

ORIGINAL RESEARCH—COUPLES' SEXUAL DYSFUNCTIONS

Gender and Perceptions of Romantic Partners' Sexual Risk

Terri D. Conley, PhD,* and Letitia Anne Peplau, PhD†

*Departments of Psychology and Women's Studies, University of Michigan, Ann Arbor, MI, USA; †Department of Psychology, University of California, Los Angeles, Los Angeles, CA, USA

DOI: 10.1111/j.1743-6109.2009.01598.x

ABSTRACT

Introduction. Research shows that in most situations, women perceive themselves to be at greater risk of harm than do men. Gustafson's gender role perspective on risk perception suggests that this is because women are socialized to feel that they need protection, especially from men.

Aims. Based on Gustafson's gender role perspective on sex differences in risk perception, we predicted that in at least one context, perception of romantic partners' sexual risk, this gender difference would be reversed. Specifically, women should rate boyfriends as having lower risk for sexually transmitted infections (STIs) than boyfriends rate themselves having.

Methods. In two studies, we examined heterosexual couples and compared women's perceptions of their boyfriends' sexual risk level with the boyfriend's self-perception of sexual risk.

Main Outcome Measures. Self-reported measures of risk for STIs, perception of romantic partners' risk for STIs.

Results. On multiple measures, women rated their boyfriends as having a lower risk for STIs than the men rated themselves. Men did not show this pattern and, in some cases, showed the reverse pattern of perceiving their girlfriends to have a greater level of risk than girlfriends themselves believed they had.

Conclusions. Consistent with Gustafson's gender role perspective on risk perception, heterosexual women perceived their romantic partners as relatively less risky in terms of STI risk than men perceived themselves. One potential implication of this finding is that women may be less likely to protect themselves against disease in close romantic relationships because they believe that their partners are low risk, regardless of the partners' actual risk levels. **Conley TD, and Peplau LA. Gender and perceptions of romantic partners' sexual risk. J Sex Med 2010;7:794–802.**

Key Words. Sexual Risk; Sexually Transmitted Infections; Gender Differences; Perceptions of Risk

Introduction

Women perceive the world as a riskier place than men do. For example, women perceive greater risk from such environmental problems as global warming and toxic waste than men do [1,2]. Female professional investors perceive the stock market as riskier than their male counterparts do [3]. Women scientists perceive more risk in nuclear technology than male scientists do [4], and female military personnel make less risky choices in simulated battle situations than men do [5]. Women view the risks of using drugs [6], getting skin cancer [7], and being a victim of physical violence higher than men do [8–10]. When

asked to rate the likelihood that fictional targets (e.g., college students with five past sexual partners) have sexually transmitted infection (STI), women ascribed greater risk to the targets than did men [11–13].

Researchers in risk perception are only beginning to develop models to explain these gender differences. Gustafson's gender role perspective [14] is based on the established finding that girls are protected from potential threats to a greater extent than boys, and that women consistently receive more precautionary advice from the media, police, friends, and public officials than men do [15,16]. Furthermore, according to the gender role perspective on risk, females learn to depend on

others, most often on males, to protect them from these perceived dangers. In short, “women are socialized to fear and to dependency on male partners for protection” [14]. Notably, Gustafson does not assume that women’s belief that men are their protectors is a fully conscious or cognitively accessible belief for women. Rather, Gustafson argues, these beliefs are implicit in the socialization that women receive.

Importantly, Gustafson’s research and the present research focused on *perceptions* of risk. We assume that *perceptions* of risk guide people’s behaviors, independent of the *accuracy* of those perceptions.

If Gustafson’s account is veridical, it suggests one circumstance where gender differences in risk perception might be reversed. In heterosexual relationships, men are cast in the role of women’s protectors [14,17]. Consequently, relative to men, women may *underestimate* the risk of suffering harm from a dating partner or spouse. To test this idea, we focused on an aspect of risk assessment that is unique to romantic relationships: perceived risk of acquiring an STI from one’s romantic partner.

