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Sexual Deception as a Social-Exchange Process: Development of a Behavior-Based Sexual Deception Scale

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The use of deception in association with sexual encounters may take many forms, ranging from outright lies to more subtle, evasive manipulations. To address such deceptions, a behavior-based sexual deception scale was developed utilizing social exchange theory. Participants were 267 individuals associated with two large universities who were surveyed regarding different aspects of their sexual deceptive behaviors. In addition, items addressing sexually related behaviors and attitudes were assessed for validation purposes. Principal components analysis identified three components of sexual deception, labeled Blatant Lying, Self-Serving, and Avoiding Confrontation. Confirmatory factor analysis verified the resulting structure, and promising validity was noted. In general, those using any of these deceptions reported more sexual partners and one-night stands. Those telling blatant lies to have sex were more likely to report greater needs for sex, while those using self-serving lies or having sex to avoid confrontation experienced greater worry about partner loss. Men were more likely to use blatant lies to have sex, while women were more likely to have sex to avoid confrontation. Results support sexual deception as an exchange process, with sex for pleasure and positive relationship outcomes acting as rewards, and unwanted sex and deception consequences as costs. Implications for health interventions and primary prevention applications are discussed.

Prevalence of lying and deception within our society is found in countless forms, including literature, movies, self-help books, advice columns, and websites. According to Buller and Burgoon (1994), deception involves “controlling information to alter the target’s beliefs or understanding in a way that the deceiver knows is false” (p. 192). Empirically, multiple facets of deception have been investigated, including definitions, how and why it is used, its detection, and possible consequences (Burgoon, Buller, White, Afifi, & Buslig, 1999; Camden, Motley, & Wilson, 1984; DePaulo, Kashy, Kirkendol, Wyer, & Epstein 1996; Frank & Ekman, 1997; Lippard, 1988; Miller, Mongeau, & Sleight, 1986). People typically engage in deception by telling outright lies, trying to mask personal attributes such as feelings, plans, knowledge, or whereabouts, in order to benefit themselves. In other circumstances, deception allows people to gain something desirable that they cannot get or do not believe they can obtain through their own power (Hample, 1980), or avoid unpleasant

situations, hurt feelings, and conflicts (Camden et al., 1984).

The purpose of the current study is to develop a scale assessing sexual deception practices, with the focus on the lies individuals have used in order to have sex with prospective or current partners. The need to develop such an assessment is paramount given that sexual deception could contribute to the spread of sexually transmitted diseases (STDs), which in the year 2000 alone saw an incidence of 18.9 million cases in the United States (Weinstock, Berman, & Cates, 2004). Beyond failures to disclose one’s current or past STD status to prospective/current partners or outright lying about one’s serostatus (for examples, see Clark, Brasseur, Richmond, Getson, & D’ Angelo, 1997; Desiderato & Crawford, 1995; Green et al., 2003; Kalichman & Nachimson, 1999; Keller, Von Sadvosky, Pankratz, & Hermsen, 2000; Marks et al., 1994; Newton & McCabe, 2005; Perry et al., 1994; Sullivan, 2005), deceptions regarding one’s sexual history including number of sexual partners and one-night stands, multiple sex partners, dating and marital affairs, and risky sexual exploits all may contribute to the spread of STDs through pronounced exposure. Further, given that individuals tend to be poor judges of whether potential partners may be at risk for STDs (Drumright, Gorbach’s, Holmes, 2004; Malloy, Fisher, Albright,

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Misovich, & Fisher, 1997; Stoner et al., 2003), or, more importantly, lying in general (Ekman, 1997), a scale assessing sexual deception practices could contribute to disease prevention efforts.

Lying and deception within intimate relationships can be explained using classic social exchange theory (Homans, 1961; Thibaut & Kelley, 1959). Sexual deceptions may be utilized to gain or maintain various resources, including sexual intercourse, intimacy, and other relationship-related rewards. Indeed, Ekman (1997) has noted that lying often is used to obtain rewards. Both personality theory and psychoevolutionary psychology suggest that individuals have an innate need or motivation for sex (e.g., Buss, 1994; Murray, 1938), and will devise various plans and actions in order to fulfill the need (Miller & Read, 1987). Further, if sex (as a reward or gain) is perceived to be blocked, lies may be used in order to circumvent the interference, with such deceptions viewed as costs given the negative consequences if discovered (Hample, 1980; Shibles, 1985).

