

Sexual activity is inversely related to women's perceptions of the facial attractiveness of unknown men

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Abstract

A study was conducted to assess whether individual differences in sexual activity during the past 30 days, in particular penile–vaginal intercourse (PVI; which is associated with measures of relationship quality), are related to the perception of the facial attractiveness of unknown men. Forty-five women reported the frequency of a variety of sexual behaviors and rated the facial attractiveness and friendliness of 24 men. Women who reported more frequent orgasm from masturbation rated men as less friendly. This finding might be reflective of the more anti-social attitude associated with more frequent masturbation. The results also show that women who engaged more frequently in most kinds of sexual behavior, not only PVI, considered unknown men to be less facially attractive. That is, individuals who engage more frequently in a variety of sexual behaviors with their partner perceived unknown men as less attractive and thereby may be less susceptible to the lure of other (or if the only sexual behavior is masturbation, any) men.

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1. Sexual activity is inversely related women's perceived facial attractiveness of unknown men

One important factor for both men and women when considering sexual partners is physical attractiveness. According to the “good genes” hypothesis, this is because physical attractiveness is a valid marker for overall phenotypic quality (see Thornhill & Gangestad, 1999). In fact, women (especially when ovulating) consider men with more masculine faces to be more attractive (Johnston, Hagel, Franklin, Fink, & Grammer, 2001; Penton-Voak & Perrett, 2000; Penton-Voak et al., 1999) and facial masculinity has been shown to correlate positively with self-reported health in men (Thornhill & Gangestad, 2006). However, according to strategic pluralism theory, women have to trade signs of a man's genetic fitness for signs of his ability and willingness to invest in potential offspring (Gangestad & Simpson, 2000). In this vein, Fletcher, Simpson, Thomas, and Giles (1999) found that women who were asked to indicate the relative importance of several characteristics of partners for a dating or marital relationship considered warmth/trustworthiness most important, followed by attractive/vitality (both considerably more important than status/resources.) However, perceived warmth is positively related to babyfacedness (Berry & McArthur, 1986) – a facial type quite opposite to what makes a face masculine. Thus, with regard to long term relationships, physical attractiveness is only one of several criteria important for women's choice of a partner.

However, with regard to short-term relationships, men's and women's preferences are more aligned, such that both sexes prioritize physical attractiveness (Li & Kenrick, 2006). Interestingly, women who rated their current partners as low in sexual attractiveness reported more desire for men not their partners near ovulation than when fertility was low, suggesting a clear link between the attractiveness of the long term partner and the desire to associate with a different short-term partner when the personal reproductive implications were potentially greatest. These results suggest that the sexual relationship with current partners affects the way in which potential partners are perceived. More specifically, they may indicate that the fulfillment of sexual needs with a partner reduces sexual desires outside the current relationship. However, no study has assessed to what degree individual differences in sexual behavior are related to the perception of other men. The present study addresses this question.

Women with steady romantic relationships manifest considerable individual differences in the frequency with which they engage in various sexual behaviors, and this may impact both their relationship with the partner and their interest in men outside the partnership. It has been found that the frequency of penile–vaginal intercourse (PVI), but not of other sexual behaviors, is correlated positively with a number of relationship quality components as well as with global relationship quality (Costa & Brody, 2007). This might imply that the sexual needs of a woman who engages more frequently in PVI are better satisfied and therefore she may be less motivated to seek out other partners. Yet, motivations and goals influence the degree to which we attend to, as well as how we judge social stimuli (Neuberg, Kenrick, Maner, & Schaller, 2005), and even distort the very perception process on which such judgments are based (see Balcetis & Dunning, 2006). Thus, the goal of the present study was to assess to what degree individual differences in the frequency of sexual activity in the last 30 days, in particular, frequency of PVI, are related to the perceptions of the facial attractiveness of unknown men. Specifically, Costa and Brody (2007) found PVI frequency (and orgasm) but not other sexual behaviors, to be related to relationship quality and satisfaction. Hence we predicted that women who report higher rates of

PVI over the last 30 days, which in the present context would be an indirect marker of the quality of their current relationship, would rate unknown men to be less attractive.