College students have a high risk for acquiring STIs. For example, in the National College Health Risk Behavior database, less than a third of the college student participants reported consistent condom use [18]. However, we hypothesized that women would minimize their perception of their boyfriends’ sexual risk (presumably, according to Gustafson, to maintain the belief that this “protector” will not harm them by giving them an STI). More specifically, we predicted that women’s estimates of their current boyfriends’ risk of having human immunodeficiency virus (HIV) or having engaged in high-risk sexual behaviors in the past would be lower than the men’s own estimates of their personal risk. Furthermore, we predicted that women would rate their boyfriends higher on attributes associated with safer sex behavior (i.e., monogamy, safety, honesty, and sincerity) than the boyfriends would rate themselves.

To provide discriminant validity for our claims, it is important that men do *not* show this pattern. If both men and women showed this pattern, it would suggest that both the sexes have overly positive views (“positive illusions”) about their partners, a phenomenon for which gender differences are generally *not* found [19]. Therefore, boyfriends provide a crucial comparison, without which it would be impossible to test the gender role perspective. Although Gustafson’s perspective does not make specific predictions about men’s perceptions, the

logic of the theory may suggest a tentative hypothesis. Because men are cast in the role of protectors in heterosexual relationships, they may actually overestimate the risk posed to their girlfriends, either from her previous sexual partners or from the woman herself. Consistent with this reasoning, previous research has demonstrated that parents overestimate risks to their children, relative to those not in caregiving roles; for example, compared with non-mothers, mothers ascribe more risk to a variety of health-related environmental concerns [20,21]. Therefore, we predicted that, if anything, men’s estimates of their current girlfriend’s risk would be *higher* than the woman’s own estimates of risk. However, our primary hypothesis based on the gender role perspective is that men should not *underestimate* their girlfriend’s risk.

Study 1

Study 1 was an initial investigation of perceptions of risk in romantic relationships. Both members of heterosexual couples participated. Participants rated their own and their romantic partner’s sexual risk. We expected to find that women, who normally report elevated levels of risk vis-à-vis men, would show a reverse pattern in the context of romantic relationships.

Methods

Subjects and Procedure

Subjects were 62 heterosexually involved couples (i.e., a female and a male), average age 21 years. Ethnically, the sample was 10% African American, 11% Asian American, 40% white, 28% Latina/o, and 11% other. Couples had been dating an average of 17 months and 90% had engaged in sexual intercourse together.

Couples were recruited for a study on sexuality and dating relationships through flyers posted on a large, urban college campus. Thus, the sample was largely student based, although we did not explicitly ask about student status. Because couples differ a great deal regarding the time frame in which they begin to consider themselves a couple, we did not place restrictions on couples regarding the length of time that they had been dating. Thus, the criteria for participation indicated in the advertisements were that (i) the pair identified themselves as a heterosexual couple (in the sense that we indicated that we were recruiting “heterosexual couples”) (Note that we did not explicitly ask for

sexual orientation information; our interest was simply in heterosexually involved couples.) and (ii) that both members of the couple be over 18 years old. We were not especially concerned about the likelihood that “fake couples”—that is, a female and a male who are not actually romantically involved—showed up for the survey. Fake couples would only add noise to the data and make it that much more difficult to find consistent results and therefore more impressive if we find the predicted results. We did, however, independently ask each participant questions regarding the date of the couple’s first date, the date when they first considered themselves a couple, and the date when they decided to be monogamous. An inspection of these data indicated considerable similarity between members of the couples, giving us confidence that all of the couples in the sample were true couples.

Both members of the couple participated in the same session. Before completing the survey, participants read and signed a detailed informed consent form, provided to them by trained research assistants, before completing the survey. The consent form indicated the nature of the questions that participants would be asked in the questionnaire. The consent form also indicated that their responses to the questionnaire were anonymous and that their responses would never be shown to their relationship partner.

The boyfriend and girlfriend were seated separately and did not communicate. They were seated far enough away from each other that they could not talk and their behavior was monitored by the research assistants. Each participant received \$5.00 for completing the questionnaire. Participants were provided with psychological counseling information upon conclusion of the survey. The questionnaires had no identifying information on them, so it was unlikely that their responses could ever be revealed. However, the questionnaires were stored in a locked laboratory room, to which only the primary investigators had access.

Materials

The materials were developed by the authors specifically for the current research project. After an exhaustive literature search and consultation with experts in the field, the authors developed materials consistent with the goals of the project because we could not identify items that adequately addressed the current hypotheses. The items were pilot tested on a group of undergraduate research assistants and their feedback was incorporated before administering the questionnaire to partici-

pants. Participants responded to a self-report questionnaire that included the following items.

