

**Perceived Vulnerability to Disease and Sexual Satisfaction in Men and  
Women in Committed Romantic Relationships**

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**Abstract**

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Previous research indicates that sexual disgust is strongly negatively associated with sexual satisfaction. Less is known, however, about how disgust in general affects sexual satisfaction. The present study examined whether individuals with higher perceived vulnerability to disease (PVD) had lower sexual satisfaction in their committed romantic relationships. I also assessed whether mating strategy (long-term vs. short-term dating interests) moderated the association between PVD and sexual satisfaction. I examined these associations through separate analyses for women and men. To answer these questions, I used secondary data that were part of a broader dissertation project. 530 participants'

data were used in which they answered the PVD scale, a sexual satisfaction measure, and a mating strategy measure. Contrary to expectations, there was no significant association between PVD and sexual satisfaction for either sex.

Furthermore, mating strategy did not moderate the association between PVD and sexual satisfaction for either sex. While this study found no association between PVD and sexual satisfaction, the question of whether an association between these two variables exists remains unanswered. This may be because the data used were not designed to explicitly examine my study's research questions. The data used were not ideal in terms of sample composition, available measures, or historical period due to the emergence of COVID-19. Future research should aim to run a study specifically designed to answer these research questions.

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## INTRODUCTION

What comes to mind when you think of a “germaphobe?” Perhaps you think of someone who washes their hands excessively and wipes down public surfaces before touching them. These germophobic behaviors may stem from an individual’s perceived vulnerability to disease (PVD). PVD is the extent to which individuals perceive themselves as susceptible to infectious diseases (Duncan et al., 2009). Previous research documents that individuals differ in their perceptions of disease vulnerability – or the anxiety surrounding exposure to germs and other pathogens. This perception influences behavior and may negatively impact quality of life (Pozza et al., 2020). Less is known, however, about how anxiety surrounding pathogens affects one’s sexual satisfaction. Briefly, sexual satisfaction is a subjective evaluation of an individual’s sex life (Lawrance & Byers 1995). Since sexual satisfaction is highly integral to overall well-being (Davison et al., 2009), it is important to understand how one’s perceived vulnerability to disease impacts sexual satisfaction. In the current study, I test the hypothesis that individual differences in perceived vulnerability to disease negatively impact self-reported levels of sexual satisfaction for individuals in committed romantic relationships.



### **Perceived Vulnerability to Disease**

Perceived vulnerability to disease (PVD) is the extent to which individuals perceive themselves as susceptible to infectious diseases (Duncan et al., 2009).

PVD is an adaptive strategy, through which our psychology promotes the detection and avoidance of disease-carrying individuals. Those who feel particularly vulnerable to infectious disease may have an exaggerated disgust response, negative perceptions of disease-carrying individuals, and may avoid individuals they perceive as a threat to their health (Díaz et al., 2016; Schaller & Murray, 2008).

Recent empirical research documents that individual differences in PVD influence a constellation of psychological outcomes including anxiety and guilt (Pozza et al., 2020; Brady et al., 2021). For example, individuals with a higher PVD may experience anxiety about interacting with individuals who are a potential threat to their health. Since individuals with a higher PVD are more sensitive to the probability of catching an illness (Brady et al., 2021), anyone may be perceived as a potential threat to them. These individuals may experience guilt from their avoidant behaviors and negative view of others (Schaller & Murray, 2008).

Guilt and anxiety are not the only psychological outcomes related to PVD. Another includes obsessive compulsive disorder (OCD). OCD is an anxiety disorder characterized by the presence of recurrent obsessions (i.e., intrusive thoughts) and subsequent behaviors to reduce obsessions (Leckman et al., 2010). Contamination-based OCD is driven by an excessive propensity to experience disgust, especially in response to pathogens and fear of illness (Brady et al., 2021). Recent research documents that PVD mediates the association between disgust and contamination-based OCD (Brady et al., 2021). After accounting for individual differences in PVD, the relationship between disgust and contamination-based OCD statistically decreases in strength.

Contamination-based OCD has been associated with worse sexual functioning and lower sexual satisfaction (Burri & Spector, 2011). What remains unclear, however, is if individual differences in PVD are associated with deficits in sexual satisfaction in individuals without contamination-based OCD. Previous work examining the link between PVD and sexual intercourse documented that individuals who report higher levels of PVD also report higher levels of sexual disgust (Tybur et al., 2009).

Sexual disgust is an evolved emotion motivating avoidance of perceived biologically-suboptimal partners and reproductively-risky sexual situations (e.g.,

one-night stands; Crosby et al., 2019). PVD is different from sexual disgust. PVD involves a greater anxiety surrounding pathogens, in general. Sexual disgust, however, involves anxiety surrounding risky sexual situations. PVD might relate to sexual disgust given the potential disease risks associated with sexual intercourse, such as sexually transmitted infections. For example, in a laboratory study of undergraduate students, researchers found that women with higher chronic levels of germ aversion reported an increased desire for long-term relationships and a decreased preference for promiscuity after viewing photos of people with indicators of infectious disease (Murray et al., 2013). Given that sexual intercourse involves close physical contact between individuals and the exchange of bodily fluids, individuals with higher levels of PVD may find it more difficult to enjoy sexual interactions. Furthermore, individuals with a higher PVD may avoid certain sexual acts altogether. Ultimately, the difficulty to enjoy sexual interactions may negatively impact these individuals' sexual satisfaction.

