

Men's Benefit-Provisioning Mate Retention Behavior Mediates the Relationship Between Their Agreeableness and Their Oral Sex Behaviors

Michael N. Pham · Todd K. Shackelford · Christopher J. Holden · Virgil Zeigler-Hill · Yael Sela · Austin John Jeffery

Received: 13 May 2013 / Revised: 3 March 2014 / Accepted: 27 July 2014 / Published online: 20 September 2014
© Springer Science+Business Media New York 2014

Abstract Men perform oral sex on their romantic partner as part of a broader benefit-provisioning mate retention strategy and men higher in Agreeableness are especially likely to provision their partner with benefits. The current research explored whether men's benefit-provisioning mate retention behavior mediated the relationship between their Agreeableness and their oral sex behaviors in their long-term romantic relationship. Men ($n = 346$) in a committed, sexual, heterosexual relationship completed the Mate Retention Inventory—a 104-item instrument that assesses the frequency with which they performed various mate retention behaviors during the past month, a 40-item personality inventory, and reported on a questionnaire their interest in and the time they spent performing oral sex on their romantic partner during their most recent sexual encounter with her. The results indicated that men higher in Agreeableness reported greater interest in and spent more time performing oral sex on their partner, and that their benefit-provisioning mate retention behaviors partially mediated these relationships. The current research is the first to investigate the relationship between personality dimensions and oral sex behaviors and adds to a growing body of research documenting that mate retention strategies influence sexual behavior.

Keywords Agreeableness · Oral sex · Mate retention · Relationship satisfaction · Personality

Introduction

Oral sex is a prominent feature of human sexuality. Oral sex is practiced in dozens of cultures worldwide (Bailey, Neema, & Othieno, 1999; Guadamuz et al., 2010; Iwawaki & Wilson, 1983; Kaestle & Halpern, 2007; Parker, 1999; Santtila et al., 2007; Wilson & Lang, 1981), is frequently depicted in pornography (Rimm, 1994), and is depicted on human ancestral cave paintings (Angulo & García, 2005). Despite the ubiquity of oral sex, previous research has not investigated the links between personality dimensions and oral sex behaviors. Because men more often perform oral sex in the context of a long-term romantic relationship than in a casual, sexual encounter (Armstrong, England, & Fogarty, 2009; Backstrom, Armstrong, & Puentes, 2012; Lewis, Granato, Blayney, Lostutter, & Kilmer, 2012; Reiber & Garcia, 2010), the current research explored individual differences in men's oral sex behaviors in their long-term romantic relationship.

The five-factor model of personality describes five dimensions of stable, individual differences: Surgency, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience (Goldberg, 1982; Norman, 1963). Men's Agreeableness is positively associated with their romantic partner's relationship satisfaction (Donnellan, Conger, & Bryant, 2004; Lenhart & Neyer, 2006; Malouff, Thorsteinsson, Schutte, Bhullar, & Rooke, 2010). Men high in Agreeableness more often maintain stable, harmonious relationships (Bentler & Newcomb, 1978; Buss, 1991; Karney & Bradbury, 1995; Kelly & Conley, 1987; Kwan, Bond, & Singelis, 1997). Women's sexual satisfaction and marital satisfaction is positively related to their partner's Agreeableness (Botwin, Buss, & Shackelford, 1997).

Oral sex may function, in part, to increase a romantic partner's relationship satisfaction. Men report performing oral sex on their partner to sexually satisfy her (Cornell & Halpern-Felsher, 2006) and women who more frequently receive oral sex from their

M. N. Pham (✉) · T. K. Shackelford · C. J. Holden · V. Zeigler-Hill · Y. Sela · A. J. Jeffery
Department of Psychology, Oakland University, 130 Pryale Hall,
Rochester, MI 48309, USA
e-mail: mnpham@oakland.edu

partner report greater relationship satisfaction (Kaestle & Halpern, 2007; Santtila et al., 2007). Because men's Agreeableness is positively related to their partner's relationship satisfaction, and because men perform oral sex on their partner, in part, to satisfy her, we hypothesized that men higher in Agreeableness would report greater interest in (Hypothesis 1) and spend more time (Hypothesis 2) performing oral sex on their partner.

Men perform "mate retention" behaviors to reduce the likelihood of their partner's infidelity. Buss (1988) identified several mate retention behaviors and constructed a Mate Retention Inventory of these behaviors. Miner, Starratt, and Shackelford (2009) grouped items from this inventory into a superordinate "benefit-provisioning" domain—behaviors that reduce the likelihood of partner infidelity by increasing the partner's relationship satisfaction (Shackelford, Besser, & Goetz, 2008; Shackelford & Buss, 2000).