Previous Sexual Behavior

Participants indicated how many individuals they had sexual intercourse with (type of intercourse was not specified) prior to the current relationship. They also indicated how many sexual partners their relationship partner had prior to the current relationship. Participants indicated the percentage of time they had used condoms during intercourse in each prior relationship. Participants who had not been sexually active to their prior relationship did not answer these questions. Results were averaged over the total number of partners listed. Participants also estimated the percentage of time that their own partners used condoms in each of their prior relationships.

Risk-Related Personality Traits

Participants used 5-point scales to rate themselves and their partners on traits which have been found to be associated with perceived risk for having STIs [12]: *insincere–sincere*, *sleeps around–monogamous*, *risky–cautious*, *unpredictable–predictable*. Higher scores indicate a greater degree of the second trait in the pair.

Finally, we included an item addressing the extent to which participants had discussed their sexual histories. This item will be used to rule out alternative interpretations for our findings.

Statistical Analyses

Results were analyzed with SPSS 13 for Windows (SPSS Inc, Chicago, IL, USA). We were interested in two specific comparisons: (i) women’s perception of themselves compared with the boyfriend’s perception of their girlfriends and (ii) men’s perception of themselves compared with the girlfriend’s perception of their boyfriends. Because we were interested in these specific comparisons, results were analyzed using paired samples *t*-tests comparing each of these two sets of means. Results are presented as means and standard deviations (SD). Differences were considered significant if $P < 0.05$ for two tails.

Results and Discussion

Means and results of significance tests are presented in Table 1.

Women’s Perception of Their Boyfriends

Consistent with predictions, women perceived their boyfriends as significantly more predictable,

Table 1 Means and standard deviations for women's and men's self-perceptions and partner perceptions on sexual risk dimensions, Study 1

	Women's perceptions of boyfriends	Boyfriend's self-perceptions	Men's perceptions of girlfriends	Girlfriend's self-perceptions
Predictable	3.27 (1.28)	2.79 (1.16)*	3.10 (1.12)	2.98 (1.18)
Sincere	4.56 (0.80)	4.27 (0.89)*	4.27 (0.93)	4.47 (0.82)
Cautious	3.92 (1.01)	3.25 (0.93)*	3.56 (1.07)	3.07 (1.25)†
Monogamous	4.46 (1.03)	4.00 (1.16)*	4.22 (1.06)	4.27 (1.09)
Percentage of time condoms used with previous partners	71.17 (31.48)	68.32 (35.42)	66.50 (34.52)	82.39 (23.75)†

*Significantly different from the mean for women's perceptions of boyfriends at the $P < 0.05$ or lower level.

†Significantly different from the mean for men's perceptions of girlfriends at the $P < 0.05$ or lower level.

sincere, cautious, and monogamous than the men perceived themselves to be. Women agreed with their relationship partner (i.e., there were no significant differences) on the number of prior sexual partners the boyfriends had. Women also agreed with men in their assessment of the amount of time condoms were used in previous relationships.

Men's Perceptions of Their Girlfriends

Men agreed with their girlfriend's self-assessment of predictability, sincerity, and monogamy. Men believed that their girlfriends were significantly less cautious than the women perceived themselves to be. Finally, men perceived their girlfriends to have used condoms less frequently in their past relationships than the women themselves reported. In summary, men did not show a tendency to underestimate their girlfriend's riskiness and, in some contexts, perceived the girlfriend to be more risky than she perceived herself to be; this is consistent with our predictions. Men agreed with their girlfriends about their number of prior sexual relationships the girlfriend reported.

Therefore, the findings support the hypotheses. Women generally perceived their boyfriends to be less risky than the boyfriends perceived themselves to be. Men did not show this pattern and at times displayed the opposite reaction. Also, women and men agreed in their estimates of one another's prior sexual partners. We will return to this point as we try to rule out alternative interpretations of this phenomenon.

Study 2

We had two main goals for Study 2. First, we strove to replicate the findings of Study 1: that typical gender differences in risk perception are reversed in the context of heterosexual relationships. Therefore, we examined dating couples' estimates of their own and their current partner's

sexual risk with an expanded set of items, including risk for HIV, risky sexual behavior, and personality characteristics associated with STIs. Second, we sought to replicate the well-established finding that women typically perceive greater risk than do men, to establish that participants do not show the same pattern of gender differences when they assess sexual risk of someone *other than* their partner. To this end, participants assessed the sexual risk of a fictional college student [12].