There are circumstances, however, when sex is utilized as a resource exchanged for another reward or gain. In other words, sex is a cost (along with deception), with the reward being gain or maintenance of various relationship resources. As noted by Sprecher (1998, p. 38) in her review of social exchange and sexuality, "Partner A may give more sexual resources than Partner B, but Partner B may reciprocate with services, presents (goods), or love and gratitude." Michaels, Edwards, and Acock (1984) successfully utilized sex as an exchange resource in their study on relationship satisfaction (see also Michaels, Acock, & Edwards, 1986). Baumeister and Vohs (2004) note in their review that sex often is used by women as an exchange resource. Impett and Peplau (2003) reviewed the prevalence of consensual unwanted sex, finding that sexual capitulation was performed in part to impress peers, gain partner approval, and promote intimacy, all of which may be viewed as external rewards gained through sex.

Within intimate relationships, how often do individuals deceive their partners, and what do they lie about? Saxe (1991) reported 85% of his sample lied to a relationship partner, with the deceptions focused on relationships with other individuals (i.e., unfaithful to one's partner, kissing another person). Knox and colleagues (1993) found that most college students (92%) lied at least once to a current or past partner. The top six lies included the number of previous partners (31.1%), having an orgasm (26.2%), saying that a partner was "the best" (17.5%), reporting the sexual experience "was good" (17.5%), saying "I love you" (16.7%), or reporting being a virgin (8%). Knox and colleagues also noted a small proportion lied about having an STD or AIDS, while Sullivan's (2005) review of HIV disclosure studies notes nondisclosure rates of

12% to 33% to primary partners. Similarly, Green and colleagues (2003) noted that 38% of those with genital herpes did not disclose to their regular sexual partners (with a higher percentage of nondisclosure for casual partners), and Keller and colleagues (2000) reported that in their sample of those with genital human papillomavirus (HPV), 69% failed to disclose their serostatus to new partners prior to sexual intercourse.

A multistudy paper by Williams (2001) found that individuals were least honest in regard to the number of previous sexual partners, the identity of past sexual partners, and conditionally whether they had ever been unfaithful to a partner. In addition, more deception was found with sexual partners who were strangers as opposed to those who were primary partners. Williams also found, however, that individuals were more likely to deceive their primary partners regarding their number of past sexual partners, and those with a history of STDs or who had ever been unfaithful to their partners were more likely to deceive. Desiderato and Crawford (1995) noted that almost half of their sample failed to disclose information regarding past sexual partners to their current partners, particularly if they had multiple past sexual partners.

Cochran and Mays (1990) reported that 34% of men and 10% of women had lied to a partner to have sex. Fischer (1996) noted that 22% of her male sample responded *yes* to the item, "Have you ever talked a person into having sex by lying to them or by making promises you knew you were not going to keep," with the lies including statements such as "I love you," "I care about you," "I really respect you," and it is "safe... [to have sex] with me" (p. 531). In particular, lies regarding caring/commitment were most prevalent (58%). Stebleton and Rothenberger (1993) found that 18% of their sample lied to a partner in order to have sex (table data aggregated by lead author). In addition, those self-reporting to be nonmonogamous were more likely to lie in order to have sex than those in monogamous relationships. Rowatt, Cunningham, and Druen (1998) noted that some individuals tend to deceive potential relationship partners regarding desirable characteristics. Tooke and Camire (1991) found that some individuals lie to their partners regarding a host of interpersonal issues (i.e., misleading about career expectations, being boastful, acting interested in the relationship when really not), as well as issues pertaining to "enhanced bodily appearance" (i.e., wearing make-up or specific clothing to enhance appearance).

For the current study, a collection of survey items was derived based on many of the sexually related lies reported from previous research. Exploratory (principal components) and confirmatory factor analyses were used to determine the final subscales. It was hypothesized that the resulting factors would reflect an exchange-oriented framework. Criterion and construct validities of the resulting subscales were also evaluated.

