

Infidelity is not Disgusting?

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ABSTRACT

The aim of the current study was to determine whether participants' scores on three different disgust scales (sexual, moral, and pathogen) (Tybur, Griskevicius, & Lieberman, 2009) are related to their reported level of upset in response to both sexual and emotional infidelity committed by a partner. Tybur et al., (2009) report that disgust evolved as an emotion to help individuals solve the problems of avoiding elements that harbor diseases, and individuals and sexual behavior that lead to reproductive costs. With this in mind, and because sexual cheating could lead to costs such as STIs (sexually transmitted infections), and to men being cuckolded, it was hypothesized that those who scored higher on the sexual disgust scale would report being more upset by a scenario involving sexual infidelity committed by a partner. This was expected to be especially true for men since men are more upset about sexually infidelity committed by a partner. However, the results were not consistent with the hypothesis. None of the disgust scales were related to reactions to sexual or emotional infidelity for men and women. The results are discussed in terms of prior research, and suggest that reactions to a partner's commission of infidelity do not involve disgust. Disgust may deal more with protection from direct harmful exposures than with protection from indirect harmful exposures via a partner's infidelity.

KEYWORDS

Sexual Infidelity, Emotional Infidelity, Disgust

The adaptationist approach to research on human behavior and cognition focuses on the pressures that ancestral humans faced over our evolutionary history. This approach has been applied to the study of the human emotion of disgust (Tybur, Griskevicius, & Lieberman, 2009). Tybur et al., (2009) pointed out that disgust is an emotion that evolved as a strategy to solve adaptive problems of avoiding substances that may harbor disease (Curtis, Aunger, & Rabie, 2004; Curtis & Biran, 2001; Fessler, Eng & Navarrete, 2005; Haidt Rozin, McCauley, & Imada, 1997). The disgust emotion also evolved to help individuals avoid sexual behaviors and mates that would not benefit one's reproductive potential (Fessler & Navarrete,

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2003, 2004), and to help individuals avoid others who lead one to incur social costs (Levine & Kurzban, 2006).

The emotion of sexual disgust may have served as a strategy to help solve the problem of finding an optimal mate. Tybur et al., (2009) suggest that sexual disgust evolved as a strategy for solving the problem of avoiding a mate who was not biologically compatible, as well solving the problem of avoiding sexual behaviors that may incur risks. Since the genetic compatibility of a potential partner affects one's mate choice (Wedekind, Seebeck, Bettens, & Paepke, 2015), disgust likely served to help humans avoid selecting those mates who were too genetically similar, i.e., who could be kin. Al-Shawaf, Lewis, and Buss (2014) also found that the mating strategy men and women choose changes the level of sexual disgust they report such that individuals considering a short-term as compared to a long-term partner report less sexual disgust. But, prior research has not investigated whether or not disgust is related to reactions to sexual or emotional infidelity committed by a partner. Why focus on infidelity?

Since Al-Shawaf et al., (2014) reported that men and women's preferences for the type of relationship they desire are affected by their feelings about disgust, it is possible that other important relationship foci/preferences are also affected by feelings about disgust. Prior research indicates that individuals' preferences for partners are affected by said potential partner's history of infidelity. Mogilski, Wade, and Welling (2014) reported that a potential partner's history of infidelity is an attribute that individuals place a lot of importance on when evaluating potential partners. Not surprisingly, individuals prefer partners who do not have a history of infidelity.

