

How intercourse frequency is affected by relationship length, relationship quality and sexual strategies using couple data

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Running head: INTERCOURSE FREQUENCY

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Abstract

The frequency of sexual intercourse within couples is associated with a variety of factors, such as relationship length, sexual and relationship satisfaction, and perceived quality of the relationship. Love, as a commitment device, might reduce interest in extra-pair sex. One can therefore expect a negative association between measures of passion and sociosexual desire. Further, we wish to explore the effects of decoupling love and sex as measured by sociosexual attitudes on sexual frequency; as there might be a greater willingness to compromise on frequency of sex if sex is less related to expression of emotions and relational quality. We examined how men and women's sociosexuality, relationship length and various dimensions of relationship quality impact couples' intercourse frequency. Structural Equation Modelling analyses were performed on data from 92 romantically involved, heterosexual couples recruited at a Norwegian university. Participants' age ranged from 19 to 30 years. The current relationship length ranged from one month to nine years ($M = 21$ months). Intercourse frequency decreased with increased length of relationship. Both men and women's ratings of relationship passion were strongly associated with frequency of having sex, but negatively associated with desire for extra-pair sex. Intercourse was more frequent in couples where women reported less restricted attitudes, while men's level of sociosexuality had no effect on intercourse frequency in any of the models. These novel findings suggest that while men in general might desire sex more, in this sample from a highly egalitarian nation, men might be compromising more than women do.

Public significance statement:

What decides the frequency of sex within romantic relationships? We examined how relationship length, relationship quality and short-term sexual orientation influenced frequency of sexual intercourse in 92 couples. How often couples have intercourse was predicted by the woman's short-term sexual orientation, and particularly her attitudes towards casual sex. We suggest that in a highly egalitarian country, men more than women compromise how often they have sex with their partner.

Introduction

How do factors in romantic relationships influence frequency of sexual intercourse? Studies repeatedly find that marital or relationship satisfaction is positively associated with sexual satisfaction (e.g., Impett, Muise, & Peragine, 2014; Litzinger & Gordon, 2005; Sprecher & Cate, 2004), and that frequency of sex is found to be positively associated with sexual satisfaction in most studies (e.g., McNulty & Fisher, 2008; McNulty, Wenner, & Fisher, 2016; Smith et al., 2011). Still, is what ways sexual frequency, sexual and marital satisfaction influence each other over time is less obvious, as the causal pathways between the factors have been difficult to assess. For instance, McNulty and colleagues (2016) found that sexual and marital satisfaction mutually affected one another over time. Although sexual satisfaction declined over time, the decline was muted by higher levels of marital satisfaction, and although marital satisfaction declined over time, the decline was muted by higher levels of sexual satisfaction. A link between sexual satisfaction and frequency of sex has also been found to differ between men and women. McNulty and Fisher (2008) found that changes in sexual satisfaction during a 6-8 month interval were moderately associated with changes in sexual frequency for men, while changes in frequency had no effect on changes in sexual satisfaction for women.

Sexual activity and level of sexual satisfaction tends to decline over the course of a relationship (e.g., Call, Sprecher, & Schwartz, 1995; Klusmann, 2002; McNulty & Fisher, 2008; Schmiedeberg & Schröder, 2016; Udry, 1980). For instance, Udry (1980) found a 25% mean reduction in intercourse frequency over a four-year period. A similar pattern was seen in a more recent study, were McNulty and colleagues (2016) found an even steeper decline in sexual frequency over a four-year period in their sample. The decrease is not only linked to age related factors, such as decline in

physical ability or increase of illness, since the decline is also seen in younger couples within early years of marriage (Call et al., 1995). Decreased interest in sexual activity is assumed to be the major factor influencing frequency of sex over the course of a relationship. In addition, decreased interest has been suggested to be an effect of increased accessibility of a sexual partner as well as increased predictability of sex with said partner (Call et al., 1995).

Relationship satisfaction can be measured with relationship quality, but it is a broad definition. Some aspects of relationship quality are more relevant than others when investigating sexual activity within the relationship. Relationship passion is a measure of infatuation or a more physical expression of love (Sternberg, 1986), and the latter has from an evolutionary perspective been functionally described as a commitment device (Frank, 1988; see also Fletcher, Simpson, Campbell, & Overall, 2015, for updated review of function of love). Gonzaga, Haselton, Smurda, Davies, and Poore (2009) found that love reduces desire for, and attention to, attractive members of the opposite sex. They suggest this evolved function of love protects the relationship from infidelity (see also Buss, 1987) and that relationship passion might be involved in regulating sexual intercourse within ongoing relationships. Grebe and colleagues (2013; see also Grøntvedt, Grebe, Kennair, & Gangestad, 2017) suggested that the function of extended sexuality in humans (e.g., sexual initiation and acceptance outside the fertile phase of the menstrual cycle) is to consolidate ongoing relationships.

The difference between desired frequency of sexual behavior and actual frequency of sexual behavior for individuals in relationships is referred to as sexual *desire discrepancy* (Willoughby & Vitas, 2012). Various studies have indicated that such discrepancies between partners in relationships influence relational outcomes

(e.g., Davies, Katz, & Jackson, 1999; Mark & Murray, 2012). For instance, Willoughby, Farero, and Busby (2014) reported that sexual desire discrepancy was negatively associated with general relationship satisfaction and positively associated with reported conflicts among the couples, even when controlling for baseline sexual frequency and desire. It has been suggested that how often the couple has sex would involve some kind of *compromise* of her and his desire (Peplau, 2003); meaning that both parties comply with the needs of the other. As noted, within relationships, changes in sexual satisfaction have also been found to be associated with changes in sexual frequency, but only for men (McNulty & Fisher, 2008).

