

Understanding extradyadic sex and its underlying motives through a dualistic model of sexual passion

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Abstract

Extradyadic sex in monogamous romantic relationships represents a violation of trust that has been associated with adverse personal and relationship outcomes. Although relational factors related to extradyadic sex have been extensively studied, few individual sexual factors have been identified, and these factors have remained one-dimensional. The present research proposes that sexual passion, as defined by the dualistic model of sexual passion, can help better understand extradyadic sex and its underlying motives by distinguishing two types of sexual passion. Study 1 (631 students, mean age = 24.92 years) showed that obsessive sexual passion (OSP), but not harmonious sexual passion (HSP), was related to past extradyadic sex, conflict between sexuality and the maintenance of long-term romantic relationships, and ego-invested motives for engaging in extradyadic sex. Study 2 (84 students, mean age = 28.49 years) used a longitudinal design and showed that OSP, but not HSP, predicted prospective extradyadic sex. In addition, results revealed that men with an OSP reported engaging in extradyadic sex more often

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and with more partners than other individuals. These studies underline the importance of using a two-dimensional approach to understand how sexual passion relates to extradyadic sex.

Keywords

Extradyadic sex, infidelity, romantic relationships, sexuality, sexual passion

Extradyadic sex corresponds to sex that occurs in violation of a partner's understanding that the relationship is monogamous. It is estimated to occur in about 20% of adult romantic relationships (Mark, Janssen, & Milhausen, 2011). The discovery or revelation of extradyadic sex has been linked to negative emotional consequences for the betrayed partner (Allen et al., 2005) such as shame and rage (Olson, Russell, Higgins-Kessler, & Miller, 2002). In addition, extradyadic sex has been identified as one of the most harmful relationship events (Gordon, Baucom, & Snyder, 2008) and has been associated with relationship dissolution (Frisco, Wenger, & Kreager, 2017).

Despite these critical consequences, little is known about individual sexual differences leading a person to engage in extradyadic sex. Research on individual sexual factors has been limited to using one-dimensional constructs such as a sociosexual orientation or sexual desire to predict the likelihood of being unfaithful. A broader understanding of sexual factors could better orient effective prevention and intervention strategies. In the present research, we propose that the concept of sexual passion as an individual two-dimensional sexual factor (Philippe, Vallerand, Bernard-Desrosiers, Guilbault & Rajotte, 2017) can help gain a deeper understanding of extradyadic sex and its underlying motives.

Sexual passion

The dualistic model of sexual passion (Philippe et al., 2017) has been developed based on the dualistic model of passion for activities (Vallerand et al., 2003; Vallerand, 2015). The literature on passion for activities defines passion through affective, cognitive, and behavioral criteria. Passion for an activity implies a strong inclination toward an activity that is loved. Cognitively, the activity is highly valued and is considered personally important. In addition, the person invests time and energy on a regular basis in the passionate activity (Vallerand, 2015). It has been argued that the same definition could be applied to the concept of sexual passion. Individuals with a high sexual passion would love and value sexuality, identify as a sexual person, and frequently engage in sexual activities (Philippe et al., 2017, 2019). Based on this latter model, sexual passion is defined as a stable motivational drive that pushes individuals to engage in both partnered and non-partnered sexual activities (Philippe et al., 2017, 2019). Within this model, sexual passion is therefore not conceptualized as a situational emotion felt toward a partner (e.g., Vohs & Baumeister, 2004), but rather as a stable motivational drive to engage in various types of sexual activities.

Furthermore, the dualistic model of sexual passion distinguishes between two types of passion: harmonious sexual passion (HSP) and obsessive sexual passion (OSP) (Philippe

et al., 2017; Vallerand, 2015). Both types of sexual passion are characterized by the passion criteria of loving, valuing, and frequently engaging in sexual activities. Also, both types of passion have been positively associated with solitary and dyadic sexual desire (Philippe et al., 2019) and with an unrestricted sociosexual orientation (Philippe et al., 2017), thus suggesting that they both reflect a high inclination toward sexuality. However, each type of passion is the result of distinct cognitive internalizations of sexuality in identity and each has therefore distinct consequences.

HSP develops as a result of an autonomous internalization (Vallerand et al., 2006) of sexuality, which implies that sexuality has been internalized freely and without internal or external pressures. This means that people have learned about sexuality and that they integrated aspects of sexuality in ways that promoted their free exploration of their sexual desires and needs and that they felt little pressure to behave in certain socially prescribed or stereotypical ways. As a result, they feel free to make their own choices regarding sexuality and express sexuality in ways that reflect their own values and according to what they believe is important and enjoyable (Deci & Ryan, 2000). In other words, they feel an internal locus of causality relative to their own sexuality (Hagger & Armitage, 2004). Since choices are authentic, sexuality is more likely to be coherent with other self-aspects and less likely to conflict with them (Mageau, Carpentier, & Vallerand, 2011).