Method

Participants

Participants were 267 sexually active students from two major universities in Southern California. Participants received credit toward a psychology class requirement in exchange for their involvement in the study. The sample was comprised mostly of single individuals (89.9%), while 6.7% reported being married, and 2.2% reported being divorced (less than 1% did not respond). Overall, 61.4% of the sample was female, 43.1% was White, 24.7% was Asian, 19.9% was Hispanic, 3.0% was Black, and the remainder were of other/mixed ethnic backgrounds. Mean age was 21.8 years ($SD = 5.6$, age range 18–55 years). Regarding sexual experience, 66.3% reported having 1–3 sexual partners over their lifetime, 23.0% reported 4–10 sexual partners, 5.2% reported having 11–16 partners, and 4.5% reported 17 or more. Thirty-three percent reported “ever” having a one-night stand.

Measures

Survey items. A pool of 19 items was generated to address the use of deception in intimate relationships. Some of the items were based on items utilized by Knox and colleagues (1993), while others were written to reflect other sexually related deception practices. The items were written based on their face validity in regards to deception in intimate relationships and were placed on a dichotomous “yes/no” scale (1 = yes, 2 = no). Directions for the items read as follows: “Below are a number of items addressing things you may or may not have done sometime in your life. Please answer each item YES or NO. ‘Sex’ below can refer to intercourse or other forms of sexual intimacy (e.g., oral sex, manual stimulation).” Items were prefaced with the stem, “Have you ever . . .” The items were reviewed for face validity by the research team, and they were pilot tested on a small number of university students. Table 1 presents the 19 items and proportions of those responding “yes” to each deceptive statement.

Validation items. Additional items were used to assess construct and criterion validity. Items dealt with behavioral and attitudinal issues associated with sex, intimacy, and needs (see Table 2 for a complete list of items). Age, gender, and race/ethnicity associations were also assessed.

Procedure

After obtaining IRB approval, data were collected by means of a web-based survey program called SurveyWiz

Table 1. Final CFA Solution for Sexual Deception Subscale Factors: Items, Proportions, Standardized Confirmatory Factor Analysis Loadings, and Robust Standard Errors ($N = 267$)

Item Number, Item, and Proportion [%Yes]	SL	SE ¹
<i>Blatant Lying (“Have you ever . . .”)</i>		
(1) Told someone “I love you” but really didn’t just to have sex with them? [7.9%]	0.62	0.04
(2) Told someone “I care for you” just to have sex with them? [12.0%]	0.42	0.04
(10) Had sex with someone just so you could tell your friends about it? [10.1%]	0.53	0.04
(13) Told someone they’d be your boyfriend/girlfriend just so they would have sex with you? [3.4%]	0.58	0.03
(14) Had sex with someone, then never returned their calls after that? [14.2%]	0.44	0.04
(19) Faked “who you are” in order to have sex with somebody? [3.7%]	0.57	0.03
(12) Gotten a partner really drunk or stoned in order to have sex with them? [5.6%]	0.44	0.03
<i>Self-Serving</i>		
(9) Had sex with someone in order to get resources from them (e.g. money, clothes, companionship)? [7.9%]	0.76	0.03
(8) Had sex with someone in order to maintain resources you get from them (e.g., money, clothes, companionship)? [11.6%]	0.86	0.03
(4) Had sex with someone so you would have someone to sleep next to? [9.4%]	0.53	0.04
<i>Avoiding Confrontation</i>		
(6) Had sex with someone even though you didn’t want to? [36.0%]	0.46	0.03
(7) Had sex with someone in order to maintain your relationship with them? [27.3%]	0.76	0.02
(11) Had sex with someone so they wouldn’t break up with you? [11.6%]	0.74	0.03
(3) Had sex with someone so they would leave you alone? [18.4%]	0.32	0.03
(16) Had sex with someone because you wanted to please them? [51.3%]	0.34	0.03

¹Robust standard errors.

Notes: SL = Standardized CFA loadings. Items removed per EFA: “Said you had an orgasm, although you really didn’t?” [Yes = 45.7%], “Told a partner they were great in bed, although they were terrible?” [31.1% = Yes], and “Had sex with someone only because you had gotten really drunk or stoned?” [22.1% = Yes]. Item removed per CFA: “Neglected to tell a partner that you have some type of sexually transmitted disease so you could have sex with them?” [1.5%]. Directions for the items read: “Below are a number of items addressing things you may or may not have done sometime in your life. Please answer each item YES or NO. ‘Sex’ below can refer to intercourse or other forms of sexual intimacy (e.g., oral sex, manual stimulation).” Items should be prefaced with the stem, “Have you ever . . .,” after the instructions. Scale items are based on dichotomous responses (1 = Yes, 2 = No). Subscale scores may be calculated by first reverse-coding all items, then summing items and dividing by the total number of items for each subscale, with higher scores indicating more deception.