Sexual strategies theory (Buss & Schmitt, 1993) hypothesizes that both men and women have evolved distinct psychological mechanisms that underlie long-term mating (i.e., committed relationships) and in short-term mating (i.e., casual sex or one-night stands) strategies. People vary in their sexual desires within as well as outside their committed relationships, which may result in sexual desire discrepancies. People further differ greatly in their preference for short-term sexual encounters, as measured with the sociosexual inventory (SOI; Simpson & Gangestad, 1991; SOI-R; Penke & Asendorpf, 2008). Cross-cultural studies suggest that men are generally less restricted than women (Schmitt, 2005). The theory of parental investment (Trivers, 1972) predicts sex differences in sexual psychology where women and men have faced different adaptive problems. These differences result in several different areas of sexual conflict (Buss, 2017).

Two such areas are general sexual desire and desire for short-term partners. The benefits of gaining sexual access to different fertile partners has throughout evolutionary history been considerable higher for men than women (Buss, 1995), and differences between men and women in desires and preferences for short-term sexual

encounters and multiple partners are thus expected. Men's desire for sex is markedly stronger than women's and ranks among the largest psychological sex differences with effects sizes (Cohen's *d*) typically in the .50 to 1.00 range (Baumeister, Catanese, & Vohs, 2001; Oliver & Hyde, 1993; Petersen & Hyde, 2010; Schmitt, 2003). The mentioned reviews and meta-studies find that men generally report having sexual fantasies far more often than women, men desire a higher number of sexual partners, and more sexual variation within relationships. Men also generally masturbate more often than women regardless of relationship status (Baumeister et al., 2001; Peterson & Hyde, 2010). Men are consistently and universally found to be more favorable towards casual, unrestricted sex than women, with effect sizes of .70 or higher across 48 nations (Schmitt, 2005). Findings of the proportion of men versus women who are willing to mate casually when asked by a stranger underline this (Clark & Hatfield, 1989), and married men report they are four times more willing than married women to have uncommitted sex (Ellis & Symons, 1990). In addition, there are substantial differences in men and women regarding desire for variety in sexual partners (Schmitt, 2003) and timing of desired first sexual intercourse (Buss & Schmitt, 1993; Kennair, Schmitt, Fjeldavli, & Harlem, 2009). If men in general have a stronger evolved sexual desire than women (e.g., Baumeister et al. 2001), this may cause friction and arguments over sexual frequency within couples. Disagreements concerning frequency of sex and intimacy are reportedly not uncommon in committed relationships (Byers & Lewis, 1988), but findings also suggest that couples tend to avoid communicating over sexual issues relative to non-sexual ones (e.g., Byers, 2011).

Consistent with the sex differences in desire, men initiate sex to a greater extent than women in early stages of new relationships as well as in marriages (Impett

& Peplau, 2003). This pattern has been reproduced across a variety of methods and in nations ranking high in sexual equality and liberty (Kennair et al., 2009; Grøntvedt, Kennair, & Mehmetoglu, 2015). Studies of sex differences in satisfaction with current frequency of intercourse suggest that men are less happy than women. For instance, in a population-based Australian sample of approximately 6,500 heterosexual participants, ranging from 16 to 64 years old, Smith and colleagues (2011) reported that 58% of women and 46% of men were satisfied with frequency of intercourse. This sex difference was particularly evident for those aged 25 and older. Among those dissatisfied with intercourse frequency, men far more often than women desired more frequent intercourse. Similar findings are reported by Træen (2010) from a sample of Norwegian adults. Given Peplau's (2003) compromise hypothesis, the above findings on satisfaction with frequency of sex suggest that coupled men in general tend to comply more often with the needs of their partner than coupled women do.

Despite sex differences, within each sex, relative to those more sexually restricted, unrestricted individuals have more casual sex, they are comfortable with having sex without love or commitment, and they more often desire sex outside ongoing romantic relationships (Penke & Asendorpf, 2008). Besides, previous sexual behavior is expected to affect future behavior across mating contexts. We argue below that certain dimensions of individual differences in sociosexuality, despite concerning mostly short-term sexual preferences, may affect the occurrence of sex in committed relationships.

Grøntvedt, Kennair, and Mehmetoglu (2015) did not find that individual differences in initiative were associated with sociosexuality for couples. For short-term relationships however initiative to sex was positively influenced by sociosexuality in both sexes. Both men and women who reported frequent sexual

desires for people that were not their current partner (i.e., the desire component of SOI), took more initiative to sex than their more restricted peers. This work focused on *initiative* to intercourse, not frequency of sex. In stable relationships, the more sexually restrictive partner is more likely to determine the frequency of intercourse by rebuffing sexual advances from their partners. Women are more often than men the restrictive partner (Byers & Heinlein, 1989). We therefore argue that sociosexuality, although mainly related to sexual desire outside an ongoing relationship, will influence the frequency of sexual intercourse within the relationship.

