{00} + b_{01}(\text{length}) + r_0,$$

$$p_1 = b_{10} + b_{11}(\text{length}),$$

$$p_2 = b_{20} + b_{21}(\text{length}),$$

$$p_3 = b_{30} + b_{31}(\text{length}).$$

The grand mean of preferred level of risky behaviors was 18.35. A significant main effect of sex emerged, $b = 1.57$, $t(504) = 4.77$, $p < .001$, indicating that women's preference for men's risky behaviors is incongruent with men's preference for

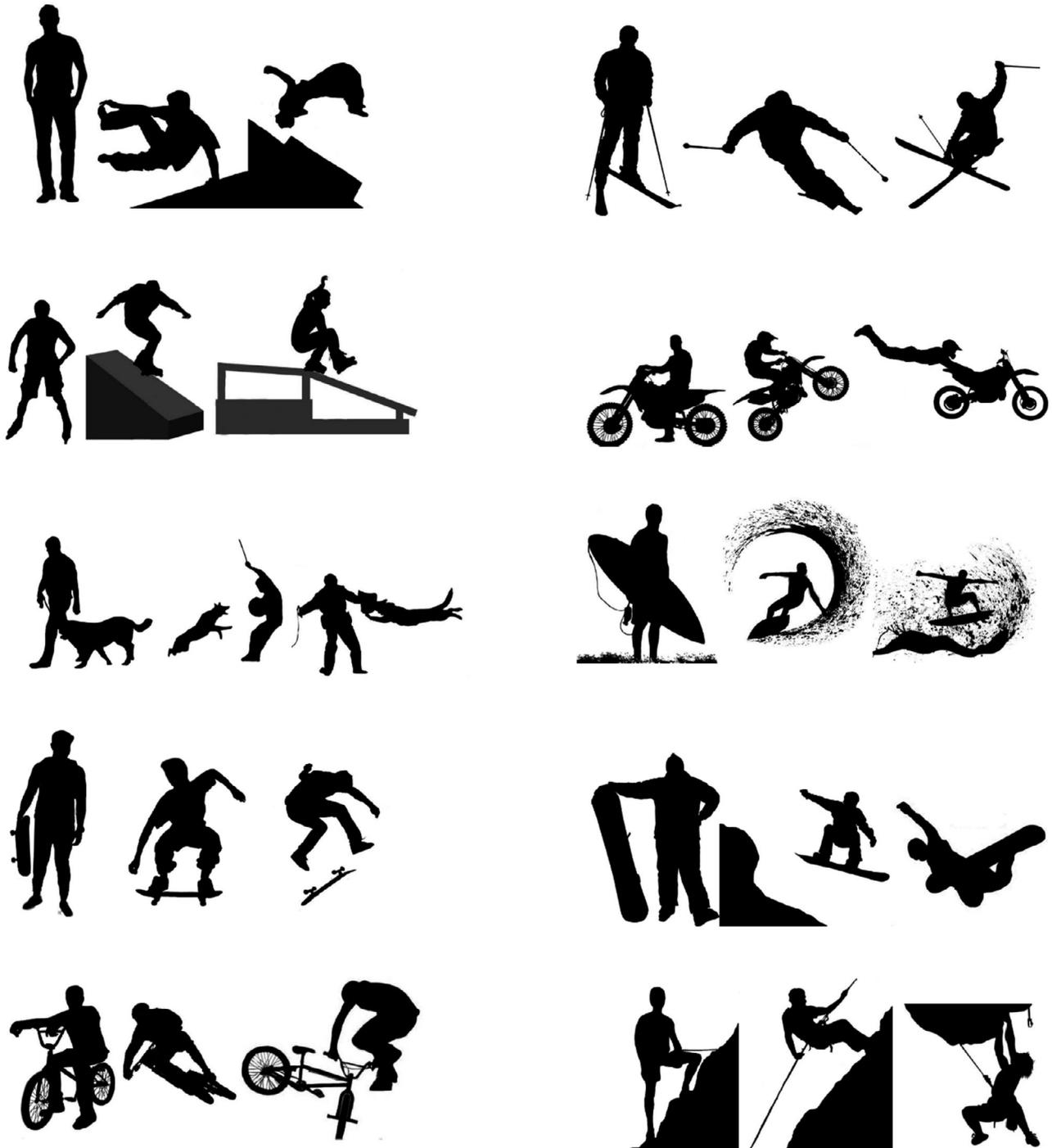


Fig. 1. Stimuli used to depict risky behaviors. For each category, behavior illustrated on the left shows lowest risk, and behavior illustrated on the right shows highest risk.