(Birnbaum, 2000). Two techniques were used to notify participants of the survey: (1) flyers posted throughout each university’s psychology department, and (2) announcements made in psychology classes giving a link to the survey through the lead author’s university

Table 2. Pearson Correlations and Significance Tests Between Behavioral and Need/Attitudinal Sexuality Measures with Sexual Deception Subscale Factors

Behavioral and Need/Attitudinal Measures	<i>N</i>	<i>Blatant Lying</i>	<i>Self-Serving</i>	<i>Avoiding Confrontation</i>
<i>Sex-Related Behaviors</i>				
What is the total number of lifetime sexual partners you have been with during your lifetime? (1 = 0, 2 = 1–3, 3 = 4–10, 4 = 11–16, 5 = 17 or more sexual partners)	267	0.36**	0.28**	0.24**
Have you ever said you had fewer sexual partners than you really have had? (1 = No, 2 = Yes)	266	0.43**	0.22**	0.18**
Have you ever had a one-night stand? (1 = No, 2 = Yes)	267	0.36**	0.16**	0.18**
How often does the use of intoxicants (e.g., alcohol, drugs) occur during your sexual encounters? (1 = Rarely/Never, 2 = Less than half the time, 3 = Half the time, 4 = More than half the time, 5 = Always)	267	0.21**	0.11	0.11
How often do you use a condom when intimate with your partner(s)? (1 = Always, 2 = Less than always)	266	–0.04	0.08	0.17**
<i>Sex- and Intimacy-Related Needs</i>				
I need sex everyday. (1 = Disagree Definitely, 5 = Agree Definitely)	266	0.21**	0.11	0.07
I need sex with a lot of partners. (1 = Disagree Definitely, 5 = Agree Definitely)	267	0.30**	0.05	0.05
I need to have more sex. (1 = Disagree Definitely, 5 = Agree Definitely)	267	0.26**	0.19**	0.06
I need somebody to love. (1 = Disagree Definitely, 5 = Agree Definitely)	266	–0.24**	0.01	0.00
I need somebody to hold my hand. (1 = Disagree Definitely, 5 = Agree Definitely)	267	–0.19**	–0.01	–0.02
I need a partner who I can manipulate. (1 = Disagree Definitely, 5 = Agree Definitely)	265	0.26**	0.16**	0.12
<i>Sex-and Intimacy-Related Attitudes and Opinions</i>				
I have a difficult time when I don't have a relationship partner. (1 = Disagree Definitely, 5 = Agree Definitely)	200	0.08	0.25**	0.18*
When I'm about to make love, have sex, or be intimate with a new partner, I know that it is not very likely that I will date this person again. (1 = Disagree Definitely, 5 = Agree Definitely)	265	0.25**	0.11	0.03
When in a relationship, I constantly worry that my partner will leave me. (1 = Disagree Definitely, 5 = Agree Definitely)	200	–0.05	0.19**	0.19**
With a casual sexual partner, how likely do you feel that unprotected sex could lead to HIV? (1 = Highly likely, 2 = Moderately likely, 3 = Somewhat likely, 4 = Not very likely)	263	0.13*	0.05	0.02

* $p < .05$, ** $p < .01$.

Note: Some validation items were reverse coded for ease of interpretation. All subscales items were reverse coded prior to calculating subscale scores, with higher scores indicating more deception. Resulting means and standard deviations of reverse coded deception scales (recoded 1 = No, 2 = Yes) are as follows: Blatant Lying ($M = 1.08$, $SD = .17$); Self-Serving ($M = 1.10$, $SD = .24$); and Avoiding Confrontation ($M = 1.29$, $SD = .29$). As calculated, reverse coded deception scales correlate .28 (Blatant Lying with Self-Serving), .15 (Blatant lying with Avoiding confrontation), and .50 (Self-Serving with Avoiding confrontation).

webpage. Both techniques specified that participants must be at least 18 years of age.