The current study

At first glance, sociosexuality may not be directly theoretically relevant for sexual behavior *within* couples. However, as a measure of interest in both short-term sex and extra-pair sex, current measures of unrestricted sociosexuality will be relevant for couples in ongoing romantic relationships in the following possible ways: First, previous sexual behavior (i.e., the behavior component of SOI measures a history of casual sex) might indicate something about a general physiological sex drive (Baumeister et al., 2001). On the other hand, long-term sexual behavior may be influenced by other evolved motivations and psychological mechanisms (Buss & Schmitt, 1993). Second, the current desire component of SOI measures sexual interest in others than one's current partner; in other words, a lack of exclusive sexual attraction to a current partner. As argued above the desire aspect of sociosexuality is predicted to be inversely related to relationship passion. From an evolutionary, functional perspective to love, passionate participants should be more committed to their partner (Frank, 1988; Gonzaga et al, 2009). Current relationship passion, including a focus on and an almost obsessive interest in one's partner (Acevedo,

Aron, Fisher, & Brown, 2012), will probably be negatively associated to desire and fantasies about others than one's partner.

Further, the attitude component of SOI is of interest as it measures how comfortable one is having sex in the absence of love, commitment and emotional closeness. In other words, how willing one is to detach sexual behavior from relationship factors and focus more on physical aspects or even have other reasons for having sex than primarily love (Kennair, Grøntvedt, Mehmetoglu, Meston & Buss 2007; Penke & Asendopf, 2008; Perilloux, & Buss, 2015). If Peplau's (2003) suggestion that couples' frequency of sex is a function of compromises related to inherent differences in sexual desire, then sociosexual attitudes might predict willingness to compromise. As a function of sexual desire differences there are sex differences in what sex takes the initiative to having sexual intercourse (e.g., Grøntvedt et al., 2015). Our novel suggestion is therefore that women's sociosexual attitudes may affect how willing they are to engage in sexual behavior with their partner with less feelings of emotional closeness and love. There is also evidence that classical models of sexual response do not always flow from desire to arousal for all women. For some women arousal from engaging in foreplay or sexual activities leads to desire (Sand & Fisher, 2007).

Taken together, this suggests that in relationships the more restricted partner is more likely to affect frequency of intercourse in ongoing relationships. Given women's more restricted sociosexuality, we predict that women's, but not men's sociosexuality, affect the intercourse frequency, especially in gender egalitarian cultures (Grøntvedt & Kennair, 2013; Simpson & Gangestad, 1991). The current study therefore considers both evolved sex differences and evolved individual differences, and how these regulate within couple intercourse frequency.

The following hypotheses will be tested:

H1: Both men and women's relationship passion will be strongly associated with intercourse frequency in couples, while other dimensions of the relationship are expected to be less strongly associated with frequency.

H2: Passion, as a reflection of infatuation and being in love, will be negatively associated with desire for extra-pair sex (the desire dimension of sociosexuality).

H3: The couple's relationship length will be negatively associated with frequency of intercourse.

H4: The couple's intercourse frequency is expected to be more strongly affected by women's than by men's sociosexuality. We predict especially that women's detachment of sex and love, as expressed by sociosexual attitudes, will affect intercourse frequency through greater willingness to compromise.

Method

Design and Participants

The study was a questionnaire based cross-sectional study on students in ongoing relationships and their partners. Ninety-two romantically involved, heterosexual couples were recruited at the campus of a Norwegian university. Participants age ranged from 19 to 30 years (women: $M = 22.0$; $SD = 1.8$; men: $M = 22.9$; $SD = 2.2$), with current relationship length ranging from one month to nine years ($M = 21$ months; $SD = 19$ months).¹

Procedure

Flyers with a short description of the study were handed out by the assistants around the university campus. In addition, recruiters were allowed to provide short

¹ Men and women almost perfectly agreed on the couple's relationship length ($r = .988$).

oral presentations during lecture breaks at campus. Information on the flyers included directions to the lab-area where the study took place, and that participants in a romantic, committed relationship needed to bring their partner to the lab-area in order to partake. Upon arrival couples were provided with written and oral information about the study and then separated into different rooms for responding. At completion, each participant independently handed in the questionnaire in a sealed envelope. Research assistants were available for questions during the completion of the questionnaire and for a debrief. Each couple received two cinema tickets for their participation.

Measurements

Sociosexuality. Participants' preference for short-term sexual relations was measured using the revised sociosexual orientation index (SOI-R; Penke & Asendorpf, 2008). The SOI-R is a 9-item measure covering three separate components: past casual sex behavior, attitudes toward casual sex, and desire. The behavior item *last year's number of casual sex partners* was not measured. The main reason for the omission was that we did not want to generate any additional distress to the participating couples by having them report on possible sexual infidelity in their ongoing relationship. Scaling and scoring for the 8-item scale and each of the three dimensions followed Penke & Asendorpf's recommendations. Scores were summed and averaged for each sex. Internal consistency was good for the behavior and attitude dimensions (α 's > .80) and acceptable for the desire dimension (α 's > .70).