Methods

Subjects and Procedure

Both partners in 109 heterosexually involved college dating couples (i.e., couples including a male and a female) completed the questionnaire. The mean age was 21 years. The couples had been dating an average of 21 months. Eighty-eight percent of the participants had engaged in sexual intercourse with their current partner. The sample was 4% African American, 33% Asian American, 33% Latina/o, and 27% white.

The procedure was fundamentally the same as in Study 1. Participants were paid \$7.50 per person.

Materials

Participants again completed a self-report questionnaire, including the following items.

Previous Sexual Behavior

As in the previous study, participants reported how many partners they had experienced sexual intercourse with prior to their current relationship and made the same estimate for their current relationship partner. Participants also indicated the percentage of time they had used condoms in each prior relationship. For each measure, the results were averaged over the total number of partners the person listed. Finally, participants indicated

the percentage of time their partners used condoms in their previous relationships.

Risk-Related Personality Traits

Once again, participants used 5-point scales to rate themselves and their partners on traits which have been found to be associated with perceived risk for STIs [12]. Additionally, we included some more direct items: *insincere–sincere*, *dishonest–honest*, *dangerous–safe*, *sleeps around–monogamous*, *risky–cautious*, *unpredictable–predictable*, *likely to practice safer sex–unlikely to practice safer sex*, *informed about STIs–uninformed about STIs*, and *frequently has one-night stand–never has one-night stands*. A higher score indicates a greater degree of the second trait in the pair.

Likelihood of Having STIs/HIV

Participants indicated the likelihood that they have ever had an STI. They also rated the likelihood that their relationship partner had ever had an STI. Participants rated the probability that they themselves and their present relationship partner currently have HIV, or could transmit HIV to a future partner. Participants answered these latter two questions only if they or their partner had not been tested for HIV. This was a requirement of the institutional review board at our institution because of the potential threat to participants if we had access to actual HIV status information. Only about one-third of the sample—31.6%—had been tested for HIV.

Rating a Fictional College Student

To determine if participants in this study displayed the basic gender differences in risk perception shown in previous studies, participants rated the

sexual risk of a person described as a college student with four previous sexual partners. Sex of the target was varied, with half of the participants reading about a female target and half of participants reading about a male target. Participants evaluated the probability out of 100 that this person (i) *has ever had an STI*, (ii) *currently has HIV*, or (iii) *will transmit an STI in the future* [12]. These three items were combined to form a scale ($\alpha = 0.87$).

Finally, we once again included an item addressing the extent to which participants had discussed their sexual histories; we will use this item to rule out alternative interpretations for our findings.

Data Analysis

Data analysis procedures were the same as in Study 1. We first tested specific predictions about men and women's perceptions of risk in a current romantic relationship. Next, we attempted to replicate the previously reported gender difference in general risk perception.

Results

Partners' Perceptions of Each Other

We conducted independent samples *t*-tests to assess differences between (i) women's perceptions of their boyfriends and the boyfriend's self-perceptions and (ii) men's perceptions of their girlfriends and the girlfriend's self-perceptions. Means and results of *t*-tests are displayed in Table 2. Men's and women's perceptions will be discussed separately.

Women's Perceptions of Boyfriends

We predicted that women would give lower estimates of their boyfriend's risk than the man would

Table 2 Means and standard deviations for women's and men's self-perceptions and partner perceptions on sexual risk dimensions, Study 2