Data were gathered at different 2-week intervals during April 2001, June 2002, and November 2002. The survey began with information regarding informed consent and anonymity of participants. The survey ended with the creation of an exclusive identification number, which participants used to verify completion of the survey and subsequently receive research credit. It was highly unlikely that persons other than those associated with the universities took the survey due to the method of advertising for the study, the linking of

the survey to the university's homepage, and the short period of time the survey was available online.

Analysis

Exploratory factor analysis using principal components analysis was utilized for the initial evaluation of items, followed by confirmatory factor analysis. Construct and criterion validities were assessed for the resulting subscales via correlations with relevant items from the survey.

Results

Exploratory Factor Analysis

Prior to analysis, data were evaluated and met assumptions of factor analysis, including sampling adequacy, absence of singularity and multicollinearity, and factorability of R (Tabachnick & Fidell, 2001). The optimal number of components was determined by parallel analysis (Thompson & Daniel, 1996), inspection of the eigenvalue scree plot, and interpretability of the resulting component solution (Gorsuch, 1983). Overall, three components were deemed satisfactory based on these criteria.

Principal components analysis was performed on the 19 items requesting a three-component solution. The total variance accounted for by the three components was 46.7%. Both oblique and orthogonal rotations were performed, with the oblique rotation retained as it yielded a more interpretable solution. With the exception of two items that subsequently were removed (see Table 1 Notes), all items had adequate rotated component loadings (.40 or higher) on at least one component. Another item, "Had sex with someone only because you had gotten really drunk or stoned?" was also removed because it did not clearly load on one factor. A second principal components analysis was performed on the remaining 16 items, forcing a three-component solution. Overall, 48.91% of the variance was accounted for, with 24.5% accounted for by the first component, 16.0% by the second, and 8.5% for the third component (prior to rotation). The three components were labeled *Blatant Lying* (five items, based on highest pattern matrix loading, component Two), *Self-Serving* (six items, Component Three), and *Avoiding Confrontation* (five items, Component One). Correlations across the components showed that *Blatant Lying* was associated with *Self-Serving* ($r = -.24$), but showed little association with *Avoiding Confrontation* ($r = .02$). *Self-Serving* was associated with *Avoiding Confrontation* ($r = -.17$).

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) using EQS (Bentler, 2006) was next performed on the 16 items to verify the factor structure that evolved from the exploratory factor analysis (EFA) (see Gerbing & Hamilton, 1996, for a detailed overview of the advantages of using CFA on the same EFA sample). Applying CFA to an EFA sample allows one to apply the desired solution directly (Nunnally, 1978) and provides confirmation by assigning items directly to the resulting subscales and setting nonsignificant loadings to zero (Gorsuch, 1983). Multivariate normality was assessed by examination of Mardia's coefficient, which indicated that the assumption had been violated. To ensure viability of the results, robust statistics in EQS were employed. Items were assigned directly to the factor that evidenced

the highest pattern matrix loading, and they were not allowed to load on the remaining factors. Factor variances were fixed at 1.0, while factor loadings, measurement error, and factor correlations were allowed to vary. Multiple fit indices with robust statistics were evaluated, including the root mean square error of the approximation (RMSEA), the non-normal fit index (NNFI), the comparative fit index (CFI), and Bollen's incremental fit index (IFI).

The resulting model yielded a Satorra-Bentler χ^2 of 176.94 (101, $N = 267$), with an RMSEA of .053 (90% confidence interval [C.I.] = .040 to .066), an NNFI of .76, a CFI of .80, and an IFI of .81, all suggesting poor fit. Alternative models were also assessed, although fit appeared to be even poorer. A one-factor model yielded a Satorra-Bentler χ^2 of 497.82 (120, $N = 267$), with an RMSEA of .081 (90% C.I. = .070 to .093), an NNFI of .44, a CFI of .52, and an IFI of .54. A three-factor model without correlated factors resulted in a Satorra-Bentler χ^2 of 222.12 (104, $N = 267$), with an RMSEA of .065 (90% C.I. = .053 to .077), an NNFI of .64, a CFI of .69, and an IFI of .70.