Men higher in Agreeableness are more likely to provision their partner with benefits. Agreeableness is strongly related to altruism (Buss, 1996; Goldberg, 1982; MacDonald, 1995; Norman, 1963; Saucier & Goldberg, 1996) and men incur costs when they provision their partner with benefits (Miner et al., 2009), including time, effort (e.g., "I made sure that I looked nice for my partner"), and money (e.g., "I bought my partner an expensive gift") (Buss, 1988).

Men may perform oral sex on their partner as part of a broader benefit-provisioning mate retention strategy. Men at greater risk of their partner's infidelity report greater interest in performing oral sex and spend more time performing oral sex on their partner (Pham & Shackelford, 2013a). Furthermore, men who perform more frequently mate retention tactics, in general, and who more frequently provision their partner with benefits, in particular, are also more likely to report greater interest in and spend more time performing oral sex on their partner (Pham & Shackelford, 2013b).

Because men higher in Agreeableness are more likely to provision their partner with benefits, and because oral sex may be part of a broader benefit-provisioning mate retention strategy, we hypothesized that men's benefit-provisioning mate retention behaviors would mediate the relationship between their Agreeableness and their interest in performing oral sex on their partner (Hypothesis 3) as well as the time they spend performing oral sex on their partner (Hypothesis 4).

Men's Emotional Stability and Conscientiousness correlates with their partner's relationship satisfaction (Heller, Watson, & Ilies, 2004; Malouff et al., 2010) and, therefore, scores on these personality dimensions may also correlate with oral sex behaviors. Because no previous research has investigated the links between personality dimensions and oral sex behaviors, we do not offer predictions about which personality dimension best predicts the oral sex measures. For reportorial completeness, we statistically explored the relationships between men's standings on each of the five personality dimensions and the outcome variables.

Method

Participants and Procedure

Men ($n = 346$) in a committed, sexual, heterosexual relationship participated. The mean participant age was 24.2 years ($SD = 7.17$) and the mean relationship length was 36.2 months ($SD = 51.68$). Participants signed a consent form and completed questionnaires concerning their mate retention behaviors, personality features, and recent oral sex behavior. To maintain anonymity, participants placed the completed questionnaires in an envelope that they then sealed and placed the consent form in a separate envelope.

Measures

Mate Retention Behaviors

Participants completed the Mate Retention Inventory—a 104-item instrument that assesses the frequency with which men performed various mate retention behaviors during the past month (Buss, 1988). On a 4-point scale, participants reported how frequently they performed each behavior (0 = *Never performed this act*, to 3 = *Often performed this act*). Following Miner et al. (2009), we constructed a *benefit-provisioning mate retention* variable ($\alpha = .92$) from the sum of scores to specific items from the Mate Retention Inventory (e.g., "I bought my partner an expensive gift").

Five-Factor Model of Personality

Participants completed a 40-item inventory which assesses standings on the five major dimensions of personality (Botwin et al., 1997). On a 7-point scale, participants selected bipolar adjectives that described themselves, in general (e.g., 1 = *passive*, 7 = *active*; 1 = *undependable*, 7 = *reliable*). Following Botwin et al., we constructed scores for each of the five personality dimensions from responses to the personality inventory: *Surgency* ($\alpha = .61$), *Agreeableness* ($\alpha = .65$), *Conscientiousness* ($\alpha = .63$), *Emotional Stability* ($\alpha = .52$), and *Openness to Experience* ($\alpha = .53$). These alpha reliabilities are lower than the conventional cutoff ($\alpha = 0.70$), suggesting that this personality instrument may have psychometric problems of reliability (Cronbach, 1951). However, in previous work, these bipolar adjective pairs have demonstrated high internal consistency as well as high convergent validity with the Big Five Inventory and with the NEO Five Factor Inventory (Goldberg, 1992; John & Srivastava, 1999).