Research also indicates that men and women in relationships are concerned about a partner's commission of infidelity. But, the sexes reactions to infidelity committed by a partner differ. Many studies indicate that men are more upset by a partner's commission of sexual infidelity, while women are more upset by a partner's commission of emotional infidelity (Buss, Larsen, Weston, & Semmelroth, 1992; Buunk, Angleitner, Oubaid, & Buss 1996; Cramer, Abraham, Johnson, & Manning-Ryan, 2001-2002; Goldenberg et al., 2003; Harris & Christenfeld, 1996, 1998; Pietrzak, Laird, Stevens & Thompson, 2002; Sagarin, Becker, Guadagno, Nicastle, & Millevoi, 2003; Schützwohl, 2004, 2005, 2006; Wiederman & Allgeier, 1993; Wiederman & Kendall, 1999). Evolutionary psychologists attribute this difference to be the result of the qualitatively diverse ways that men and women invest in their offspring. Due to the fact that they face paternity uncertainty, men are likely to experience greater jealousy in response to a partner's sexual infidelity than emotional infidelity (Buss et al., 1992). This type of infidelity by a women results in reproductive costs for the man, in that the resources he contributes to his partner and her offspring may be for progeny that are not his own. Women, on the other hand, are more sensitive and threatened by a man's emotional infidelity. While a woman's maternity is indisputable, her concern lies with her partner's commitment to provide resources to her and her offspring (Buss et al., 1992). Emotional infidelity signals a threat to the man's commitment and to the key resources he provides. Evolutionary psychology credits men and women's differing jealousy responses to be adaptations developed to guard against their respective infidelity concerns (Buss et al., 1992).

Since disgust affects long and short term relationship preferences, it might also affect an individual's reactions to infidelity committed by a partner since a partner's history of infidelity affects an individual's evaluations of potential as well as current partners. Having a partner that cheats puts one's future sexual behavior and emotional commitment with that partner at risk. Thus, there may be a relationship between disgust and reactions to infidelity committed by a partner. Therefore, the present research was conducted.

The purpose of the current research was to examine how participants' scores on three different disgust scales (sexual, moral, and pathogen) (Tybur et al., 2009) were related to how upset they felt in response to both sexual and emotional infidelity scenarios. It was hypothesized that those individuals who scored higher on the sexual disgust scale would also report being more upset by a scenario involving sexual infidelity committed by a partner. Furthermore, because men are more upset about sexual infidelity committed by a partner (Buss et al., 1992; Buunk et al., 1996; Cramer et al., 2001–2002; Goldenberg et al., 2003; Harris & Christenfeld, 1996, 1998; Pietrzak et al., 2002; Sagarin et al., 2003; Schützwohl, 2004; Wiederman & Allgeier, 1993; Wiederman & Kendall, 1999), it was predicted that men who score the highest in sexual disgust will also be the most upset by the sexual infidelity scenario. Examination of how the moral and pathogen disgust scales relate to a sexual and emotional infidelity committed by a partner was exploratory in nature.

METHODS

Participants

Participants were 54 men and 143 women, ranging in age range from 18-63, $M = 20.37$, $SD = 4.16$. The sample reported as 91.4% White, 3.0% Black, 4.06% Asian, 2.0% Hispanic, and 2.5% Other. Some participants were from a University in the northeastern US and were emailed and invited to take part in the research, while other participants were recruited via Facebook posts to the authors' Facebook pages, and to Facebook pages dedicated to psychology research participation. Participants did not receive any compensation for taking part in the research.

Procedure

Participants received an online link to a survey where they were first presented with an informed consent statement. Upon giving their consent to take part in the research, participants were asked to complete demographic information, including their age, sex, race, whether they have ever been in a sexual relationship, their current relationship status, their sexual orientation, whether they are currently on hormonal birth control (women), and what, if any, medications that they are taking. The sample's demographics were as follows: 76% of the sample had sexual relationship experience while 24% did not, 56.3% were single, 39.3% were in a relationship, and 4.4% reported Other; 92.6% were heterosexual, 2.6% were

homosexual and 4.8% reported Other; and 64.3% of the women in the sample reported using hormonal birth control while 35.7% reported not using birth control.

Next, participants were presented with the three domain disgust scale (Tybur et al., 2009), see Appendix A, which included 21 questions total, with 7 questions relating to each domain of disgust: moral, pathogen, and sexual. These scales were reliable in the present research: sexual disgust Cronbach's $\alpha = .82$, moral disgust Cronbach's $\alpha = .88$, pathogen disgust Cronbach's $\alpha = .78$. Instructions and sexual and emotional infidelity scenarios (see below) were presented in random order to participants:

Please imagine a deeply committed relationship in which either you are currently involved, were previously involved, or would like to be involved. Now please read the following scenarios and indicate on the scale from one to seven how upset each situation would make you feel, one being not upsetting at all, seven being the most upsetting.