Modifications were next undertaken for the correlated three-factor model. Based on item content and verified through a model modification index (Lagrange multiplier), misfit was noted between two items and their assigned factors: "Faked 'who you are' in order to have sex with somebody?" and "Gotten a partner really drunk or stoned in order to have sex with them?" were subsequently reassigned to the *Blatant Lying* factor from the *Self-Serving* factor. Another modification involved removing the item "Neglected to tell a partner that you have some type of sexually transmitted disease so you could have sex with them?" due to a nonsignificant parameter path ($p > .05$). Other modifications included allowing a number of within-factor error variances to covary to account for sample-specific error (Byrne & Baron, 1993; Tanaka & Huba, 1984). After these changes, a final correlated three-factor model using 15 items was generated, yielding a Satorra-Bentler χ^2 of 99.03 (78, $N = 267$), with an RMSEA of 0.032 (90% C.I. = .000 to .049), an NNFI of .93, a CFI of .95, and an IFI of .95. All model parameters were significant at $p < .01$ or better, and internal consistency for the three subscales ranged from .71 to .75 (see Table 1). *Blatant Lying* was correlated with *Self-Serving* at .28 and with *Avoiding Confrontation* at .18, while *Self-Serving* was correlated with *Avoiding Confrontation* at .72 (as calculated subscales, the correlations range from .15 to .50).

The correlations across the factors are highly suggestive of a second-order factor (Gorsuch, 1983), reflecting a broader sexual deception construct, which may be derived by factoring the correlations of the primary factors. When using higher-order factors, the primary factors provide a narrow scope of generalization, while higher-order factors "increase the breadth of generalization" (Gorsuch, 1983, p. 240). The discovery of a

second-order factor does not imply a single factor solution (which was assessed above and found untenable), but rather suggests that the more narrow factor scales are part of a broader construct (thus explaining their correlations). Using EQS, a second-order latent factor was added to the model, fixing the variance at 1.0 and allowing the paths from the second-order factor to the primary factors to be estimated (thereby dropping the factor correlations). The disturbance terms for the original factors were also estimated, and two of the terms (for *Self-Serving* and *Avoiding Confrontation*) were constrained for identification purposes (Byrne, 2006). Also for identification purposes, one item from each of the factors was fixed at 1.0. The resulting model showed a Satorra-Bentler χ^2 of 100.15 (79, $N = 267$), with an RMSEA of 0.032 (90% C.I. = .000 to .049), an NNFI of .93, a CFI of .95, and an IFI of .95. As with the correlated model, all parameter estimates were significant ($p < .05$). In addition, the paths from the second-order to the primary factors were also significant ($p < .05$), with standardized parameters of .29, .90, and .81 for *Blatant Lying*, *Self-Serving*, and *Avoiding Confrontation* (respectively). Findings for this analysis subsequently support the three-factor model, with the correlations explained by the second-order latent factor.

Validity

Validity of the resulting subscales was assessed through associations with other deception-related items addressing sexual behaviors and intimacy needs/attitudes. Table 2 contains Pearson correlations of the subscales with the validation items. Note that items within the subscales were reverse coded, with higher subscale scores indicating greater levels of deception.

For the five sex-related behaviors, significant correlations were noted across most of the subscales. Greater levels of deception were associated with more lifetime sex partners, having one-night stands, and lying to partners regarding number of sexual partners. Drug and alcohol use was more likely to be utilized by those who tell blatant lies to have sex, while condom use was less likely for those who have sex to avoid confrontation. Regarding sex/intimacy needs, those who used blatant lies reported needing sex everyday and with a lot of partners, and also a partner whom they can manipulate. In addition, those who used blatant lies to have sex were less likely to say they needed somebody to love and somebody to hold their hand. Individuals who used self-serving deception to have sex reported they need to have more sex and also a partner they can manipulate. For sex/intimacy-related attitudes and opinions, those who have sex to avoid confrontation and those who use self-serving deceptions were more likely to report that they have a difficult time when they do not have a relationship partner, and that they constantly worry that their partners will leave them.

Those who tell blatant lies noted that they are not likely to date a new sexual partner again, and they are less likely to think that unprotected sex with a casual sex partner could put them at risk for HIV.

Demographic comparisons were also undertaken. Using an independent sample t-test, males ($M = 1.15$, $SD = .23$) were more likely to tell blatant lies to have sex than females ($M = 1.04$, $SD = .10$; $t[264] = 5.33$, $p < .001$). Females ($M = 1.33$, $SD = .31$), however, were more likely to have sex to avoid confrontation than males ($M = 1.23$, $SD = .25$; $t[264] = 2.63$, $p < .01$). Age was not associated with any of the subscales using Pearson correlations, nor did the subscales show race/ethnicity differences.