Relationship quality. Participants perception of the quality of their current relationship was measured with the 18-items Perceived Relationship Quality Components Inventory (PRQC; Fletcher, Simpson, & Thomas, 2000). The inventory covers 6 inter-correlated domains of relationship quality: Satisfaction (e.g., *How*

happy are you in your relationship), Commitment (e.g., *How dedicated are you in your relationship*), Intimacy (e.g., *How close is your relationship*), Trust (e.g., *How dependable is your partner*), Love (e.g., *How much do you cherish your partner*), and Passion (e.g., *How sexually intense is your relationship*). The complete wording of the 18 items is found in the Appendix in Fletcher et al. (2000). Internal consistency for the 18-items Relationship Quality scale was excellent ($\alpha \approx .90$). For analysis, we treated the passion domain separately from the remaining non-passion domains. Both the 3-item *Passion* subscale and the 15-item *Non-Passion* subscale had good internal consistency (α 's $> .80$). Scores were summed and averaged for each sex.

Frequency of intercourse. Participants rated how often they had sexual intercourse on a 9-point scale; 1 (*Never*), 2 (*Rarely*), 3 (*Once every 2 or 3 months*), 4 (*Approximately once a month*), 5 (*Every other week*), 6 (*Approximately once a week*), 7 (*Several times a week*), 8 (*Almost every day*), and 9 (*At least once a day*). Within each couple, men and women's ratings of the frequency of sexual intercourse were largely similar (Pearsons's $r = .68$, Polychoric $Rho = 0.79$ [95% CI: 0.70, 0.89]). In the majority of the couples (61%), men and women's frequency ratings were identical. For ratings that did not match, 13% of the women and 26% of the men reported higher frequency than their partner.² For analyses, an aggregate couple score was derived by averaging men and women's responses.

Analyses

All statistical tests were performed using Stata/MP 15.1 for Mac (StataCorp, 2017). Path analyses were performed for dyadic data using Structural Equation Modelling (SEM) with estimation option 'maximum likelihood with missing values'

² Overall, men's ($M = 7.01$) ratings of the frequency of intercourse was slightly higher than women's ($M = 6.85$), $t(91) = 2.29$, $p < .05$, $d = 0.19$. The aggregate scores distribution was only slightly skewed (-0.95), hence not subject to any transformation.

(mlmv). Following the advice of Kenny and Ledermann (2010) regarding dyadic data, we also applied robust procedures for estimations of standards errors. Indirect effects were tested using mediation analysis for SEM (Mehmetoglu, 2017). Postestimation procedures for SEM was used for estimating variance (R^2) accounted for by the predictors in the model.

Ethics statement

The study was carried out in line with the American Psychological Association's ethical principles of psychologists and code of conduct. Prior to the data collection, the Norwegian Data Protection Services (Personvernombudet, NSD) was consulted. Any formal notification of the research was deemed unnecessary because Personal Data was not to be collected (i.e., information that can be used to identify individual persons). All project assistants signed a confidentiality form.

Results

All measures relevant for testing the hypotheses as shown in Table 1. To examine sex differences in the three sociosexuality dimensions we applied paired-sampled t-tests. There was no sex difference in number of casual sex partners (SOI-Behavior) was not significant, $t(91) = 0.26, p = .79, r = .39$, but men were moderately more accepting of casual sex (SOI-Attitudes) than women, $t(91) = 3.68, p < .001, r = .31, d = 0.45$). The moderate associations in sociosexual behavior and attitudes suggest assortative mating. With regard to casual sex desires (SOI-Desire), men reported doing this markedly more frequent than women, $t(91) = 7.85, p < .001, r = .16, d = 1.06$). Men had more frequent desires for casual sex than women's in 75% of the couples. In only 10% of the couples, women reported more frequent desires. Men and women's reported level of relationship passion and non-passion were generally high, did not differ between the sexes. Men and women largely agreed on the quality

of their relationship (moderate-to-strong associations). The passion dimension of relationship quality was substantially associated with the couples' intercourse frequency for both men and women, while the associations for the non-passion dimensions (i.e., Satisfaction, Commitment, Intimacy, Trust, and Love) were nonsignificant.

For testing Hypothesis 1 we included men and women's passion and non-passion ratings as predictors to intercourse frequency in a path model. Only the paths from men's passion ($\beta = .52$) and women's passion ($\beta = .36$) affected frequency. Once passion was accounted for in the model, the non-passionate aspects of the relationship showed no association with intercourse for neither men ($\beta = -.02$) nor women ($\beta = -.16$).

We tested Hypothesis 2 in a path model predicting men and women's passion ratings from their respective desire components of SOI-R. We expected that passion, as a reflection of infatuation and being in love, would be negatively associated with desire for extra-pair sex. As shown in Figure 1, women's relationship passion rating was somewhat lower ($p = .052$) when their own desire for extra-pair sex was higher, and clearly lower when their partner's (men's) desire for extra-pair sex was higher. Men's relationship passion rating was clearly lower when their desire for extra-pair sex was higher, and somewhat lower ($p = .059$) when their partner's (women's) desire for extra-pair sex was higher.³

For testing Hypothesis 3, we correlated the couples' frequency of intercourse with relationship length. As shown in Table 1, how frequent the couples had sex was

³ As seen in Table 1, the zero-order correlations between women's sociosexuality desire on the one hand and men and women's passion scores on the other were significant (both $r = -.23$, $p = .028$). The marginal effects were not affected by applying robust estimates of standard errors.

negatively associated with increased relationships length ($r = -.30$). The robustness of this association was examined in a more complex path model (SEM) that also accounted for the effects of men and women's sociosexuality (Figure 2). In this model, relationship length was negatively associated with women's unrestricted sociosexuality ($\beta = -.42$). As predicted (Hypothesis 4), women's sociosexuality affected intercourse frequency. Unrestricted *women* had significantly more often intercourse than women being more restricted, producing a total effect of $\beta = .30$. As shown in Figure 2, the effect was primarily a direct one ($\beta = .22$), but an additional mediation analysis using the Baron and Kenny approach (Mehmetoglu, 2017) suggest that relationship length partially accounted for the effect of women's sociosexuality on couple intercourse frequency (accounting for 28% of the total effect). In stark contrast, *men's* sociosexuality did not show *any* association with neither relationship length nor frequency of intercourse.