Oral Sex

Participants provided information about their most recent sexual encounter with their partner using a 10-point scale:

Table 1 Zero-order correlations among target variables

	1	2	3	4	5	6	7
1. Interest in oral sex							
2. Time spent on oral sex	.45**						
3. Benefit-provisioning	.22**	.15**					
4. Surgency	.05	.07	.11*				
5. Agreeableness	.14*	.14*	.14**	.12*			
6. Conscientiousness	.11*	.14**	.08	.13*	.33**		
7. Emotional Stability	.03	.08	-.09	.11*	.30**	.19**	
8. Openness to experience	.07	.05	.12*	.19**	.18**	.21**	.11*

Note $df = 344$, * $p < .05$, ** $p < .01$

own interest in performing oral sex (0 = *Less interested or excited than is typical for me*, 9 = *More interested or excited than is typical for me*) and duration of oral sex (0 = *Less time than is typical for me*, 9 = *More time than is typical for me*).

Results

See Table 1 for zero-order correlations among target variables. Men's interest in performing oral sex was correlated with the frequency with which they provisioned their partner with benefits, their Agreeableness, and their Conscientiousness. The amount of time men spent performing oral sex was correlated with the frequency with which they provisioned their partner with benefits, their Agreeableness, and their Conscientiousness. The frequency with which men provisioned their partner with benefits was correlated with their Surgency, their Agreeableness, and their Openness to Experience.

The current research investigated whether men's benefit-provisioning mate retention behaviors mediated the relationship between their standings on five dimensions of personality and their oral sex behaviors. Mediation analyses require that the predictor (personality dimension) correlates with both the mediator (benefit-provisioning mate retention) and with the outcome (oral sex) (Baron & Kenny, 1986). Here, we focus on Agreeableness because it is the *only* personality dimension that correlated significantly with both the mediator and with the outcomes. We conducted two regression analyses predicting interest in (Hypothesis 1) and time spent (Hypothesis 2) performing oral sex from men's Agreeableness. Consistent with Hypotheses 1 and 2, men higher in Agreeableness reported greater interest in (Hypothesis 1; $\beta = .26$, $SE = .10$, $t = 2.52$, $p < .05$) and spent more time (Hypothesis 2; $\beta = .27$, $SE = .10$, $t = 2.53$, $p < .05$) performing oral sex on their partner.

Following Preacher and Hayes (2004), we conducted a bootstrapping mediation analysis to test Hypothesis 3. First, the test of Hypothesis 1 indicated that men's Agreeableness was positively related to their interest in performing oral sex on their partner. We conducted a regression analysis predicting benefit-provisioning mate retention from Agreeableness ($\beta = .21$,

$SE = .10$, $t = 1.99$, $p < .05$). Next, we entered Agreeableness and benefit-provisioning mate retention simultaneously into a regression predicting interest in performing oral sex. The model was significant, $F(2, 343) = 10.91$, $R^2 = .06$, $p < .001$. Benefit-provisioning mate retention uniquely predicted interest in performing oral sex ($\beta = .08$, $SE = .02$, $t = 3.91$, $p < .001$). Finally, we assessed whether the relationship between Agreeableness and interest in performing oral sex remained after controlling statistically for benefit-provisioning mate retention. The relationship remained ($\beta = .21$, $SE = .10$, $t = 2.52$, $p < .05$) but was significantly reduced (Fig. 1). Supporting Hypothesis 3, benefit-provisioning mate retention was a significant but partial mediator between Agreeableness and interest in performing oral sex (upper 95 % CI limit = .13, lower 95 % CI limit = .02).

We conducted a bootstrapping mediation analysis to test Hypothesis 4. First, the tests of Hypotheses 2 and 3 indicated that Agreeableness was positively related to time spent performing oral sex and benefit-provisioning mate retention, respectively. We entered Agreeableness and benefit-provisioning mate retention simultaneously into a regression predicting time spent performing oral sex. The model was significant, $F(2, 343) = 6.42$, $R^2 = .04$, $p < .01$, and benefit-provisioning mate retention uniquely predicted time spent performing oral sex ($\beta = .05$, $SE = .02$, $t = 2.52$, $p = .01$). We assessed whether the relationship between Agreeableness and time spent performing oral sex remained after controlling statistically for benefit-provisioning mate retention. The relationship remained ($\beta = .24$, $SE = .11$, $t = 2.16$, $p < .05$; Fig. 2), but was significantly reduced. Supporting Hypothesis 4, benefit-provisioning mate retention was a significant but partial mediator between Agreeableness and time spent performing oral sex (upper 95 % CI .10, lower 95 % CI .01).