Emotional infidelity

Your partner recently made friends with a co-worker of the other sex and has been spending more and more time with that person. You are sure that the two of them have not had sexual intercourse, but they seem to like each other very much. The two of them have many things in common and you suspect that they are falling in love.

Sexual Infidelity

You discover that, while your partner was away on vacation, your partner met someone and had sexual intercourse once with that person. You are sure that your partner loves you very much and highly values your relationship together. You also realize that, even though your partner did have sexual intercourse while on vacation, it was a "one-night stand" and your partner would never see that other person again.

Finally, a short version of the Marlow Crowne Social Desirability Scale (Strahan, & Gerbasi, 1972) was presented at the end of the survey in order to allow the authors to statistically control for socially desirable responding biases.

RESULTS

First correlations between the 3 disgust subscales, the social desirability scale sumscore, and reactions to the infidelity scenarios were computed for men and women. No significant correlations were obtained for the disgust subscales and the infidelity scenarios for men. The correlations for reactions to emotional infidelity, and disgust were: moral disgust $r = -.17$, *ns*; sexual disgust $r = -.14$, *ns*; pathogen disgust $r = -.02$, *ns*. The correlations for reactions to sexual infidelity, and disgust were: moral disgust $r = -.04$, *ns*; sexual disgust $r = -.03$, *ns*; pathogen disgust, $r = -.16$, *ns*. However, the social desirability scale sum score did correlate significantly with the moral disgust and the sexual disgust scales for men ($r = .32$, $p < .017$, and $r = .27$, $p < .05$, respectively). Men who scored higher for giving socially desirable responses (responses that make them appear more positive) also scored higher on the moral and sexual disgust subscales.

The sexual disgust subscale also did not correlate significantly with reactions to the infidelity scenarios for women ($r = -.03$, *ns*, and $r = .15$, *ns* for emotional and sexual infidelity, respectively). Additionally, the moral disgust scale did not correlate significantly with reactions to emotional infidelity ($r = .13$, *ns*) and the pathogen disgust scale did not correlate significantly with reactions to sexual infidelity ($r = .13$, *ns*). But, the pathogen disgust subscale did correlate significantly with women's reactions to the emotional infidelity scenario, $r = .20$, $p < .017$, and the moral disgust subscale did correlate significantly with reactions to sexual infidelity, $r = .17$, $p < .049$. Women who scored higher in pathogen disgust had greater negative reactions to emotional infidelity committed by a partner, and women who scored higher in moral disgust had greater negative reactions to sexual infidelity committed by a partner. The social desirability scale score correlated significantly with the moral and sexual disgust subscales for women as it did for men, ($r = .33$, $p < .0001$, and $r = .20$, $p < .021$, respectively). Women who scored higher on giving socially desirable responses (responses that make them appear more positive) also scored higher on the moral and sexual disgust subscales.

Next, a series of multiple regressions were computed separately for men and women. Because the social desirability scale sum score correlated significantly with the sexual and moral disgust subscales, regressions were computed for those men and women who scored below the median, 4.00, on the social desirability scale in an attempt to get an unbiased evaluation of whether or not disgust scale scores are related to reactions to sexual and emotional infidelity committed by a partner. One regression equation included the reaction to the sexual infidelity scenario as the dependent variable, the 3 disgust subscale scores, current relationship experience, sexual orientation, race, sexual relationship experience, and birth control usage-included for women only as the independent variables while the other regression equation included the reaction to the emotional infidelity scenario as the dependent variable, the 3 disgust scale scores, current relationship experience, sexual orientation, race, sexual relationship experience, and birth control usage-included for women only as the independent variables.

The regression analysis for men for reactions to emotional infidelity was not significant, $F(7, 20) = 1.19$, $p = .37$. However, the regression analysis for reactions to sexual infidelity for men was significant, $F(7, 20) = 6.56$, $p = .002$. Men who reported their sexual orientation as Heterosexual had greater negative reactions to sexual infidelity committed by a partner, $b = -.38$, $t(20) = -2.50$, $p < .027$. However, men's scores on the disgust scales were not significant predictors of their reactions to sexual infidelity committed by a partner. The regression equation for women for reactions to emotional infidelity was not significant, $F(8, 53) = 1.62$, $p = .15$, and the regression equation for women for reactions to sexual infidelity was not significant, $F(8, 53) = 1.47$, $p = .20$.