As seen in Figure 2, a couple's intercourse frequency was moderately associated with higher general relationship quality for men and women. The effect of own and partner's sociosexuality on relationship quality ratings for women and men was small. Still, unrestricted men (higher on SOI-R), but not women, tended to give lower ratings of the quality of their relationship.⁴ Men's sociosexuality did not affect women's relationship quality ratings and vice versa. In the model, men and women's overall sociosexuality (SOI-R) and relationship quality ratings were moderately associated. The two factors significantly affecting intercourse frequency were women's sociosexuality and relationship length (accounting for 11.5% of the variance, R^2).

⁴ The effect of women's Sociosexuality on their Relationship quality was not significant also when we applied robust estimates of the Standard Errors ($p = .098$).

Additional analyses of relationship aspects and dimensions of sociosexuality affecting intercourse frequency

In Hypothesis 4 we predicted especially that women's detachment of sex and love, as expressed by sociosexual attitudes, would affect intercourse frequency through greater willingness to compromise. To examine this, we specified a model that included only the attitudes component of SOI-R and the passion dimension of relationship quality. Relationship length was dropped from the specific model (Figure 3) as it showed no association with any of the outcomes.

The path analyses presented in Figure 3 revealed two important findings. First, the couples' intercourse frequency was moderately and positively related to women's unrestricted attitudes toward casual sex. Second, men rated their relationship as more passionate when their partner had less restricted attitudes toward casual sex.

Additional analyses suggest that the effect of women's sociosexual attitudes on the couple's intercourse frequency was robust, while the effect of women's attitudes on her partner's (men's) relationship passion rating was less robust ($p = .055$). Notably, women's relationship passion rating was neither affected by her own nor her partner's attitudes, and men's attitudes toward casual sex did not affect the couple's frequency of intercourse.

Finally, we applied mediation analysis for a closer examination of the relationship between women's sociosexual attitudes, men's relationship passion rating and the couple's intercourse frequency within the specific model. In the first mediation model, we found that intercourse frequency *completely* mediated the effect of women's attitudes on men's passion. In the second mediation model, we found that men's passion *partially* mediated the effect of women's attitudes on the couple's intercourse frequency (28% of the effect was mediated by men's passion).

Apparently, the frequency of intercourse had a stronger impact on men's ratings of relationship passion than the other way around.

Discussion

In this study of romantic couples, we examined men and women's sociosexuality, relationship length and various dimensions of relationship quality impact intercourse frequency. We investigated the dynamic interplay between love as a commitment device and sociosexual (extra-pair) desire. In support of the compromise hypothesis (Peplau, 2003) our novel findings suggest that frequency of intercourse was unrelated to men's sociosexuality. However, intercourse frequency was predicted by women's sociosexual attitudes. Hypothesis 1 was supported as only the passion dimension of relationship quality was related to intercourse frequency. Once passion was accounted for there was no effect of the remaining relationship domains (i.e., Satisfaction, Commitment, Intimacy, Trust, and Love). Hypothesis 2 was also supported: both men and women showed the predicted negative association between relationship passion and desire for extra-pair sex.

In support of Hypothesis 3, with increasing relationship length, the frequency of intercourse steadily dropped, and this effect was not accounted for by men or women's sociosexuality or overall relationship quality in the multivariate model. Still, the effect was smaller than reported in previous studies (e.g., McNulty et al., 2016). This is most likely because of the relatively low age of the sample in this study and the high proportion of couples being together for less than one year (40%).

In support of Hypothesis 4, woman's sociosexuality affects intercourse frequency in such a way that more frequent sex was reported among women being more unrestricted. There was no such effect of the men's sociosexuality. Additional analyses suggest that it was the woman's attitudes toward casual sex that had the

strongest impact on intercourse frequency. Possibly, sexually unrestricted women, who to a lesser degree linked sex to relationship commitment and emotions, appear to be less influenced by signals from their partner indicating less investment, commitment, or feelings of love. For sexually restricted women, such signals would result in downward adjustment of sex and a decline of their partner's initiative. Hence, given that men more often than women take initiative to sex toward their partner (i.e., Baumeister et al., 2001; Grøntvedt et al., 2015), women's sociosexual attitudes seem to be influential for the outcome; whether they have sex or not. Our findings suggest that relationship passion down-regulate desire for extra-pair encounters (i.e., fantasies are less easily activated). As such, the current research is in line with earlier work on the evolved function of love as a commitment device (Fletcher et al., 2015; Frank, 1988), supporting the findings of Gonzaga and colleagues (2009).