Discussion

The results of this research supported the hypothesis that men higher in Agreeableness would report greater interest in and spend more time performing oral sex on their partner. The

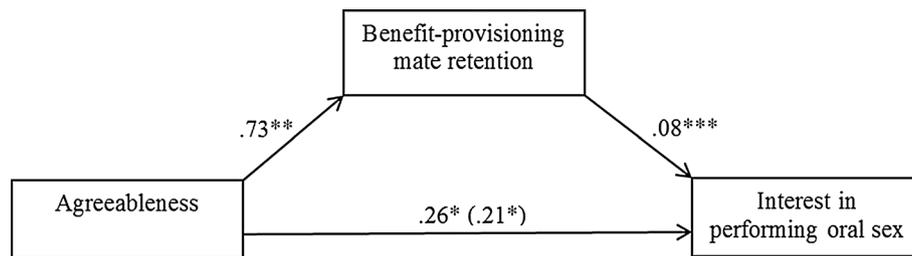


Fig. 1 Summary of mediation analysis with β weights. The relationship between men's Agreeableness and their interest in performing oral sex on their partner was reduced significantly when controlling statistically

for the frequency with which they provision their partner with benefits. $n = 346$ men. $*p < .05$, $**p < .01$, $***p < .001$

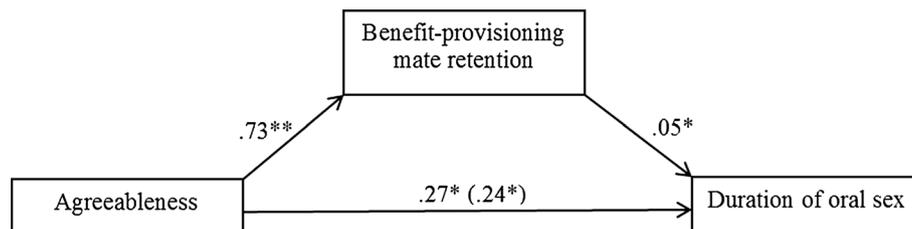


Fig. 2 Summary of mediation analysis with β weights. The relationship between men's Agreeableness and the time they spend performing oral sex on their partner was reduced significantly when controlling statistically for

the frequency with which they provision their partner with benefits. $n = 346$ men. $*p < .05$, $**p < .01$

results also indicated that men's benefit-provisioning mate retention behaviors partially mediated the relationship between their Agreeableness and their interest in, and time spent, performing oral sex on their partner. That is, although men who more frequently provision their partner with benefits report greater interest in, and time spent, performing oral sex on their partner, men who were higher in Agreeableness also reported greater interest in, and time spent, performing oral sex on their partner, even after controlling statistically for their benefit-provisioning mate retention behaviors.

These findings were also consistent with traditional conceptualizations of the Agreeableness factor. That is, Agreeableness assesses the degree to which individuals embody a sympathetic nature and are willing to invest in others (Goldberg, 1990; John & Srivastava, 1999). Therefore, men higher in Agreeableness may be more likely to perform oral sex on their partner to satisfy her desires.

A limitation of the current study is that we relied on self-report to assess oral sex behaviors. Researchers have identified measurement error and participation bias as concerns regarding self-reports of sexual behaviors (Catania, Gibson, Chitwood, & Coates, 1990; Weinhardt, Forsyth, Carey, Jaworski, & Durant, 1998). For example, Boekeloo et al. (1994) secured reports of risky sexual behaviors by administering written questionnaires, audiotape questionnaires, and face-to-face interviews. Boekeloo et al. concluded that there were significantly different numbers of missing responses among

the three methodologies. Future research would benefit from employing multiple methodologies in assessing oral sex behaviors, such as securing reports from both men and their partners of men's oral sex behaviors.

Future research would profit from exploring men's *partner's* personality dimensions to predict men's oral sex behaviors. For example, men who are mated to women higher in Surgency and Openness to Experience are at greater risk of their partner's infidelity (Goetz et al., 2005; Schmitt & Buss, 2001) and perform more mate retention behaviors (Goetz et al., 2005). Men at greater risk of their partner's infidelity (Pham & Shackelford, 2013a) and who perform more mate retention behaviors (Pham & Shackelford, 2013b) also report greater interest in and spend more time performing oral sex on their partner. We hypothesize, therefore, that men mated to women higher in Surgency and Openness to Experience will report greater interest in and spend more time performing oral sex on their partner.

In summary, this research demonstrated that investigating men's personality dimensions and their mate retention behaviors can provide insight into their oral sex behaviors. Heterosexual men who more frequently perform benefit-provisioning mate retention behaviors—and who are higher in Agreeableness—are more likely to satisfy their partner by performing oral sex. The current research is the first to investigate the relationship between personality dimensions and oral sex behaviors, and adds to a growing body of research documenting that mate retention strategies influence sexual behavior.