Discussion

Sexual deception appears to be motivated by three factors—seeking sexual pleasure and other rewards, and avoiding problems that would break up the interaction/exchange. This fits well within the approach/avoidance motivation framework (Carver & White, 1994; Gray, 1987; Higgins, 1998); behaviors adopted to gain pleasant or positive outcomes are approach motivated, while behaviors used to avoid unpleasant outcomes or situations are avoidance motivated (Cooper, Shapiro, & Powers, 1998). Those using blatant lies to have sex are approach motivated and use deception in pursuit of sex for pleasure and reward. Individuals utilizing self-serving lies are also approach motivated, exchanging sex for the pleasures and positive outcomes associated with the relationship rewards they receive. They may be also avoidant motivated, however, with sex exchanged to prevent potential loss of relationship rewards (i.e., relationship rewards are perceived to be contingent upon sexual exchanges), or to cope with unpleasant feelings generated by “sleeping alone” (cf. loneliness; Impett & Peplau, 2003; Levinson, Jaccard, & Beamer, 1995). Individuals who have sex to avoid confrontation are avoidance motivated, engaging in unwanted sex to avoid painful circumstances and outcomes.

Interestingly, the factor *avoiding confrontation* yields the most common deceptive practices, including having sex with someone because they wanted to please their partner (51.3%), having sex though the person did not want to (36.0%), and having sex in order to maintain the relationship (27.3%). Although removed after the initial EFA analysis, a large proportion of individuals also lied about having an orgasm (45.7%), and telling their partners they were “great in bed” although the partner was terrible (31.1%; see Table 1 Notes). These findings are in concert with results from other studies regarding lies told (e.g., Knox et al., 1993), and they underscore the import of not wanting to disappoint partners and avoid painful situations. Further, the gender difference we found showing women’s likelihood to

use these complicit deceptions also agree with past research (e.g., Impett & Peplau, 2003).

Each of our factors fits well within the social exchange framework. Social exchange is performed to obtain rewards and avoid problems, while deceptive practices are costs given the possible negative consequences if the deceptions are discovered (Bok, 1989; Ford, King, & Hollender, 1988; Hample, 1980; Shibles, 1985). For the *Blatant Lying* factor, sex is the reward. For *Self-Serving* and *Avoiding Confrontation* factors, however, other rewards (such as money, clothing, companionship, relationship maintenance) are what individuals seek through sexual exchanges, with sex functioning as a cost to obtain such rewards. Indeed, self-serving lies may be told to obtain these other rewards, and when social exchanges are disrupted by various problems (e.g., a relationship breakup, confrontation, or partner displeasure), deceptive avoidance through unwanted sex may be used to minimize these problems and to keep one's partner happy. Sex therefore is utilized to gain or maintain rewards and to avoid confrontation. The exchange patterns noted above agree with prior research; for example, sex often is considered a motivating factor and positive experience (Cooper et al., 1998). Sex is also, however, something exchanged for various resources and outcomes in intimate relationships (e.g., Baumeister & Vohs, 2004; Buss, 1994; Impett & Peplau, 2003; Michaels et al., 1984; Sprecher, 1998).

Research done by Anderson (1986), DePaulo and colleagues (1996), Ekman (1996), and Kashy and DePaulo (1996) indicates that people lie, usually successfully, in their daily lives and in their intimate/sexual relationships (Burdon, 1996; Fischer, 1996; Knox et al., 1993; Rowatt et al., 1998; Stebleton & Rothenberger, 1993). Our study shows that intimate relationship lies may be conceptualized as a form of social exchange, with both approach and avoidance sexual motivations for deceptive practices and having sex. In addition, because past research also suggests that deception will continue to be used, a sexual deception scale is greatly needed to further investigate the role of deception in sexual relationships. Measures that indicate a person's propensity to deceive partners would have application in public health settings, where lying to relationship partners may lead to increased exposure to STDs (e.g., Keller et al., 2000; Sullivan, 2005). Indeed, our findings suggest that those who are more likely to deceive (across all factors) may be considered at risk for STD spread or exposure—those rating higher in deception report a greater number of sexual partners, are more likely to have a one-night stand, and lied more regularly about their number of sexual partners. In addition, those telling blatant lies to have sex are less likely to view themselves at risk for HIV with casual sex partners, and those scoring higher on the avoiding confrontation factor are less likely to use condoms.