The factor that best predicted couples' intercourse frequency was women's positive attitudes toward uncommitted sex. Women, more than men, have sex because of love, and emotional or relational reasons (Kennair et al., 2015; Meston & Buss, 2007). Short-term oriented men and women have sex more because of physical reasons (Kennair et al., 2015; Meston & Buss, 2007). The more detached sex is to love and commitment for women (as measured by sociosexual attitudes), the more they possibly are willing to compromise, shifting the frequency somewhat toward their partner's ideal frequency. It is worth noting though, that despite this effect of women's sociosexual attitude scores, neither men's relationship quality nor sociosexuality scores affected intercourse frequency systematically. Thus, there may just be an effect of a general greater male desire.

The results suggest that men compromise more on the frequency of having sex in general than women (i.e., they want more), but when women have less restricted sociosexual attitudes they might not mind compromising, as sex does not link as strongly to love. Possibly, physical aspects of sex might be of greater relevance to these women. Further, the compromise may reflect women's higher desire for sex with current partner and more frequent initiative to intercourse. As shown by Grøntvedt and colleagues (2015), in relationships of longer duration, intercourse occurrence was more contingent upon women's initiatives than men's initiatives.

The above findings are from a highly gender egalitarian nation. It is possible that women's influence on frequency of sexual intercourse in couples may be the result of culture. Relevant cultural aspects may be greater gender equality and respect of women's rights and wishes. Despite sex differences in sexual desire across nations, also in gender egalitarian countries (e.g., Schmitt, 2005), frequency will often be the result of some form of negotiation and compromise. In studies of Norwegian students, Kennair and colleagues (2009) found that while women were significantly more satisfied with the frequency of intercourse in the couple, men took the initiative more often, and Grøntvedt and colleagues (2015) found that men took the initiative to having intercourse far more often than women. Still, it is possible that women's interest in sex will influence frequency less in countries that are less gender egalitarian, or where women's rights are less respected. To address this specifically, we would need matched data from less gender egalitarian societies

Limitations and future research

In a large sample of couples, we observed a novel effect of decoupling love and sex (as measured by sociosexual attitudes) on sexual frequency. There might be a greater willingness to compromise on frequency of sex if sex is less related to

expression of emotions and relational quality. Our inclusion of sociosexual desire and casual sex fantasies *outside* the current relationship, appear relevant for central aspects of the relationship. Specifically, more passionate relationships were associated with higher frequency of sex and less desire for extra-pair sex. Still, causality could not be determined in this cross-sectional data. Furthermore, this investigation did not cover measurements of overall libido, overall sexual desire towards current partner, or any measure of ideal frequency of intercourse as a proxy for sexual desire. To better understand the dynamics investigated in the current study, future studies could benefit from an inclusion of casual sex desires in addition to measures of desired frequency of sexual intercourse and sexual desire toward current partner using longitudinal designs. In addition, individual differences that might predict both men and women's willingness or reluctance to compromise to sex are compliance or agreeableness on the one hand, and Machiavellianism, narcissism, and psychopathy on the other (Koehn, Okan, & Jonason, 2018).

The current findings are from a highly egalitarian nation (Bendixen, 2014; Grøntvedt & Kennair, 2013). As such, women's influence on frequency of couple sexual intercourse may be because of culture, greater gender equality and respect of women's rights. In cultures characterized by low levels of gender equality, women's opportunity to consent to sex might be restricted. However, in egalitarian cultures, the more restricted partner is likely to down-regulate if and when sex occurs (Simpson & Gangestad, 1991). This warrants future cross-cultural comparisons considering the moderating effect of egalitarianism on the association between women's sexual psychology and frequency of intercourse in couples.

Conclusion

In this study we examined how sociosexuality, relationship length, and dimensions of relationship quality influenced couples' intercourse frequency. As predicted, more passionate relationships were associated with less desire for extra-pair sex for both men and women. We also reproduced previous findings of reduced frequency of intercourse with increased relationship length (see Klusmann, 2002, for a sample of similar age). The factors that predict couples' intercourse frequency were all related to women's sociosexuality; especially women's attitudes toward casual sex. It is claimed that intercourse frequency will often be the result of some form of negotiation and compromise (Peplau, 2003). Our findings suggest that in couples, men might compromise more than women do.