References

- Angulo, J., & García, M. (2005). *Sex in stone: Sexuality, reproduction, and eroticism in the Paleolithic epoch*. Madrid: Luzán.
- Armstrong, E. A., England, P., & Fogarty, A. C. K. (2009). Orgasm in college hookups and relationships. In B. J. Risman (Ed.), *Families as they really are* (pp. 362–377). New York: Norton.
- Backstrom, L., Armstrong, E. A., & Puentes, J. (2012). Women's negotiation of cunnilingus in college hookups and relationships. *Journal of Sex Research, 49*, 1–12.
- Bailey, R. C., Neema, S., & Othieno, R. (1999). Sexual behaviors and other HIV risk factors in circumcised and uncircumcised men in Uganda. *Journal of Acquired Immune Deficiency Syndromes, 22*, 294–301.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.
- Bentler, P. M., & Newcomb, M. D. (1978). Longitudinal study of marital success and failure. *Journal of Consulting and Clinical Psychology, 46*, 1053–1070.
- Boekeloo, B. O., Schiavo, L., Rabin, D. L., Conlon, R. T., Jordan, C. S., & Mundt, D. J. (1994). Self-reports of HIV risk factors by patients at a sexually transmitted disease clinic: Audio vs. written questionnaires. *American Journal of Public Health, 84*, 754–760.
- Botwin, M. D., Buss, D. M., & Shackelford, T. K. (1997). Personality and mate preferences: Five factors in mate selection and marital satisfaction. *Journal of Personality, 65*, 107–136.
- Buss, D. M. (1988). From vigilance to violence: Tactics of mate retention in American undergraduates. *Ethology and Sociobiology, 9*, 291–317.
- Buss, D. M. (1991). Conflict in married couples: Personality predictors of anger and upset. *Journal of Personality, 59*, 663–688.
- Buss, D. M. (1996). Social adaptation and five major factors of personality. In J. S. Wiggins (Ed.), *The five-factor model of personality: Theoretical perspectives* (pp. 180–207). New York: Guilford.
- Catania, J. A., Gibson, D. R., Chitwood, D. D., & Coates, T. J. (1990). Methodological problems in AIDS behavioral research: Influences on measurement error and participation bias in studies of sexual behavior. *Psychological Bulletin, 108*, 339–362.
- Cornell, J. L., & Halpern-Felsher, B. L. (2006). Adolescents tell us why teens have oral sex. *Journal of Adolescent Health, 38*, 299–301.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*, 297–334.
- Donnellan, M. B., Conger, R. D., & Bryant, C. M. (2004). The Big Five and enduring marriages. *Journal of Research in Personality, 38*, 481–504.
- Goetz, A. T., Shackelford, T. K., Weekes-Shackelford, V. A., Euler, H. A., Hoier, S., Schmitt, D. P., & LaMunyon, C. W. (2005). Mate retention, semen displacement, and human sperm competition: A preliminary investigation of tactics to prevent and correct female infidelity. *Personality and Individual Differences, 38*, 749–763.
- Goldberg, L. R. (1982). From ace to zombie: Some explorations in the language of personality. In C. D. Spielberg & J. N. Butcher (Eds.), *Advances in personality assessment* (Vol. 1, pp. 203–234). Hillsdale, NJ: Erlbaum.
- Goldberg, L. R. (1990). An alternative “description of personality”: The big-five factor structure. *Journal of Personality and Social Psychology, 59*, 1216–1229.
- Goldberg, L. R. (1992). The development of markers for the big-five factor structure. *Psychological Assessment, 4*, 26–42.
- Guadamuz, T. E., Kunawararak, P., Beyrer, C., Pumpaisanchai, J., Wei, C., & Celentano, D. D. (2010). HIV prevalence, sexual and behavioral correlates among Shan, Hill tribe, and Thai male sex workers in Northern Thailand. *AIDS Care, 22*, 597–605.
- Heller, D., Watson, D., & Ilies, R. (2004). The role of person versus situation in life satisfaction: A critical examination. *Psychological Bulletin, 130*, 574–600.
- Iwawaki, S., & Wilson, G. D. (1983). Sex fantasies in Japan. *Personality and Individual Differences, 4*, 543–545.
- John, O. P., & Srivastava, S. (1999). The big five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 102–139). New York: Guilford Press.