2. Method

2.1. Participants

Forty-five Dutch women with a mean age of 20 years (range 18–30) participated individually. The data were collected as part of a larger study on emotion perception and emotion reactions.

2.2. Facial stimuli

Twenty-four pictures of men (12 Dutch, 12 non-Dutch) showing facial expressions of anger, fear, and happiness¹ were drawn from a set of photos of men and women collected at the University of Amsterdam. Different men showed different emotion expressions.

2.3. Dependent measures

Participants rated each man on two 7-point scales anchored with 1-not at all and 7-very much with regard to how friendly and attractive they considered the man to be.

2.4. Individual difference measures

2.4.1. Sexual behaviors

Frequencies of sexual behaviors were assessed by asking for how many days in the past month each of the behaviors occurred, and how often women had experienced orgasms from each behavior: penile–vaginal intercourse, vaginal masturbation, clitoral masturbation, partner-performed vaginal masturbation, partner-performed clitoral masturbation, receiving cunnilingus, and vibrator use during masturbation. The present behavior assessment schedule has been shown to be valid for the assessment of individual differences in sexual behaviors in a study examining the relationship of different sexual behaviors to components of partnership satisfaction (Costa & Brody, 2007). Earlier versions of the questionnaire were used in psychophysiological studies of female sexual arousal (Brody, 2007a; Brody, Laan, & van Lunsen, 2003). As the incidence of vibrator use was very low, this variable was not included in the following analyses. Variables were combined to reflect the classes of sexual behaviors of interest, specifically, non-partnered behavior (masturbation), orgasm from non-partnered behavior (masturbation), partnered behavior with the exception of PVI, orgasm from partnered behavior with the exception of PVI, PVI, and orgasm from PVI.

¹ Faces showing happiness were rated as more friendly and attractive than faces showing fear or anger. However, correlations are invariant with regard to differences in levels. Hence data from these stimuli were combined for the following analysis.

2.4.2. Social desirability

To assess social desirability responding, the Dutch version of a brief social desirability response bias scale (Ballard, 1992; Breugelmans & Van de Vijver, 2004) was employed.

3. Results

None of the variables correlated significantly with social desirability. Pearson correlations were used to assess the relation between individual differences in frequency of sexual behaviors and perceptions of facial attractiveness and friendliness (see Table 1). With regard to friendliness only a significant and negative correlation between perceptions of friendliness and frequency of orgasm from masturbation emerged. As regards perceptions of attractiveness, all sexual behaviors (except orgasm from penile–vaginal intercourse) correlated significantly and negatively with perceptions of attractiveness.

4. Discussion

The only significant (negative) correlation between frequency of different sexual activities and friendliness emerged for orgasm from masturbation. Friendliness is arguably a variable more pertinent to long term relationships, as it is closely associated with warmth – a central variable for

Table 1
Correlations between frequency of sexual behaviors and the perceived attractiveness and friendliness of unknown men

		Friendliness	Attractiveness
Masturbation	<i>r</i>	−0.246	−0.333
	<i>P</i>	0.112	0.029
	<i>N</i>	43	43
Masturbation orgasm	<i>r</i>	−0.316	−0.367
	<i>P</i>	0.044	0.018
	<i>N</i>	41	41
Partnered activities excluding PVI	<i>r</i>	0.056	−0.325
	<i>P</i>	0.717	0.030
	<i>N</i>	44	44
Partnered activities excluding PVI, orgasm	<i>r</i>	−0.182	−0.389
	<i>P</i>	0.250	0.011
	<i>N</i>	42	42
PVI	<i>r</i>	0.260	−0.305
	<i>p</i>	0.096	0.050
	<i>N</i>	42	42
PVI orgasm	<i>r</i>	0.003	−0.191
	<i>p</i>	0.986	0.250
	<i>N</i>	38	38

NB: some women chose not to respond to some items, therefore Ns vary.

long term partner preferences (see Fletcher et al., 1999) and hence might not be as influenced by individual levels of current sexual behavior. It is possible that those women who more frequently experience orgasm from masturbation have a more negative view of men, or of people in general. In fact, women's frequency of masturbation (but not frequency of intercourse) is associated with past or present depression (Cyranowski et al., 2004; Frohlich & Meston, 2002) and interestingly, depressed women report a more intense desire for masturbation, suggesting that rather than just being self-soothing, masturbation might exacerbate depressive symptoms. Of note, in the present study, the correlations for friendliness differed significantly between masturbation frequency (negative sign) and PVI frequency (positive sign) ($z = -2.32, p < .05^2$). This suggests that frequency of orgasm from masturbation is significantly more associated with an unfriendly outlook relative to the more friendly outlook associated with more frequent PVI. It might be that something about masturbation leads women to perceive less friendliness and warmth in others, which might in part be due to less friendliness and warmth in the self.