### **Sexual Satisfaction**

Lawrence and Byers (1995) define sexual satisfaction as a subjective evaluation of one individual's sexual relationship with another individual. Sexual satisfaction depends on an individual's perceptions of both the perceived benefits (e.g., orgasm, emotional connection) and the perceived costs (e.g., time, energy)

of the sexual relationship. If an individual perceives myriad benefits from a dyadic sexual relationship—above and beyond the costs of that sexual relationship—they are more likely to experience sexually satisfaction compared to an individual whose perceived cost-benefit ratio is skewed toward more costs (Lawrence & Byers, 2005). Ideally, the perception of a sexual relationship’s costs and benefits are equal between partners. Thus, sexual satisfaction is dependent on both individual and relationship factors.

*Sexual Satisfaction in Committed Romantic Relationships.* Sexual satisfaction is important in committed romantic relationships because it aids relationship satisfaction – a related but separate construct. Relationship satisfaction is as an affective response influenced by one’s subjective evaluation of the positive and negative aspects of their romantic relationship (Peters & Meltzer, 2021). Several studies demonstrated a robust, positive association between sexual and relationship satisfaction (Fallis et al., 2016; Lawrence & Byers, 1995). However, there is confusion about whether sexual satisfaction precedes relationship satisfaction. A longitudinal study conducted over two years found that sexual satisfaction positively predicted both men’s and women’s self-reported relationship satisfaction (Fallis et al., 2016). This contrasts with other studies showing that relationship satisfaction precedes sexual satisfaction. For

example, Lawrance and Byers (1995) found that relationship satisfaction precedes sexual satisfaction. Relationship satisfaction was then added to the Interpersonal Exchange Model of Sexual Satisfaction (IEMSS) as a predictor of sexual satisfaction (Lawrance & Byers, 1995).

In addition to positive relationship outcomes, a satisfying sex life may improve an individual's quality of life. Sexual satisfaction is an important aspect of one's overall quality of life and is strongly positively associated with better physical and psychological health (Davison et al., 2009; Flynn et al., 2016; Holmberg et al., 2010). For example, researchers have suggested that sexual activity protects against depression in older women (Ganong & Larson, 2011). Furthermore, there is a strong positive association between sexual satisfaction and life satisfaction across individuals (Stephenson & Meston, 2013).

***Determinants of Sexual Satisfaction.*** Since one's sexual satisfaction can have psychological and relational outcomes, it is important to understand its determinants. Factors including age; personality traits like extraversion, neuroticism, and openness to experience; and biological sex may influence sexual satisfaction (Oyandel et al., 2020; Fallis et al., 2016).

Evolutionary reasoning about the adaptive emotion of sexual disgust may be imperative for understanding determinants of sexual satisfaction (Crosby et al.,

2019). Research suggests sexual disgust has an inhibitory effect on sexual arousal (Crosby et al., 2019). However, individuals higher in sexual disgust do not necessarily report lower sexual satisfaction in their relationships. For example, Peters and Meltzer (2021) found that sexual satisfaction in newlywed couples was independent of sexual disgust at the individual level. Instead, newlywed couples' sexual satisfaction depended on the concordance of sexual disgust between partners (Peters & Meltzer, 2021). Since only the concordance of sexual disgust between partners impacted sexual satisfaction, it is unclear whether sexual disgust is a determinant of sexual satisfaction. PVD, a general construct related to pathogen disgust, might be a clearer determinant of sexual satisfaction on the individual level.

### **Biological Sex's Influence on PVD and Sexual Satisfaction**

**Biological Sex Differences in Sexual Satisfaction.** One important demographic variable that significantly impacts both PVD and sexual satisfaction is biological sex (Tybur et al., 2009; Fallis et al., 2016). From an evolutionary perspective, sex differences in psychological phenomena explain the different adaptive problems faced by males and females throughout evolutionary history.

One sex-differentiated set of adaptive problems includes effectively maximizing reproductive potential. Due to the nature of mammalian reproduction,

the biological requisites of ancestral men and women are significantly different: ancestral women's reproductive potential was limited by their higher obligatory investment of ova, nine-month gestation period, and one to three years of breastfeeding (Trivers, 1972). Further, ancestral men's biological requisite was limited by sperm, time, and access to fertile women with whom they could mate. Ancestral women experienced more reproductive success on average when selecting resourceful, committed mates (Al-Shawaf et al., 2017). However, ancestral men with preferences for a variety of sexual partners often reproduced more than ancestral men without a preference for a variety of sexual partners (Buss, 1999). Therefore, a sexually differentiated preference for a variety of sexual partners evolved. On average, men more than women, prefer a variety of sexual partners (Buss, 1999).

Ultimately, these evolved preferences may affect one's sexual satisfaction (Liu, 2018). For example, one study documented that relationship duration had a negative effect on married men's physical pleasure of sex, but no effect on married women's physical pleasure of sex (Liu, 2018). Conflicting data suggested, however, that one's relationship duration had no effect on men's sexual satisfaction but positively affected women's sexual satisfaction (Heiman et al., 2011). Finally, data suggest sexual behavior is more satisfying for men than

women across each type of sexual relationship (e.g., one night stand, first date, married) – except for unmarried committed sexual behavior, where there was no difference. Men, on average, experience higher sexual satisfaction than women (Cohen's  $d$  between .12 to .80; Mark et al., 2015).

Furthermore, sexual satisfaction may be different for individuals seeking long-term (e.g., committed, romantic relationships) versus short-term relationships (e.g., one-night stand). The type of sexual relationship an individual engages in is their mating strategy (Buss & Schmitt, 1993). In the present study, we explore the effect of long-term versus short-term mating strategy on PVD's relationship with sexual satisfaction.