Although we had no a priori expectations regarding the direction of associations between the subscales and

sex/intimacy needs and attitudes, the resulting patterns are interesting. Those using blatant lies to have sex report needing sex more often and with more partners, yet they are less likely to need somebody to love or even to date someone with whom they just had sex; these individuals may be more inclined toward short-term mating strategies and have an unrestricted sociosexuality orientation (Simpson & Gangestad, 1991). Individuals utilizing self-serving lies are less pronounced in needing sex (with only one significant finding), and they worry instead about relationship loss and have a need for a partner they can manipulate. This underscores the import of the broader relationship and related rewards for these individuals, compared with those who tell blatant lies to have sex where sexual gratification appears to be central. Those who have sex to avoid confrontation show no significant findings regarding sexual needs or partner manipulation. Instead, findings reflect worries of losing the relationship, thereby indicating that being in a relationship or relationship maintenance is important to these individuals, with unwanted sex used to avoid conflict.

Deceptions in exchange for sexual pleasure, as noted primarily in the *Blatant Lying* factor, were more likely to be used by males as compared with females. This finding may be explained possibly by males' tendency for greater sexual variety (e.g., Schmitt, 2003)—telling blatant lies to have sex as a short-term mating strategy to remove sexual barriers (Burdon, 1996). The lack of gender differences on the *Self-Serving* factor, however, are contrary to research suggesting women have a greater disposition to pursue resources (e.g., Buss, 1994), and to exchange sex for resources (Baumeister & Vohs, 2004, although they note that the gender difference may be less prevalent after the onset of sexual or intimate relationships). In the current study, it may be that the resources garnered through exchange (per the mostly nonspecific items in this factor) were equally attractive to both men and women. It is possible that if more specific exchange resources had been offered, gender differences might have been found.

How might these scales be used in applied settings? As already noted, those showing higher levels of deception (across any of the scales) could be targeted for intervention to reduce these practices since such deceptions can have detrimental effects not only on the ongoing relationship (e.g., Feeney, 2004), but also can promulgate STDs. Programs addressing safe-sex education (i.e., primary prevention programs either field based or in school settings) could incorporate the basic premise that individuals have varying motives for sex and often lie in order to have sex. More sobering, however, is that these lies actually work, and it is this information that would be ripe for inclusion into prevention programs. For example, a simple approach would be to have clients complete the scales as part of a prevention package and provide feedback regarding how much they have deceived their partners, further noting that their current

or prospective partners may deceive them as much if not more. Another application would be to emphasize to those who are avoidant motivated for sex (through having unwanted sex to avoid confrontation, or in some circumstances telling self-serving lies) that such motivations are particularly negative for relationships (Impett, Peplau, & Gable, 2005).

One major strength of this study is that the deception subscales are based on real behaviors. Hence, the resulting subscales are behaviorally based and arguably more viable than research based on hypothetical scenarios and situations. However, there are several limitations that need to be addressed. One limitation involves the age of the participants. Because the majority of participants were primarily younger and of White race/ethnicity, the results of this study may not apply to other populations. A second limitation is that the scale items were binary, and some suggest that factor analysis on such data require special treatment (Kubinger, 2003). Nunnally and Bernstein (1994), however, argue that alternative methods such as tetrachoric correlations can be problematic and continue to recommend correlations (i.e., phi coefficients) for binary factor analysis, which was done in this study. Finally, the scales developed do not address degrees of deception—the questions only ask participants whether they did certain things, not their opinions about doing the actions or how many times they had done these things. Questions asking whether a person would do a certain deceitful act again or ratings in rank order as to which deceitful acts are most undesirable would be useful in assessing the degrees of deception and lend more insight as to how many degrees of deception exist.

In sum, deception pervades our culture (Anderson, 1986; DePaulo & Kashy, 1998; Kashy & Depaulo, 1996), and the use of deception in intimate or sexual relationships can have negative consequences. This study illustrates that sexual deception may be understood as an exchange process, and it can be measured reliably and with good preliminary validation. As deception and related motives/outcomes are understood, better prevention efforts may be devised to educate individuals about deception and related effects. Educating individuals about these three types of deception and their motivations would make such deceptions easier to identify, and thus help individuals avoid the painful consequences associated with each.

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