DISCUSSION

The results were not consistent with the hypotheses. Reactions to sexual and emotional infidelity committed by a partner were not associated with sexual, moral, or pathogen disgust scores for men or for women. This is surprising since

one could get an STD from having sex with a partner who cheated sexually, and men can become cuckolds from this type of cheating. Furthermore, a partner's emotional cheating could lead to a loss of future parental investments, which could also impair future reproductive success. Nevertheless, even though disgust evolved as a strategy to help individuals avoid mates who would lead them to incur reproductive costs (Tybur et al., 2009), and disgust is related to preferences for short and long term mates (Al-Shawaf, et al., 2015), reactions to sexual and emotional cheating are not associated with this adaptive strategy. Disgust may deal more with protection from direct exposures than with protection from indirect exposures via a partner's infidelity. This research is the first to examine whether or not reactions to infidelity are related to disgust. Thus, additional research is necessary to further substantiate whether there is a relationship between disgust and reactions to sexual and emotional infidelity.

Men in the present research who were heterosexual did have greater negative reactions to sexual infidelity committed by a partner. This may have occurred because heterosexual men risk being cuckolded by a partner's sexual infidelity (Buss et al., 1992) while homosexual men do not have that risk.

Limitations and Future Research

The scenarios in the present research involved limited infidelities. It might be the case that sexual, moral, or pathogen disgust is only associated with longer term infidelity on the part of a partner. Thus, future research should examine whether or not disgust relates to reactions to infidelity that is longer in duration. In addition, the present sample was over 90% White with an average age of 20. Thus, future research should examine how reactions to infidelity are related to disgust using samples with greater ethnic diversity, and older populations. It could be the case that among White college age students who are heavily involved in the "hookup" culture (Flack, et al., 2007), disgust is not associated with reactions to infidelity committed by a partner.

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APPENDIX A

Three-Domain Disgust Scale (Tybur et al., 2009)

“The following items describe a variety of concepts. Please rate how *disgusting* you find the concepts described in the items, where 0 means that you do not find the concept disgusting at all and 6 means that you find the concept extremely disgusting.”

	Not at all disgusting						Extremely disgusting
	0	1	2	3	4	5	6
1. Shoplifting a candy bar from a convenience store	0	1	2	3	4	5	6
2. Hearing two strangers having sex	0	1	2	3	4	5	6
3. Stepping on dog poop	0	1	2	3	4	5	6
4. Stealing from a neighbor	0	1	2	3	4	5	6
5. Performing oral sex	0	1	2	3	4	5	6
6. Sitting next to someone who has red sores on their arm	0	1	2	3	4	5	6
7. A student cheating to get good grades	0	1	2	3	4	5	6
8. Watching a pornographic video	0	1	2	3	4	5	6
9. Shaking hands with a stranger who has sweaty palms	0	1	2	3	4	5	6
10. Deceiving a friend	0	1	2	3	4	5	6
11. Finding out that someone you don't like has sexual fantasies about you	0	1	2	3	4	5	6
12. Seeing some mold on old leftovers in your refrigerator	0	1	2	3	4	5	6
13. Forging someone's signature on a legal document	0	1	2	3	4	5	6
14. Bringing someone you just met back to your room to have sex	0	1	2	3	4	5	6
15. Standing close to a person who has body odor	0	1	2	3	4	5	6
16. Cutting to the front of a line to purchase the last few tickets to a show	0	1	2	3	4	5	6
17. A stranger of the opposite sex intentionally rubbing your thigh in an elevator	0	1	2	3	4	5	6
18. Seeing a cockroach run across the floor	0	1	2	3	4	5	6
19. Intentionally lying during a business transaction	0	1	2	3	4	5	6
20. Having anal sex with someone of the opposite sex	0	1	2	3	4	5	6
21. Accidentally touching a person's bloody cut	0	1	2	3	4	5	6