***Biological Sex Differences in PVD.*** Not only are there biological sex differences in sexual satisfaction, but there are also biological sex differences in both sexual and pathogen disgust. Women, on average, report substantially higher levels of sexual disgust compared to men (Al-Shawaf & Lewis, 2013; Al-Shawaf et al., 2017; Crosby et al., 2019). The effect sizes of biological sex on sexual disgust range from Cohen's  $d$  of .60 to 1.54 (e.g., Al-Shawaf et al., 2014; Tybur et al., 2009). Women also report statistically higher levels of pathogen disgust compared to men. The difference in effect size of biological sex on pathogen disgust is estimated as a Cohen's  $d$  of 0.32 (Tybur et al., 2009).



These sex differences in sexual and pathogen disgust are consistent with sex differences in PVD, where women have a significantly higher PVD than men (Cohen's  $d = .22$ ; Díaz et al., 2020). However, Díaz and colleagues (2020) found that while perceived infectibility was higher in females than in males, the sex difference in germ-aversion was much smaller (Cohen's  $d = .01$ ). Previous studies found sex differences in both PVD and germ-aversion with higher values (Duncan et al., 2009). Despite there being differences in values across studies, the finding that there are significant sex difference in both PVD and germ aversion are consistent throughout the literature.

### **Present Study**

The purpose of the present study was to investigate: (a) the association between PVD and sexual satisfaction among individuals in committed romantic relationships and (b) the potential role of long-term vs. short-term dating interests in moderating the association between PVD and sexual satisfaction. I examined these associations through separate analyses for women and men.

Previous research focuses on the association between sexual disgust and sexual satisfaction (Crosby et al., 2019). However, it remains unclear how PVD relates to sexual satisfaction. Understanding PVD's role in sexual satisfaction could be useful for clinicians since sexual satisfaction is an integral component of

individuals' well-being and overall life satisfaction (World Health Organization, 1999).

Informed by previous research on sexual disgust and sexual satisfaction, I predicted that higher PVD would be associated with lower sexual satisfaction. In addition, I explored how long-term versus short-term dating interests impacted the hypothesized relationship between PVD and sexual satisfaction. See Figure 1 graphically depicting the current research questions.

## METHOD

### Participant Selection and Characteristics

The present study used secondary data that were part of a broader dissertation project examining variation in moral judgments of sexual behaviors (Crosby, 2022). Eligible participants who were at least 18 years of age, fluent in English, cis-gendered, and in a committed romantic relationship ( $N = 1,048$ ; 474 men; 574 women) were recruited through Prolific. Prolific is an online survey platform that sources reliable and representative participants across the world (www.prolific.co [2021]). An online advertisement described the study's inclusion criteria, the estimated time commitment, and the amount of compensation provided. Participants provided informed consent, took part in a brief online study, and were then compensated for their time. The study was approved by The University of Texas's Institutional Review Board. For additional information on the sample recruitment and data collection procedure, see Crosby (2022).

### Design

The current study's main independent variable was perceived vulnerability to disease and the outcome variable was sexual satisfaction. Both the predictor and outcome variables were continuous measures based on participants' self-reports. I examined the outcome for both females and males. Covariates included

participants' self-reported relationship duration and interest in short- or long-term mating.

### Measures

**Perceived vulnerability to disease.** To examine how perceptions of disease vulnerability related to sexual satisfaction, I included the perceived vulnerability to disease scale (PVD scale; Duncan et al., 2009). The PVD scale examines participants' baseline disease avoidance across two facets: (1) self-perceived infectability and (2) germ aversion. The PVD scale assesses participants' self-perceived infectability and germ aversion among 15 items. Participants self-reported the extent to which they agreed or disagreed with the 15 items using the following scale: 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Example items from the two subscales include: "It really bothers me when people sneeze without covering their mouths" (germ aversion) and "If an illness is 'going around' I will get it" (perceived infectability).

Scores for each subscale of the PVD are calculated by averaging participants' responses to items within each subscale. In this study, we calculated the mean of the full scale to create an overall "PVD" score ( $\alpha = .82$ ). The PVD scale has an acceptable level of internal consistency. For the seven items on the

perceived infectability factor, the Cronbach's alpha was .87. For the eight items on the germ aversion factor, the Cronbach's alpha was .74.

***Female sexual satisfaction.*** I assessed women's sexual satisfaction using the Female Sexual Functioning Index (FSFI; Rosen et al., 2000). The FSFI is a 19-item self-report questionnaire assessing key dimensions of sexual function in women over the preceding four weeks (Rosen et al., 2000). Participants responded to questions on five separate domains of female sexual function: desire/arousal, lubrication, orgasm, satisfaction, and pain. Items assessing sexual satisfaction asked participants to respond with the following scale: 1 (*Very Dissatisfied*) to 5 (*Very Satisfied*). Individual domain scores of the FSFI are calculated by summing the scores of the individual items comprising each domain followed by multiplying the sum by the domain factor. Scores for the entire scale are calculated by summing each of the six domain scores.

In this study, our primary outcome measure was sexual satisfaction measured with two items from the FSFI. The items on the FSFI read: "Over the past 4 weeks, how satisfied have you been with your overall sexual life?" and "Over the past 4 weeks, how sexually satisfied have you been with your partner?" The FSFI has excellent overall test-retest reliability ( $r = 0.79 - 0.86$ ) and total scale reliability ( $r = 0.88$ ; Rosen et al., 2000).