	Women's perceptions of boyfriends	Boyfriends' self-perceptions	Men's perceptions of girlfriends	Girlfriends' self-perceptions
Predictable	3.32 (1.27)	2.91 (1.12)*	2.91 (1.11)	3.04 (0.98)
Sincere	4.55 (0.83)	4.33 (0.85)*	4.48 (0.80)	4.58 (0.57)
Honest	4.53 (0.81)	4.22 (0.84)*	4.42 (0.72)	4.33 (0.83)
Cautious	3.25 (1.03)	3.18 (1.12)	3.10 (1.04)	3.49 (0.96) [†]
Safe	3.86 (1.11)	3.41 (1.11)*	3.51 (1.08)	4.01 (0.81) [†]
Unlikely to practice safer sex	1.76 (1.16)	1.86 (1.17)	1.99 (1.26)	1.45 (0.88) [†]
Uninformed about STIs	1.38 (0.75)	1.30 (0.57)	1.44 (0.82)	1.13 (0.35) [†]
Never has one-night stands	4.61 (0.80)	4.57 (0.85)	4.55 (0.84)	4.82 (0.45) [†]
Monogamous	4.72 (0.62)	4.52 (0.92)*	4.60 (0.90)	4.84 (0.46) [†]
Likelihood partner has ever had an STI	1.22 (0.58)	1.12 (0.68)	1.34 (0.71)	1.04 (0.40) [†]
Likelihood partner has HIV	2.03 (5.12)	4.27 (11.68)*	5.42 (14.6)	2.31 (6.84)
Percentage of time condoms used with previous partners	68.08 (36.09)	60.49 (36.69)*	59.88 (39.09)	65.34 (37.48)

*Significantly different from the mean for women's perceptions of boyfriends at the $P < 0.05$ or lower level.

[†]Significantly different from the mean for men's perceptions of girlfriends at the $P < 0.05$ or lower level.

HIV = human immunodeficiency virus; STI = sexually transmitted infection.

give for himself. We found support for this prediction. Women rated their boyfriends' risk of currently having HIV as lower than the boyfriends' rating of themselves. Women believed that the boyfriends had used condoms a greater percentage of time in previous relationships than the men reported. Finally, consistent with the idea that women view men as their protectors, women rated their current boyfriend as being more predictable, sincere, honest, safe, and monogamous than the boyfriends rated themselves to be. Although women generally perceive greater risk than men do in a wide variety of contexts, this gender pattern was consistently reversed in this study. These findings support our prediction, derived from Gustafson's perspective, that women would perceive less risk from their boyfriends than the boyfriends themselves perceive.

Men's Perceptions of Girlfriends

To be consistent with Gustafson's gender role perspective, men should *not* underestimate their girlfriend's risk, relative to the woman's own self-ratings (in contrast to the women's underestimation of their boyfriends' risk). As predicted, boyfriends did not show the underestimation pattern. In fact, men rated their girlfriends as more likely to have ever had an STI, and as more likely to have HIV, or to transmit HIV, than the women rated themselves. No differences were found on assessments of the number of previous sexual partners, or on condom use with previous partners. In terms of their girlfriends' personal attributes, consistent with our prediction, men rated their girlfriends as significantly less cautious, safe, and monogamous than the women rated themselves to be. They also rated their girlfriends as being less likely to practice safer sex and as being less informed about STIs than the women rated themselves to be. The consistent pattern of men perceiving less risk than women was eliminated or reversed in the context of a romantic relationship. These findings are consistent with our theoretical analysis. Women who displayed the normal pattern of risk with regard to a fictional college student (i.e., ascribing more risk than men do) displayed a reverse pattern when considering their boyfriends. Men did not show this pattern, and, if anything, tended to believe that their girlfriends had higher levels of risk than the women themselves believed they had.

Once again, both women and men accurately estimated the number of prior sexual relationships of their current relationship partner (i.e., there were no significant differences between women's

estimates of their boyfriends and boyfriends' own estimates or men's perceptions of their girlfriends and girlfriends' own estimates). We will return to this point in the Discussion section.

Replication of Previous Risk Perception Research

We expected that when respondents assessed the sexual risk of a hypothetical college student, women would report greater risk than men. An independent samples *t*-test confirmed this prediction. Women rated the likelihood that a fictional college student had STIs/HIV as significantly higher (Mean (*M*) = 45.54%, standard deviation (*SD*) = 23.54) than did men (*M* = 37.64%, *SD* = 23.04, *t* [101] = 2.62, *P* = 0.009). Therefore, consistent with prior research on risk perception, women in this sample perceived greater risk than did men. We found no target gender differences (i.e., differences in the likelihood that the female vs. the male target had STIs/HIV, *t* [210] = 0.94, not significant), although this finding is not directly pertinent to our hypotheses.