In contrast, the frequency of sexual activity in the last 30 days was systematically inversely associated with perceptions of the facial attractiveness of unknown men. However, contrary to our predictions, this applied to all sexual behaviors, except orgasm from PVI. That is, those women who engaged more frequently in sexual behaviors during the last 30 days perceived unknown men to be less facially attractive, rather than only women who had engaged more in the one sexual behavior associated with gene replication and good relationship quality – PVI (Costa & Brody, 2007).

Thus, unlike in a series of studies by Brody and colleagues which found that exclusively PVI, but not other sexual behavior, is associated with indices of better psychological and physiological functioning (Brody, 2003, 2004, 2006a, 2006b, 2007a, 2007b; Brody & Krüger, 2006; Brody & Preut, 2003; Brody, Veit, & Rau, 2000; Brody et al., 2003) – in the present study engaging more frequently in any sexual activity was found to dampen the perceived attractiveness of other men. This suggests that simply having experienced more sexual activity of any sort makes other potential sexual partners appear less attractive.

Interestingly in this context not only sexual activity that involves a partner but also masturbation has this effect. This observation is suggestive of the notion that dampening of some aspect of sexual drive may play a role. That is, with increased frequency of sexual activity, a potential sexual stimulus becomes less attractive because desire to engage in further sexual activity is low. However, sexual satiation is mediated by increased prolactin secretion, which is specific to orgasm (Exton et al., 1999, 2000), in particular, orgasm from PVI (Brody & Krüger, 2006), and this specific variable was not associated with reductions of men's perceived facial attractiveness. Also, the post-orgasmic prolactin surge is relatively brief, and unlikely to directly account for the present effect. Rather, it is likely that unknown men appear less attractive because women who are sexually more active are less motivated to search for a partner outside their present relationship than those who are less active, and this reduced motivation for new relationships affects their perceptions of potential new partners.

However, this latter explanation does not account for the observation that sexual activity that does not involve a partner seems to have the same effect on perceptions. It is, however, possible

² Test for the difference between two correlations; commonly unused statistics version 1.3.

that this effect is due to the fact that sexual drive reduction from masturbation is a meretricious signal in the sense used by Dawkins (1989). Specifically, Dawkins (1989) notes that for higher organisms, gene perpetuation was increasingly likely when one ate sweet tasting substances and obtained orgasm. However, this may lead the organism to be attracted to substances that have some seemingly similar properties but are valueless, and Dawkins cited saccharin and masturbation as the key examples. In the present case drive reduction from masturbation might falsely lead women to consider men they view to be less attractive.

The finding that PVI orgasm frequency did not have the expected negative association with men's perceived facial attractiveness might be due to a combination of two factors. First, compared to other sexual behaviors, PVI orgasm is associated with better mental health and the catecholaminergic homeostatic properties underlying some aspects thereof (Brody, 2007b; Brody & Krüger, 2006). This more optimal mental status could arguably "protect" women from the bias to perceive unknown men as less attractive. Second, there was less statistical variance for PVI orgasm than for the other variables.

The present study was restricted to women. This was based on considerations of differences in mating strategies between men and women, and the specific prediction that PVI frequency, but not other sexual behaviors would reduce the perceived attractiveness of other men. In the light of the present results it may be of interest to study the relationship between men's sexual behavior and their perception of other women.

Overall, the present study shows that whereas women might be more likely to choose attractive men as partners, especially for short-term relationships outside their primary relationship, the differences in the frequency with which women engage in sexual behaviors with their current partner are related to their perceptions of unknown men such that these men appear to them to be less attractive, thereby making those women less susceptible to the lure of other men.

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