***Male sexual satisfaction.*** I measured men's sexual satisfaction using the International Index for Erectile Function (IIEF; Rosen et al., 1997). The IIEF is a 15-item self-report questionnaire assessing male sexual functioning over the preceding four weeks (Rosen et al., 1997). Participants responded to questions measuring five domains of male sexual functioning: erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction. Questions assessing men's sexual satisfaction asked participants to respond using the following Likert-type scale: 1 (*Very Dissatisfied*) to 5 (*Very Satisfied*). Individual domain scores of the IIEF are calculated by summing the scores of the individual items comprising each domain followed by multiplying the sum by the domain factor. Scores for the entire scale are calculated by summing each of the five domain scores.

In this study, our primary outcome measure was sexual satisfaction, which used two items from the IIEF. The items on the IIEF read: "Over the past 4 weeks, how satisfied have you been with your sexual relationship with your partner?" and "Over the past 4 weeks, how satisfied have you been with your overall sexual life?". The IIEF has relatively high test-retest reliability for intercourse satisfaction ( $r = 0.81$ ) and total scale reliability ( $r = 0.82$ ; Rosen et al., 1997).

*Mating strategies.* To assess how mating interests might moderate the hypothesized relationship between PVD and sexual satisfaction, we examined participants' self-reported interest in two different mating strategies: long- and short-term mating. The following questions assessed a participant's mating strategy: "Please rate the following items on a scale from 1 (not at all currently interested in) to 7 (strongly currently interested in): The degree to which you are currently interested in short-term mateships (e.g., casual sex, one-night stands); The degree to which you are currently interested in a long-term committed mateship (e.g., a committed romantic relationship or marriage)".

## RESULTS

### Participant Demographics and Data Characteristics

This study used data from a larger dissertation project that included 1048 participants. Since the present study examined those in committed romantic relationships, we removed 397 participants who identified as “single” from final analyses. We also removed 120 participants who had a sexual identity other than heterosexual due to our predictions laid out above. Lastly, one outlier was removed who claimed they had been in a relationship for 1500 months (125 years). The 530 remaining participants were used for final analyses. This study was approved by The University of Texas at Austin Institutional Review Board.

There were 274 women (51.7%) and 256 men (48.3%), with a mean age of 39.5 ( $SD = 12.7$ ). The ethnic/racial composition was 78% White-not of Hispanic origin, 8.5% Hispanic/Latino, 7% Asian/Pacific Islander, 3% Black/African American, and 2.7% other groups. Average relationship length for women was 87 months ( $SD = 104$ ) and 98.6 months ( $SD = 110$ ) for men. Correlations among the study variables are shown in Figures 2 & 4.

To assess internal reliability, I estimated Chronbach’s alpha for the multi-item measures. Good internal reliability ( $\alpha = .82$ ) was found for the PVD scale. The satisfaction composite items displayed good internal reliability for women’s



scores on the FSFI items 15 and 16 ( $\alpha = .84$ ) and great men's scores on the IIEF items 13 and 14 ( $\alpha = .98$ ). Participants' interests in short- and long-term mating interests were individual items, thus I did not estimate Cronbach's alpha.

### **Primary Analyses**

My hypothesis stated that: (a) higher PVD would be associated with lower sexual satisfaction and (b) the negative association between PVD and sexual satisfaction would be stronger for women than for men. We examined these questions with both correlations and in two separate multiple linear regression analyses for both men and women.

**Analyses for women.** All correlations between variables were not statistically significant for women (Figure 2). In the multiple linear regression analyses, the predictor variable was PVD. The dependent variable was sexual satisfaction. Counter to my hypotheses, higher PVD did not predict lower sexual satisfaction for women ( $p > .01$ ) (Figure 3). Table 1 depicts the relationship between PVD and sexual satisfaction for women.

**Analyses for men.** All correlations between variables were not statistically significant for men (Figure 3). In the multiple linear regression analyses, the predictor was PVD. The dependent variable was sexual satisfaction. Counter to our hypotheses, higher PVD did not predict lower sexual satisfaction

for men ( $p > .01$ ). Table 2 depicts the relationship between PVD and sexual satisfaction for women.

### **Additional Analyses**

Additionally, I explored how long-term versus short-term dating interests impacted the hypothesized relationship between PVD and sexual satisfaction. I explored these questions in two separate multiple linear regression analyses for men and women. The predictor variables were long-term interest (one item), short-term interest (one item), PVD (composite variable), the interaction of long-term interest and PVD, and the interaction of short-term interest and PVD. The dependent variable was sexual satisfaction.

**Analysis for women.** Neither long-term nor short-term mating strategy affected the association between PVD and sexual satisfaction for women ( $p$ 's = .17 - .44).

**Analysis for men.** Neither long-term nor short-term mating strategy affected the association between PVD and sexual satisfaction for men ( $p$ 's = .61 - .68)

## DISCUSSION

The present study examined a hypothesized relationship between PVD and sexual satisfaction for heterosexual men and women in committed romantic relationships. I also explored how long-term versus short-term dating interests impacted this hypothesized relationship. I found no evidence for a significant relationship between PVD and sexual satisfaction for both men and women. Furthermore, neither long-term nor short-term dating interests significantly impacted the hypothesized relationship.

There are two possible explanations why my predictions were not supported: 1) my data were not valid or 2) my hypothesis was not correct. Because my data were not consistent with previous findings, it is possible my data were not valid. That is, I attempted to replicate previous findings in sex differences in both PVD and sexual satisfaction. My data showed no statistical difference between men or women for either construct. This contrasts with previous studies. For instance, Díaz et al. (2020) and Duncan et al. (2009) documented higher average PVD scores in women compared to men. Additionally, women are typically less sexually satisfied than men on average (Mark et al., 2015).