General Discussion

Taken together, these results provide support for Gustafson's gender role theory of risk perception. In Study 2, when asked to evaluate the risk of a hypothetical college student, participants showed the typical pattern in which women perceive greater risk than do men. By contrast, in both studies, when rating their own romantic relationship, this gender pattern was reversed in both studies. Consistent with the idea that women are socialized to view men as their protectors, girlfriends underestimated their boyfriend's risk relative to the man's own estimates. Crucially, men, who commonly perceive lower levels of risk, did not show this pattern, demonstrating that this effect is not merely the result of both partner's tendency to perceive each other in more positive terms. In fact, in some instances, men perceived greater risk concerning their own current girlfriend than did the woman herself. Perhaps, because men feel that they are in the role of a protector, their concern about their female partner's well-being was elevated on some measures.

Alternative Interpretations

Two alternative explanations are important to consider. First, the result may reflect impression management concerns. Women may be motivated to underestimate their own levels of sexual risk (to preserve the idea that they are "pure" or "inexpe-

rienced"). Men may be motivated to increase their risk estimates to enhance their sexual prowess. This explanation might reasonably apply to estimates of the number of previous partners reported by men or women, but seems less relevant to self-ratings on other measures. That is, we suspect that there is little status to be gained for men by reporting a higher perceived risk for HIV, for example. To further address this possibility, we followed up this study with an independent sample of college students. These 47 new participants were given a thorough description of our questionnaire (i.e., they were told to imagine that they were in a study about close relationships, birth control practices, and risk issues, and were given paraphrases of several of the original questions in the survey). Next, they were asked how likely they would be (i) to lie or misrepresent their level of risk, (ii) to make themselves appear *more* risky than they actually are, or (iii) to make themselves appear *less* risky than they really are. They were carefully encouraged to be very honest. Consistent with our hypotheses, independent samples *t*-tests showed no gender differences on these measures (all $P > 0.40$), suggesting that impression management is not a viable explanation for our findings.

Although people are more likely to be honest about hypothetical behaviors than actual behaviors, some might argue that, to the extent that participants are dishonest with researchers about their level of risk, they may be similarly dishonest when asked about the likelihood of lying. Therefore, we conducted another follow-up study in which we utilized established methods of eliciting accurate estimates of one's own moral behaviors. Prior research has shown that participants effectively report their own moral or ethical behaviors when they are asked to estimate *other people's* moral and ethical behaviors [22]. Therefore, we asked participants to indicate the likelihood that *someone else* would lie to researchers in a sexuality survey. Utilizing this method, we conducted an online survey in which we asked college-aged participants ($n = 66$) to imagine that someone of their own age and gender was taking a sexuality survey. Participants indicated how likely it was that this person would be to lie in their responses on the survey, how likely this person would be to misrepresent her or his sexual background to make it more risky than it actually is, and how likely it is that the person would misrepresent her or his sexual background to make it less risky than it actually is. As in the previous survey, there were no gender differences on any of these ratings.

The main finding of the current research is that women underestimate the risk of their boyfriends, compared with men's assessments of their girlfriends. Based on these two follow-up studies, the idea that gender differences in reporting of sexual behaviors to researchers account for these findings seems unlikely. That is, we find no support for the idea that men would be more likely to lie than women to make themselves appear more risky, or, conversely, that women would be more likely to lie than men to make themselves appear less risky.

Another alternative interpretation of the pattern of results is that men may lie to women to make themselves appear less risky. This explanation seems unlikely because recent research involving in-depth examinations of lying among college students suggests that college students are not inclined to lie to current close relationship partners about previous risky activities. More importantly for our purposes, gender differences were not observed on this dimension [23,24]. That is, to explain the gender differences that we demonstrated, we would expect men to report a great deal more lying than women, but that does not appear to be the case in careful studies of lying.

Furthermore, analyses of the patterns of responses in these samples provide further data to rule out the hypothesis that male lying could account for our results. First, if boyfriends were lying to girlfriends about their sexual histories, this should be reflected in the association between the amount of discussion about the topic and the riskiness of the reports. That is, girlfriends who reported having discussed sexual histories with their boyfriends more thoroughly should rate their boyfriends as less risky. To test this hypothesis, we conducted correlations between the reported depth of discussions with boyfriends about the boyfriends' previous sexual behaviors and their reports about how risky their boyfriends were. No significant correlations emerged on any measures. If men were lying to their girlfriends to make themselves appear less risky, then we would expect girlfriends who had discussed sexual histories with their boyfriends more thoroughly to have significantly lower estimates of their boyfriends' sexual risk. Such effects did not emerge, inconsistent with the alternative hypothesis of male lying.