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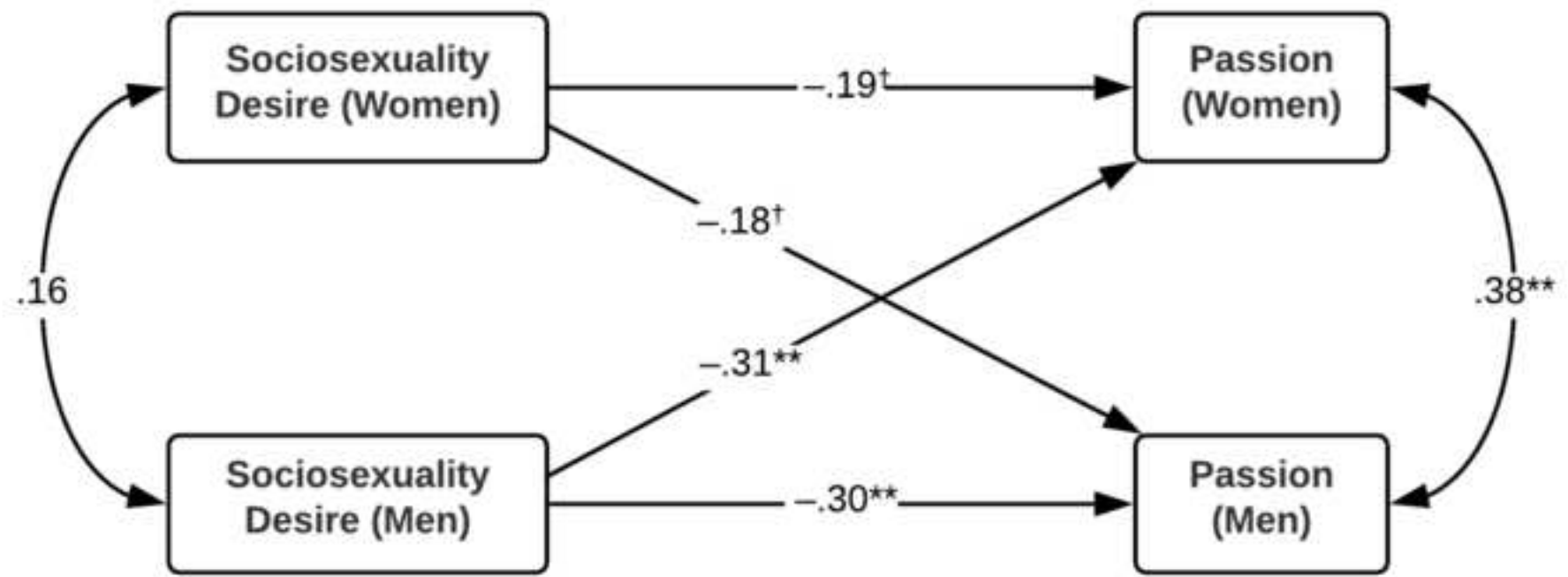
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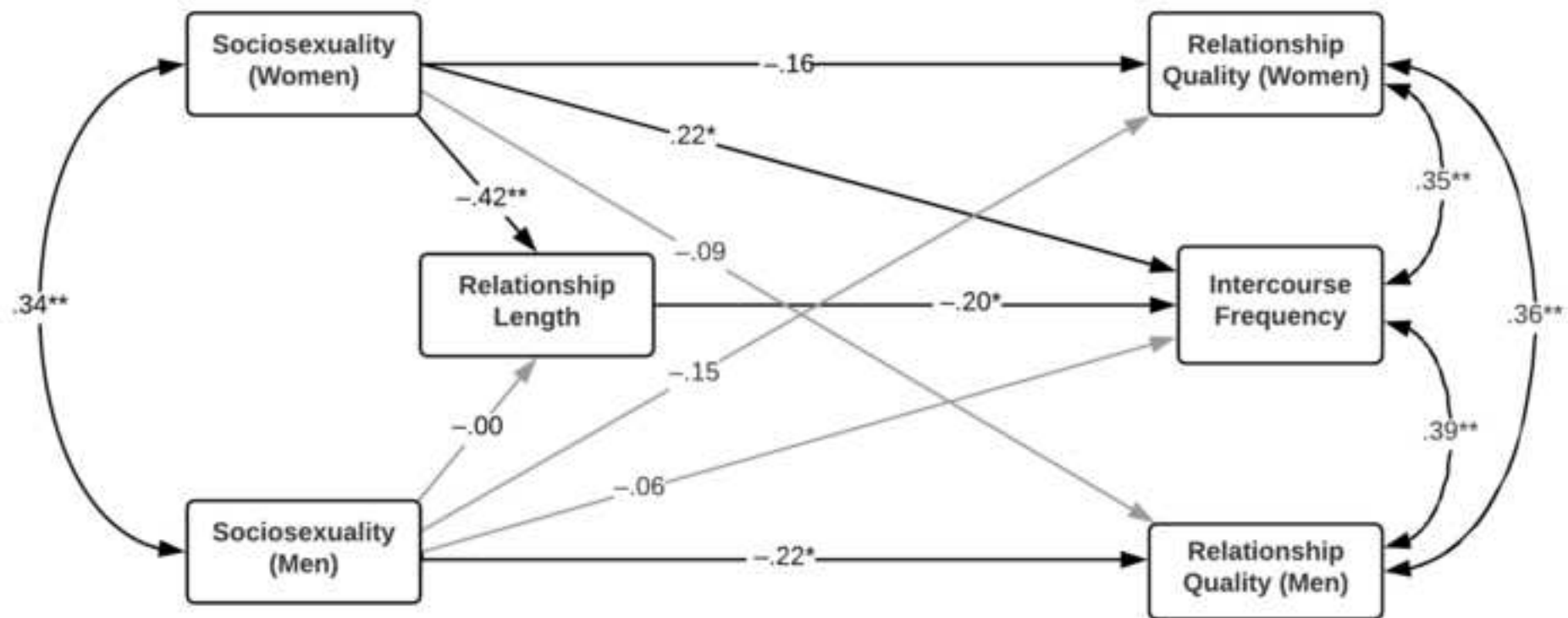
Table 1.