Furthermore, these findings are not consistent with previous literature that observe a possible relationship between PVD and sexual satisfaction (Hicks et al., 2022). Nor are they consistent with previous literature observing a negative relationship between sexual disgust and sexual satisfaction (Crosby et al., 2019; Murray et al., 2013). Because PVD and sexual disgust are both related to germ aversion (Al-Shawaf et al., 2017), I expected similar results. For example, Crosby et al. (2019)'s review of extant literature found a strong positive relationship between sexual disgust and sexual dysfunction. Similarly, Hicks et al. (2022) found a strong negative relationship between PVD and sexual satisfaction. While Crosby et al. (2019) found the hypothesized relationship between sexual disgust and sexual dysfunction, Hicks et al. (2022), found a relationship between PVD and sexual satisfaction when looking at within-person daily fluctuations in COVID-19 infectability. However, Hicks et al.'s (2022) data do not necessarily reflect typical averages since they were collected during the peak onset of the pandemic.

Another possible explanation for the lack of relationship between PVD and sexual satisfaction is that my data were collected during the COVID-19 pandemic. The COVID-19 pandemic, which started in 2019 (World Health Organization, 2020), took a toll on people's health and arguably altered

individuals' health-related behaviors and perceptions. It is possible that participants' responses to our PVD measure were more positively biased in response to the global pandemic. This might explain why my PVD data were less variable than expected.

Assuming my data were valid, a possible explanation for the lack of relationship between PVD and sexual satisfaction could be one's established welfare tradeoff ratio with their romantic partner. "Welfare tradeoff ratio" is a theoretical construct positing that individuals might sacrifice their own personal welfare to enhance the welfare of another (Sell, 2005; Sparrowe, 2020). Related to my study, welfare tradeoff ratios between heterosexual romantic partners imply that individuals in committed relationships care about the well-being of their partners, and thus, may not engage in sex with them when they are contagious. Individuals in committed relationships likely trust their partners to refrain from sexual activity during this timeframe. An individual's PVD may not easily activate once a strong welfare tradeoff ratio is established between partners. Because my data are from those in committed relationships, it is possible that the welfare tradeoff ratio was an important third variable not captured in my study.

Another related, but not mutually exclusive, explanation for a lack of relationship between PVD and sexual satisfaction is the comfort level between

partners. Because my data are from those in committed relationships, it is possible that there exists a certain comfort level between partners that would negate one's fear of germs (Meltzer & Peters, 2021). Arguably, comfort level could be a byproduct of the evolved psychological mechanism calculating one's welfare tradeoff ratio for another person. In other words, assuming individuals believe their partners to have a high welfare tradeoff for them, they would likely be more comfortable engaging in sexual activity. Also related to comfort level, previous research documents that individuals with higher levels of germ aversion report an increased desire for long-term, romantic relationships and a decreased preference for promiscuity (Murray et al., 2013). The participants in my study who reported a higher PVD were probably in their sexual relationship of choice (i.e., long-term), more comfortable in their sexual behavior, and thus, more sexually satisfied.

Future research should replicate this study from the ground up. While my study took advantage of a large dataset gathered for a dissertation project, these data were not designed to explicitly examine my study's research questions. Although the data were appropriate for an exploratory study, they were not ideal in terms of sample composition, available measures, or historical period due to the emergence of COVID-19. For example, the measure used for sexual satisfaction contained only one question from the FSFI and the IIEF (Rosen et al., 2000;

Rosen et al., 1997). Future research could use the New Sexual Satisfaction Index, which is the same for both sexes. The New Sexual Satisfaction Index has an internal reliability of  $\alpha = .94 - .96$  (Štulhofer, & Buško 2019). Future research could include individuals not in committed romantic relationships, where welfare tradeoff ratios with sexual partners are not established and the comfort-level of being in a relationship is not a likely factor.

In conclusion, despite not finding a significant relationship between PVD and sexual satisfaction for men or women, we cannot be certain that there is no relationship between these two variables. One's high PVD could be a major unidentified barrier in an individual's sexual satisfaction. This is important because sexual satisfaction is integral to overall well-being (Duncan et al., 2009; Pozza et al., 2020). Moreover, identifying a reason for lower sexual satisfaction could reduce shame on within individuals. If future research replicates the lack of relationship between PVD and sexual satisfaction, that would also be beneficial. Arguably, if fear of contracting a disease has nothing to do with sexual satisfaction, previous findings on sexual disgust's negative relationship with sexual satisfaction is strengthened. Ultimately, understanding the intricacies of the hypothesized relationship between PVD and sexual satisfaction would greatly

benefit treatments for satisfaction in romantic relationships and sexual domains

(Fallis et al., 2016; Lawrance & Byers, 1995).



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### APPENDIX A: Perceived Vulnerability to Disease

From Duncan et al. (2009)

**1 = Strongly Disagree - 7 = Strongly Agree**

1. It really bothers me when people sneeze without covering their mouths.
2. If an illness is 'going around', I will get it.
3. I am comfortable sharing a water bottle with a friend. (R)
4. I don't like to write with a pencil someone else has obviously chewed on.
5. My past experiences make me believe I am not likely to get sick even when my friends are sick. (R)
6. I have a history of susceptibility to infectious diseases.
7. I prefer to wash my hands pretty soon after shaking someone's hand.
8. In general, I am very susceptible to colds, flu, and other infectious diseases.
9. I dislike wearing used clothes because you don't know what the past person who wore it was like.
10. I am more likely than the people around me to catch an infectious disease.
11. My hands do not feel dirty after touching money. (R)
12. I am unlikely to catch a cold, flu, or other illness, even if it is going around. (R)
13. It does not make me anxious to be around sick people. (R)
14. My immune system protects me from most illnesses that other people get. (R)
15. I avoid using public telephones because of the risk that I may catch something from the previous user.