Moreover, women *accurately* estimated their boyfriends' reports of his previous number of sexual partners. Presumably if a boyfriend desired to lie to his girlfriend to make himself appear less risky, the easiest way to do that would be to report

to her that he has had fewer sexual partners than he has actually had. Instead, it appears that males were reporting the same number of partners to their girlfriends that they were reporting to us, given the lack of significant differences between their own estimates of previous sexual partners and their girlfriends' estimates of that number. It seems far more likely that college students would discuss the number of previous sexual partners than to provide judgments to one another about the other outcome measures in this study (such as perceived cautiousness or percentage of time condoms were used in prior relationships). Thus, there should be a greater likelihood of male lying on the previous sexual partner measure. Yet, we found differences on the other, likely *less*-discussed measures, providing further evidence that these findings are not a result of males lying to females.

Limitations and Future Directions

Given that participants for both of our studies were recruited on a college campus, these were largely student samples. The current research cannot be generalized to other populations. Future research should extend this finding to other populations, including adult married and cohabitating samples, and samples of individuals who have lower socioeconomic status. In addition, it would be productive to test these hypotheses among a random sample of individuals, rather than with volunteer participants. Furthermore, cross-cultural data could help ascertain the validity of these hypotheses. For example, researchers could compare cultures in which traditional gender roles are strong with cultures in which gender roles are more egalitarian. Based on the gender role perspective, we would expect the findings to be even stronger in more gender traditional cultures.

In a related vein, we did not specifically test the premise that women view men as protectors. We, therefore, suggest that further research could utilize implicit perceptions of romantic partners as protectors and determine if these perceptions moderate the effects demonstrated.

Implications

Two implications of the current research are noteworthy. First, these findings suggest the need for gender-specific interventions to prevent the spread of STIs. If women tend to underestimate the sexual risk posed by their romantic partners, they may be less likely to protect themselves against disease in close romantic relationships. They may not see the need to take precautions to

prevent health problems that could be caused by boyfriends or husbands. Interventions for women could incorporate discussions of these cognitive biases. Women could be advised to seek objective measures of risk, rather than rely on subjective perceptions of safety or trust. A different approach, however, could be utilized for men. Men see equal, or more, risk in their female partners than the women see in themselves. Therefore, they may be less likely to abandon safer sex practices because of subjective perceptions of safety. If men do feel (implicitly or explicitly) like women's protectors, an appeal to them to use condoms to protect the women in their lives might be an effective strategy for safer sex interventions.

Second, if women show the same tendency to underestimate risk relative to their male partners in nonsexual domains, they may make other unwise decisions about their health. For example, women are statistically safer drivers than men, but women may be handing the car keys to their statistically more dangerous boyfriends and husbands.

Gender bias in risk perception may also help us understand women's views on domestic violence. Statistically, women are more likely to be physically harmed by a romantic relationship partner than by anyone else, yet research demonstrates that women perceive the physical risk posed by their own partners (compared with the risk posed by strangers) to be very small [25]. Future research should assess the generalizability of predictions based on the gender role perspective on risk perception to other populations and to a broader range of health domains.

Conclusion

Women normally perceive higher levels of risk than men do. In the current study, this pattern was reversed when women were considering the risk of their relationship partners. We suggest that this reduced perceived risk is a function of women's socialization into dependence on men. Future research could help clarify the reasons for women's lesser perceptions of risk from their male partners.

Corresponding Author: Terri D. Conley, PhD, Department of Psychology, University of Michigan, 530 Church Street, Ann Arbor, MI 41809, USA. Tel: (734) 516-3985; E-mail: conleyt@umich.edu

Conflict of Interest: None.