Correlations (Pearson's r), Means, and SDs Across All Measures for Couples, Women and Men ($n = 92$ women, $n = 92$ men)

Variable	Couples				Women				Men					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Frequency of Sex	—													
2. Relationship Length	-0.30	—												
3. Women Age	-0.08	0.29	—											
4. Women Non-Passion	0.14	0.23	0.01	—										
5. Women Passion	0.55	-0.24	-0.18	0.49	—									
6. Women SOI-Behavior	0.29	-0.41	0.19	-0.06	0.08	—								
7. Women SOI-Attitudes	0.30	-0.34	-0.02	-0.14	-0.01	0.53	—							
8. Women SOI-Desire	-0.07	-0.17	0.06	-0.51	-0.23	0.26	0.29	—						
9. Men Age	-0.02	0.17	0.60	-0.03	-0.23	0.16	0.04	-0.03	—					
10. Men Non-Passion	0.18	0.07	0.07	0.41	0.26	0.00	-0.22	-0.36	0.01	—				
11. Men Passion	0.61	-0.24	-0.05	0.08	0.47	0.11	0.15	-0.23	-0.08	0.48	—			
12. Men SOI-Behavior	0.28	-0.26	0.21	-0.06	0.13	0.39	0.30	-0.02	0.29	-0.01	0.18	—		
13. Men SOI-Attitudes	0.03	-0.19	0.13	-0.20	-0.11	0.28	0.31	0.07	0.16	-0.33	-0.14	0.62	—	
14. Men SOI-Desire	-0.23	0.14	0.09	-0.20	-0.34	0.06	0.11	0.16	0.14	-0.25	-0.33	0.26	0.38	—
Mean	6.93	21.43	22.00	6.28	5.59	3.43	5.34	2.13	22.90	6.23	5.61	3.50	6.35	3.44
SD	0.78	19.27	1.78	0.48	0.78	2.29	2.22	0.95	2.17	0.49	0.91	2.36	2.30	1.44

Note. SOI = Sociosexuality. Correlations $\pm .205$ and higher are significant at $p < .05$ for $n = 92$





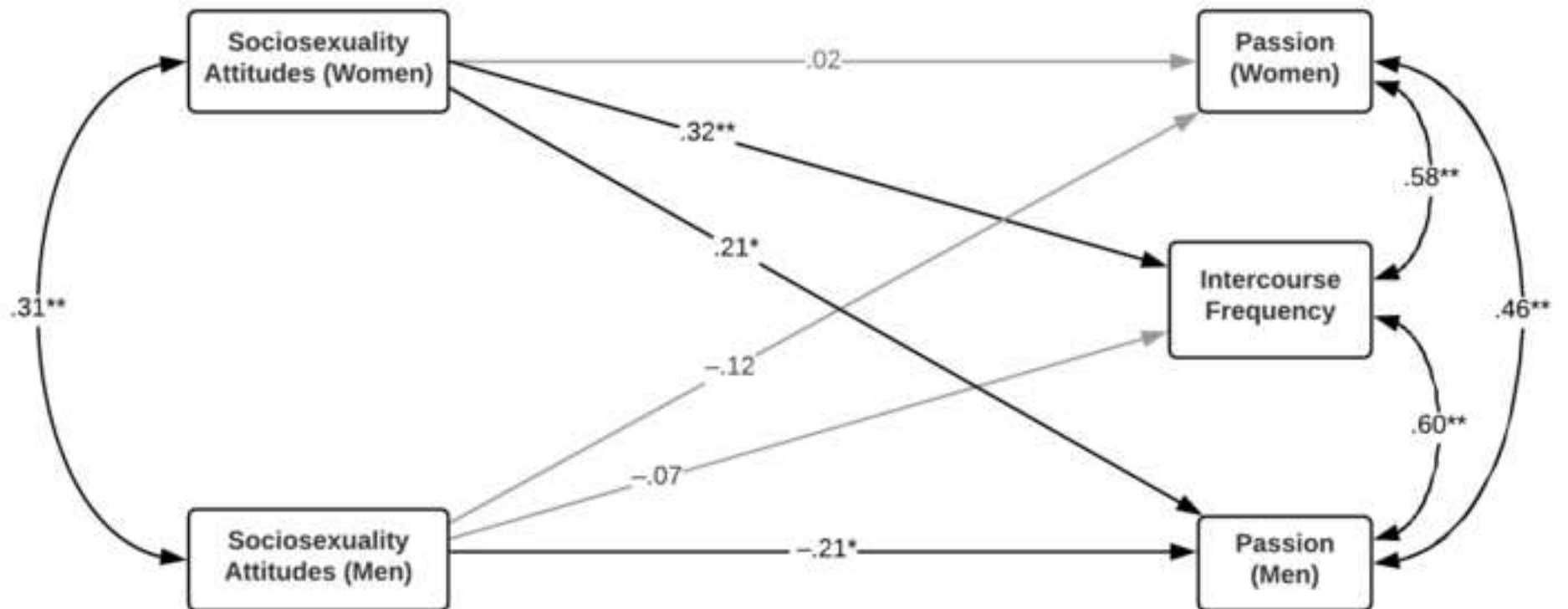


Figure 1. The effects of sociosexual desire on relationship passion using couple data.

† $p < .10$, ** $p < .01$.

Figure 2. The basic model for predicting couples' intercourse frequency.

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

Figure 3. The specific model for predicting couples' intercourse frequency.

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