(R) = Reverse scored

Subscale 1 (Perceived Infectability): Items 2, 5, 6, 8, 10, 12, 14

Subscale 2 (Germ Aversion): Items 1, 3, 4, 7, 9, 11, 13, 15



## Tables and Figures

Table 1

Regression results using Satisfaction as the criterion for women

Predictor	<i>b</i>	<i>b</i> 95% CI [LL, UL]	<i>beta</i>	<i>beta</i> 95% CI [LL, UL]	<i>sr</i> <sup>2</sup>	<i>sr</i> <sup>2</sup> 95% CI [LL, UL]	<i>r</i>	Fit
(Intercept)	4.31**	[3.57, 5.05]						
PVD	-0.10	[-0.29, 0.09]	-0.07	[-0.19, 0.06]	.00	[.00, .03]	-.07	
								<i>R</i> <sup>2</sup> = .005 95% CI[.00,.03]

*Note.* A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. *sr*<sup>2</sup> represents the semi-partial correlation squared. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.

\* indicates  $p < .05$ . \*\* indicates  $p < .01$ .

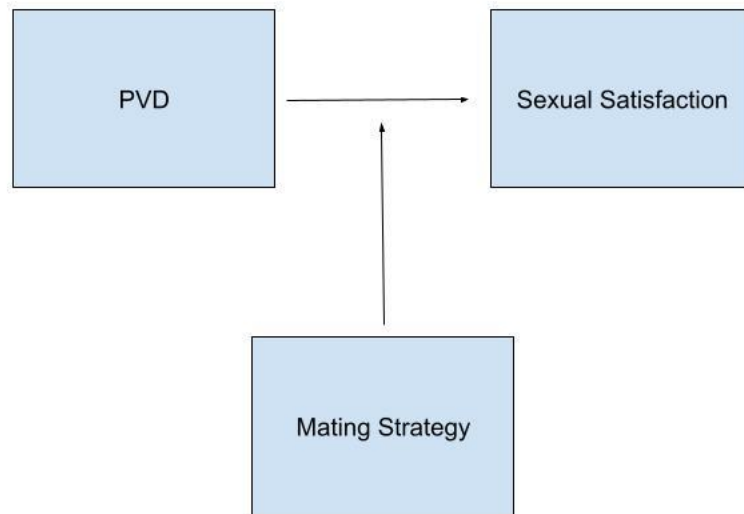
Table 3

Regression results using Satisfaction as the criterion for men

Predictor	<i>b</i>	<i>b</i> 95% CI [LL, UL]	<i>beta</i>	<i>beta</i> 95% CI [LL, UL]	<i>sr</i> <sup>2</sup>	<i>sr</i> <sup>2</sup> 95% CI [LL, UL]	<i>r</i>	Fit
(Intercept)	4.31**	[3.57, 5.05]						
PVD	-0.10	[-0.29, 0.09]	-0.07	[-0.19, 0.06]	.00	[.00, .03]	-.07	
								<i>R</i> <sup>2</sup> = .005 95% CI[.00,.03]

Note. A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. *sr*<sup>2</sup> represents the semi-partial correlation squared. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.

\* indicates *p* < .05. \*\* indicates *p* < .01.



*Figure 1.* Integrative model of the role of mating strategy in moderating the association between PVD and sexual satisfaction