- Kaestle, C. E., & Halpern, C. T. (2007). What's love got to do with it? Sexual behaviors of opposite-sex couples through emerging adulthood. *Perspectives on Sexual and Reproductive Health, 39*, 134–140.
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin, 118*, 3–34.
- Kelly, E. L., & Conley, J. J. (1987). Personality and compatibility: A prospective analysis of marital stability and marital satisfaction. *Journal of Personality and Social Psychology, 52*, 27–40.
- Kwan, V. S. Y., Bond, M. H., & Singelis, T. M. (1997). Pancultural explanations for life satisfaction: Adding relationship harmony to self-esteem. *Journal of Personality and Social Psychology, 73*, 1038–1051.
- Lenhart, J., & Neyer, F. J. (2006). Should I stay or should I go? Attachment and personality in stable and instable romantic relationships. *European Journal of Personality, 20*, 475–495.
- Lewis, M. A., Granato, H., Blayney, J. A., Lostutter, T. W., & Kilmer, J. R. (2012). Predictors of hooking up sexual behaviors and emotional reactions among U. S. college students. *Archives of Sexual Behavior, 41*, 1219–1229.
- MacDonald, K. (1995). Evolution, the five-factor model, and levels of personality. *Journal of Personality, 63*, 525–567.
- Malouff, J. M., Thorsteinsson, E. B., Schutte, N. S., Bhullar, N., & Rooke, S. E. (2010). The five-factor model of personality and relationship satisfaction of intimate partners: A meta-analysis. *Journal of Research in Personality, 44*, 124–127.
- Miner, E. J., Starratt, V. G., & Shackelford, T. K. (2009). It's not all about her: Men's mate value and mate retention. *Personality and Individual Differences, 47*, 214–218.
- Norman, W. T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nominations and personality ratings. *Journal of Abnormal and Social Psychology, 66*, 574–583.
- Parker, R. (1999). Sexual diversity, cultural analysis, and AIDS education in Brazil. In R. Parker & P. Aggelton (Eds.), *Culture, society and sexuality* (pp. 325–336). London: UCL Press.
- Pham, M. N., & Shackelford, T. K. (2013a). Oral sex as infidelity-detection. *Personality and Individual Differences, 54*, 792–795.
- Pham, M. N., & Shackelford, T. K. (2013b). Oral sex as mate retention behavior. *Personality and Individual Differences, 55*, 185–188.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers, 36*, 717–731.
- Reiber, C., & Garcia, J. R. (2010). Hooking up: Gender differences, evolution, and pluralistic ignorance. *Evolutionary Psychology, 8*, 390–404.
- Rimm, M. (1994). Marketing pornography on the information superhighway: A survey of 917,410 images, descriptions, short stories, and animations downloaded 8.5 million times by consumers in over 2000 cities in forty countries, provinces, and territories. *Georgetown Law Journal, 83*, 1849–1934.
- Santtila, P., Wager, I., Katarina, W., Harlaar, N., Jern, P., Johansson, A., ... Sandnabba, N. K. (2007). Discrepancies between sexual desire and sexual activity: Gender differences and associations with relationship satisfaction. *Journal of Sex and Marital Therapy, 34*, 29–42.

- Saucier, G., & Goldberg, L. R. (1996). Evidence for the Big Five in analyses of familiar English personality adjectives. *European Journal of Personality, 10*, 61–77.
- Schmitt, D. P., & Buss, D. M. (2001). Human mate poaching: Tactics and temptations for infiltrating existing mateships. *Journal of Personality and Social Psychology, 80*, 894–917.
- Shackelford, T. K., Besser, A., & Goetz, A. T. (2008). Personality, marital satisfaction, and probability of marital infidelity. *Individual Differences Research, 6*, 13–25.
- Shackelford, T. K., & Buss, D. M. (2000). Marital satisfaction and spousal cost-infliction. *Personality and Individual Differences, 28*, 917–928.
- Weinhardt, L. S., Forsyth, A. D., Carey, M. P., Jaworski, B. C., & Durant, L. E. (1998). Reliability and validity of self-report measures of HIV-related sexual behavior: Progress since 1990 and recommendations for research and practice. *Archives of Sexual Behavior, 27*, 155–180.
- Wilson, G. D., & Lang, R. J. (1981). Sex differences in sexual fantasy patterns. *Personality and Individual Differences, 2*, 343–346.