their own risky behaviors. Specifically, women found more risky behaviors to be less attractive than their partners found them to be. There was also a main effect of relationship length, $b = -0.019$, $t(254) = 3.25$, $p = 0.002$, suggesting that preferred risky behaviors tended to decrease as relationships developed over time. However, this was qualified by an interaction with sex, $b = 0.02$, $t(504) = 2.63$, $p = 0.009$. Simple slopes analyses revealed that, for women, relationship length was associated with a decline in preferred risky behaviors for their male partner ($b = -0.02$, $p < 0.001$). However, there was no association between

relationship length and preferred risky behaviors for men ($b = 0.004$, $p = 0.54$). In other words, women prefer their partners to be less risky as their relationship develops, but men do not share this preference for their own behavior. An interaction between sociosexuality and relationship length also emerged, $b = -0.003$, $t(504) = 2.01$, $p = 0.044$. Simple slopes analyses revealed that higher sociosexuality scores (e.g., relatively unrestricted individuals) were associated with a reduction in preferred risky behaviors for people in longer relationships (e.g., 60 months, $b = -0.21$, $p < 0.001$), relative to those in newer relationships

(e.g., 2 months, $b = -0.06$, $p = 0.12$). Finally, a main effect of attractiveness emerged, $b = 0.25$, $t(504) = 2.04$, $p = 0.042$, indicating that higher self-perceived attractiveness was associated with a stronger preference for risky behaviors. No other main or interactive effects were observed.

DISCUSSION

In general, we found that preferences for risky behaviors varied as a function of individual difference variables. Regarding sex differences, men preferred to engage in more risky behaviors than women's ideal. This indicates a mismatch between how women and men perceive the attractiveness of risk-taking during courtship (Wilke, Hutchinson, Todd & Kruger, 2006). For women, general preferences for men's risk-taking decreased as relationships progressed, indicating a diminishing return on the investment for risky behaviors as a function of increased commitment. Interestingly, this pattern was not observed for male participants. One potential explanation for this finding is that is that lower male parental investment correlates with higher competitiveness for mates (Trivers, 1972), and this may be why male proclivity for risky behavior is higher than expectations of females.

Contrary to our hypotheses, attractiveness was positively associated with a preference for risky behaviors, indicating that unattractive men do not have a preference for risk-taking as a compensatory strategy. In addition, attractive women with high mate value have higher standards of male characteristics (Buss & Shackelford, 2008; Buston & Emlen, 2003; Pawlowski & Dunbar, 1999). This may indicate that attractive women have higher expectations regarding male risk-taking than less attractive women, and that men who want to attract high quality women might benefit from engaging in more risky behaviors. Risky behaviors are favoured by sexual selection (e.g., Petraitis *et al.*, 2014; Wilson & Daly, 1985), indicating that risk-taking may be an advertisement of male genetic quality (e.g., Farthing, 2005; Wilke *et al.*, 2006). Indeed, men who engage in various forms of risky behaviors show cues of higher genetic quality (Brown, Cronk, Grochow *et al.*, 2005; Fink, Hamdaoui, Wenig & Neave, 2010; Park, Buunk & Wieling, 2007). Because physical attractiveness is linked to genetic quality in human males (Barber, 1995; Lie, Rhodes & Simmons, 2008), and costly signals cannot be faked (Searcy & Nowicki, 2005), it seems that less physically attractive men may be less inclined to engage in risk-taking, which provides further support for risk-taking as form of costly signaling in humans.

Women preferred their partners to be less risky as their relationship progressed. We suggest that women's higher parental investment (Trivers, 1972), reproductive goals (i.e., desire for having offspring), or preparedness for parenting could be responsible for this result. Indeed, higher reproductive goals (measured by expected number of desired offspring), parental status (being a parent; Wang, Kruger & Wilke, 2009) and exposure of females to baby faces (Fischer & Hills, 2012) reduced propensity of risk-taking in university students. In contrast, male preferences for risk-taking were not influenced by the length of relationship, perhaps because risky behaviors in men are strongly influenced by intrasexual competition (Wilson &

Daly, 1985). That is, the ceiling effect for risky behaviors is not constrained by female preferences in the context of intrasexual selection, and males may balance their risk-taking decisions between intrasexual and intersexual contexts.

We failed to find main effect of sociosexuality on individual's preferences for risky behaviors. Moreover, for people in longer committed relationships, sociosexuality was inversely related to risk preference, which was counter to our hypothesis. This seems to indicate that willingness to take sexual risks is distinct and unrelated to preferences toward physical risk-taking. Individuals scoring higher in sociosexuality, on the other hand, engage more frequently in other forms of risky behaviors, such as risky casual sex without using condoms, along with drinking alcohol (Velez-Blasini 2008). Thus, perhaps sociosexuality is not associated with physical risk-taking, but rather with other forms of risky behaviors immediately leading to sexual intercourse.

The results of this study provide insight into how preferences for risky behavior vary during courtship rather than during zero-acquaintance situations. Although our focus was specifically on preferences toward men's behavior, examining how preferences toward women's risk-taking behavior would be worthwhile in future research. A strength of our study design is that we used illustrations varying in degree of risk, which may be more objective than using mental imagery instructions. However, a noteworthy limitation is that our assessment of preferred level of risk-taking may not generalize to actual real-world behavior. In addition, it is unclear whether preferences for visual stimuli used in this study correlate with other forms of risk-taking, such as gambling or drug use. Additional research, perhaps with dynamic video displays of risky behaviors, would lead to a more detailed account of risk preferences. Future research utilizing behavioral methods, rather than self-report assessments, would provide further support for differences in risk-taking preferences during courtship.

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