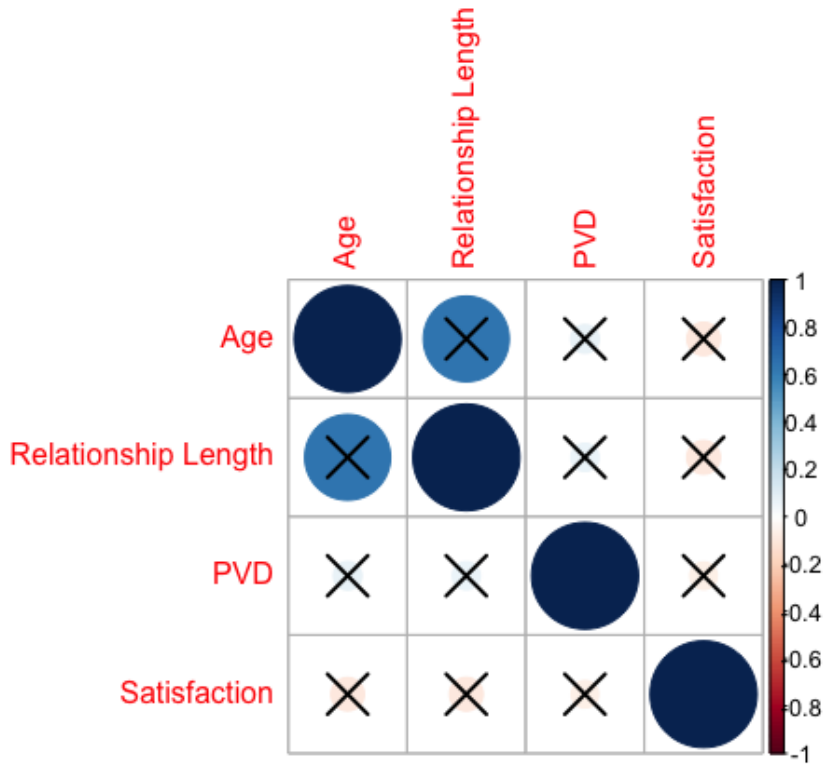


Figure 2. Correlation results between all variables for women

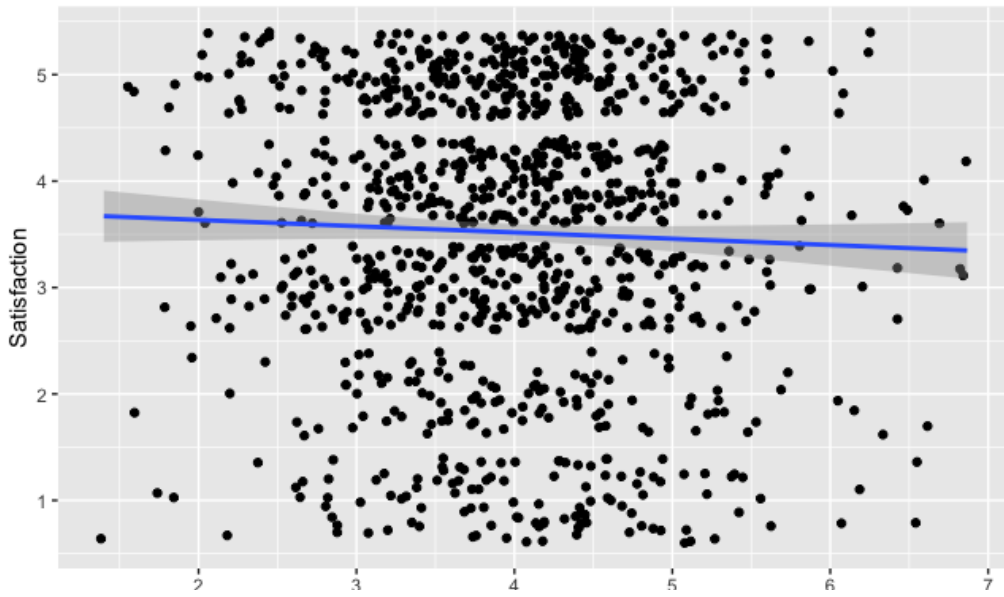


Figure 3. PVD vs. Satisfaction for women.

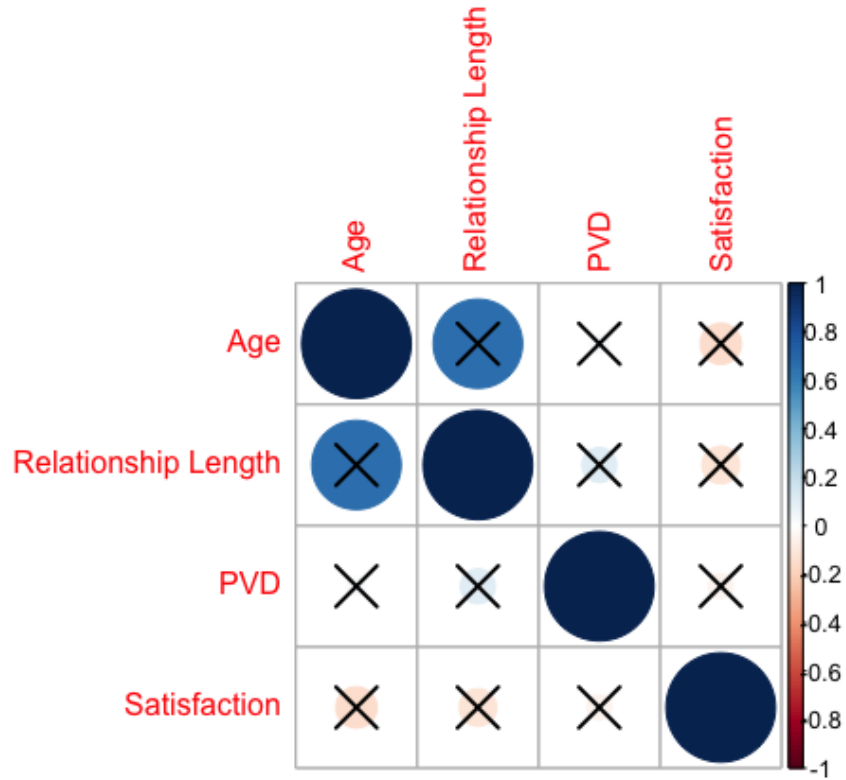


Figure 4. Correlation results between all variables for men.