Statement of Authorship**Category 1****(a) Conception and Design**

Terri D. Conley; Letitia Anne Peplau

(b) Acquisition of Data

Terri D. Conley; Letitia Anne Peplau

(c) Analysis and Interpretation of Data

Terri D. Conley; Letitia Anne Peplau

Category 2**(a) Drafting the Article**

Terri D. Conley; Letitia Anne Peplau

(b) Revising It for Intellectual Content

Terri D. Conley; Letitia Anne Peplau

Category 3**(a) Final Approval of the Completed Article**

Terri D. Conley; Letitia Anne Peplau

References

- 1 Bord RJ, O'Connor RE. The gender gap in environmental attitudes: The case of perceived vulnerability to risk. *Soc Sci Q* 1997;135:830–40.
- 2 Flynn J, Slovic P, Mertz CK. Gender, race, and perception of environmental health risks. *Risk Anal* 1994;14:1101–8.
- 3 Olsen RA, Cox CM. The influence of gender on the perception and response to risk: The case of professional investors. *J Behav Finance* 2001;2:29–36.
- 4 Barke RP, Jenkins-Smith H, Slovic P. Risk perceptions of men and women scientists. *Soc Sci Q* 1997;78:167–76.
- 5 Hudgens GA, Fatkin LT. Sex differences in risk-taking: Repeated sessions on a computer simulated task. *J Psychol* 1985;119:197–206.
- 6 Spigner C, Hawkins W, Loren W. Gender differences in perception of risk associated with alcohol and drug use. *Women Health* 1993;20:87–97.
- 7 Eiser JR, Arnold BWA. Out in the midday sun: Risk behaviour and optimistic beliefs among residents and visitors of Tenerife. *Psychol Health* 1999;14:529–44.
- 8 Ferraro, KF. Women's fear of victimization: Shadow of sexual assault? *Soc Forces* 1996;75:667–90.
- 9 Harris MB, Miller KC. Gender and perceptions of danger. *Sex Roles* 2000;43:843–63.
- 10 Smith WR, Tortensson M. Gender differences in risk perception and neutralizing fear of crime: Toward resolving the paradoxes. *Br J Criminol* 1997;37:608–34.
- 11 Agocha VB, Cooper LM. Risk perceptions and safer-sex intentions: Does a partner's physical attractiveness undermine the use of risk-relevant information? *Pers Soc Psychol Bull* 1999;25:746–59.
- 12 Conley TD, Collins BE. Gender, relationship status, and stereotyping about STD risk. *Pers Soc Psychol Bull* 2002;28:1483–94.
- 13 Seal DW, Agostinelli G. College students' perceptions of the prevalence of risky sexual behavior. *AIDS Care* 1996;8:453–66.
- 14 Gustafson PE. Gender differences in risk perception: Theoretical and methodological approaches. *Risk Anal* 1998;18:805–11.
- 15 Burt MR, Estep RE. Apprehension and fear: Learning a sense of sexual vulnerability. *Sex Roles* 1981;7:511–22.
- 16 Gardner CB. Safe conduct: Women, crime and self in public spaces. *Soc Probl* 1990;37:311–28.
- 17 Walters M, Carter B, Papp P, Silverstein O. The invisible web: gender patterns in family relationships. New York: Guilford; 1988.
- 18 Centers for Disease Control and Prevention. Youth risk behavior survey: National College Health Risk Behavior United States 1995. *Morb Mort Wkly Rep* 1997;46:6.
- 19 Murray SL, Holmes JG, Griffin DW. The self-fulfilling illusions in romantic relationships: Love is not blind, but prescient. *J Pers Soc Psychol* 1996;71:1155–80.
- 20 Collins ME. Parents' perception of the risk of child sexual abuse and their protective behaviors. Findings from a qualitative study. *Child Maltreat* 1996;1:53–64.
- 21 Dixon RM, Pasnak R. Perceptions of the risk of child abduction or loss and the utility of electronic child security devices. *Child Care Health Dev* 1997;23:415–21.
- 22 Epley N, Dunning D. Feeling "holier than thou": Are self-serving assessments produced by errors in self- or social prediction? *J Pers Soc Psychol* 2000;79:861–75.
- 23 DePaulo BM, Kashy DA. Everyday lies in close and casual relationships. *J Pers Soc Psychol* 1998;74:63–79.
- 24 Williams SS. Sexual lying among college students in close and casual relationships. *J Appl Soc Psychol* 2001;31:2322–38.
- 25 Pain R. Space, sexual violence and social control: Integrating geographical and feminist analyses of women's fear of crime. *Prog Hum Geogr* 1991;15:415–31.