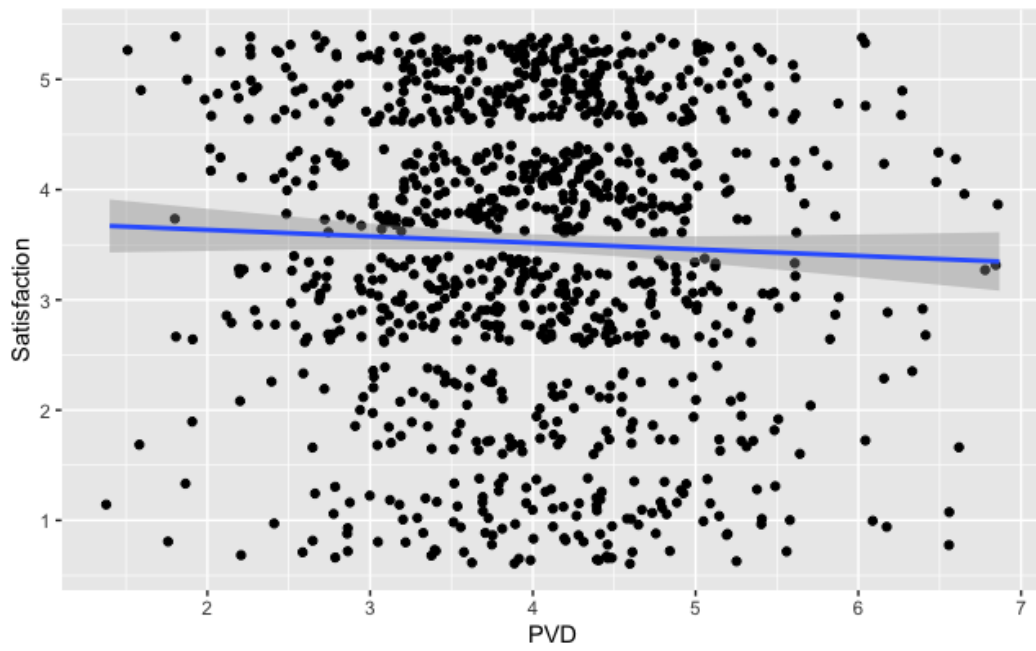
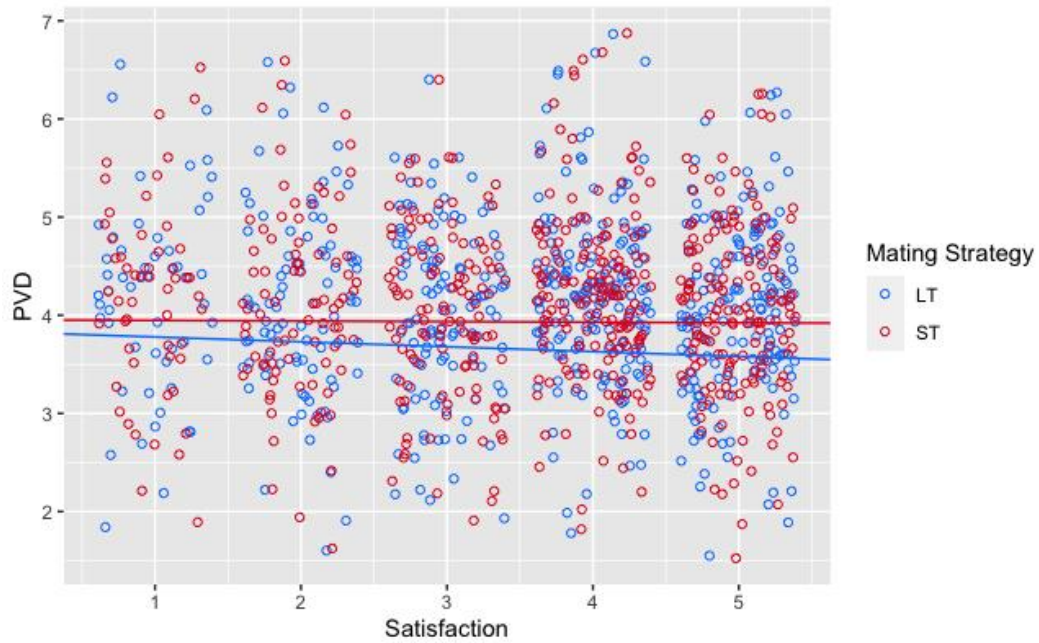


Figure 7. PVD vs. Satisfaction for men.



*Figure 8.* Multiple linear regression results for the interaction of long-term (LT) and short-term (ST) mating strategy on PVD and Satisfaction for women.



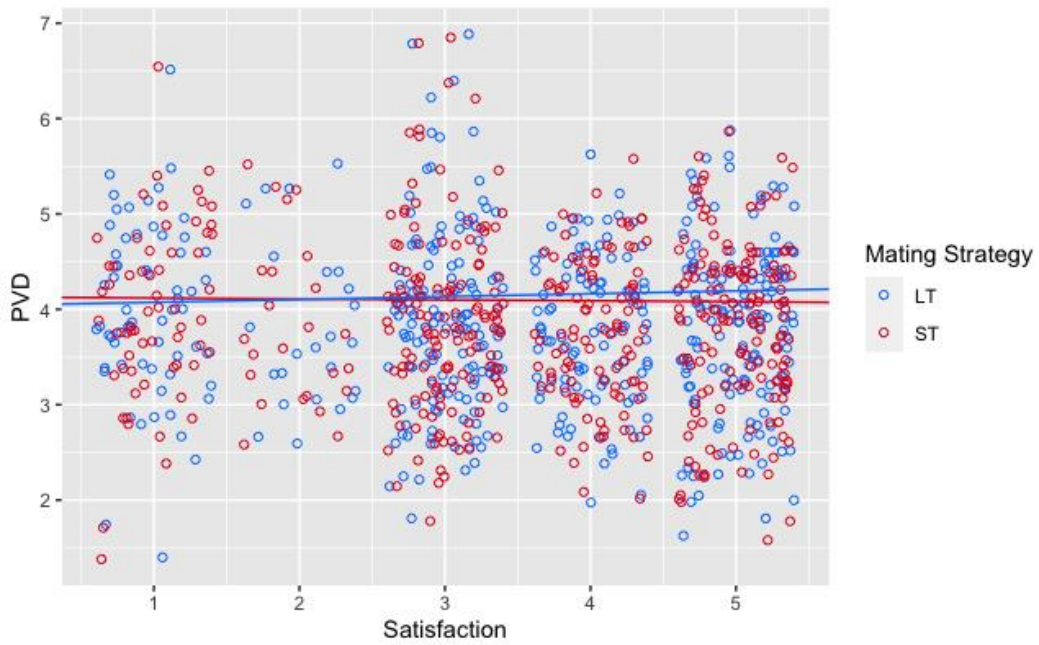


Figure 9. Multiple linear regression results for the interaction of long-term (LT) and short-term (ST) mating strategy on PVD and Satisfaction for men.