Conversely, when sexuality is internalized in a controlled fashion, following interpersonal and/or intrapersonal pressures, it results in an OSP (Mageau et al., 2011; Vallerand et al., 2006). Pressures may include societal prescriptions on how to dress in ways that are socially perceived as attractive or regarding how to express sexuality following stereotypical norms (e.g., sexual intercourse should last long). With this form of internalization, norms, values, and beliefs related to sexuality are imposed onto the person and are less likely to reflect the person's own values (Deci & Ryan, 2000). This means that people have integrated aspects of sexuality in ways that were not in line with their sense of self. In other words, people with an OSP feel an external locus of causality in regard of their sexuality (Hagger & Armitage, 2004). Given this type of internalization, sexuality is not part of an integrated self, is more conflicting, remains associated with contingencies, such as feelings of self-esteem or social acceptance, and nourishes ego-invested structures (Mageau et al., 2011). For instance, people with an OSP may feel that their self-esteem is tied to the way they express their sexuality (e.g., they may only feel good about their sexual intercourse when they conform to social norms, such as being long-lasting and expressing performance).

Drawing from the Dualistic Passion scale for activities (Vallerand, 2015), a scale assessing both forms of sexual passion has been developed and confirmatory factor analyses have supported a two-factor model of sexual passion (Philippe et al., 2017). Moreover, such a dualistic conceptualization of sexual passion has been shown to be distinct from many other existing potentially related constructs, such as attachment, romantic or relational passion, sexual satisfaction, sexual desire (solo or dyadic), sexual compulsivity, relationship quality, sociosexuality, personal self-control, and psychological distress (Philippe et al., 2017, 2019).

Each type of passion has also been associated with different consequences. Given that in HSP, sexuality is autonomously internalized, goals associated with this activity stand

in harmony with other goals (Young, de Jong, & Medic, 2015), including romantic goals. Accordingly, HSP has been positively associated with higher relationship quality and couple adjustment (e.g., Philippe et al., 2017, 2019). HSP has also been either negatively associated or unrelated with impulses that could be harmful to relationship stability such as attentiveness to romantic alternatives while engaged in a romantic relationship (Philippe et al., 2017, 2019). Thus, HSP should reflect a sexuality that does not conflict with the establishment and maintenance of long-term romantic relationships.

Conversely, in OSP, sexuality is more likely to conflict with other self-aspects (Philippe et al., 2017, 2019) and ongoing goals (Young et al., 2015). As such, OSP has been found to be either negatively related or unrelated to relationship quality and couple adjustment (Philippe et al., 2017, 2019). It has also been positively associated with attentiveness to alternatives (Philippe et al., 2017, 2019) and found to prospectively predict relationship dissolution (Philippe et al., 2017). Thus, in OSP, sexuality is felt as imposing itself on the person and the person feels the need to satisfy his/her sexuality even at the expense of maintaining a long-term monogamous romantic relationship, which may generate a feeling of conflict between sexuality and long-term relationships.

Other factors associated with extradyadic sex

Research on extradyadic sex has revealed several factors that can explain in part why people are sometimes inclined to (and ultimately do) engage in extradyadic sex. First, research found biological sex differences in extradyadic involvements showing that men in heterosexual relationships are more likely to engage in extradyadic sex than women (Allen & Baucom, 2004; Frisco et al., 2017). However, this difference tends to be weaker with younger cohorts (Allen et al., 2005) and some studies report no such difference (e.g., Barta & Kiene, 2005). Still, there seems to be a gap in the number of extradyadic partners men and women report, with men reporting more partners than women (Allen & Baucom, 2004).

Relationship satisfaction or adjustment and sexual satisfaction have often been negatively related to extradyadic sex (Mark et al., 2011). Also, attachment avoidance has been positively associated with extradyadic sex (Allen & Baucom, 2004; Beaulieu-Pelletier, Philippe, Lecours, & Couture, 2011). Another factor that has received much attention in relation to extradyadic sex is an unrestricted sociosexual orientation (Simpson & Gangestad, 1992), which has been associated with past extradyadic sexual involvements (Barta & Kiene, 2005) and a greater willingness to engage in extradyadic behaviors (Mattingly et al., 2011). Finally, another factor found in the literature is sex drive or interest toward sexuality, which has been linked to greater involvement in extradyadic sex (Treas & Giesen, 2000).

In sum, past studies have documented several factors related to extradyadic sex, mostly relational ones (e.g., Sprecher, 1998), and studies that focused on individual sexual factors have typically used concepts that are restricted to a one-dimensional perspective of how the presence or absence of an inclination toward sexuality can lead to extradyadic sex. Moreover, there exist few theoretical sex models explaining extradyadic sex apart from predisposing factors (Allen et al., 2005). Accordingly, research has led to the conclusion that a higher inclination toward sexuality is associated

with a greater likelihood of being unfaithful. This appears over simplistic and risks the stereotyping of people experiencing a high sex drive. The dualistic model of sexual passion suggests that the picture is more nuanced and that it depends on how sexual representations have been internalized—in an autonomous or controlled fashion—thereby leading to different types of sexual passion, each with different consequences on extradyadic sex. In the present research, we suggest that there are two types of high inclination toward sexuality (HSP and OSP) and that each is differently related to extradyadic sex occurrence and the motives underlying it.

The present research

The present research sought to test how HSP and OSP are related to the occurrence of extradyadic sex and how they foster different motives to engage in extradyadic sex. In the first study, we examined cross-sectionally how HSP and OSP are related to past extradyadic sex, to conflict between sexuality and the maintenance of long-term romantic relationships, and to potential motives to engage in extradyadic sex. We also explored whether the results were similar for partnered and single participants. Based on past studies (Philippe et al., 2017, 2019), we expected to find the same pattern of association between sexual passion and extradyadic sex for single and partnered participants. Study 2 sought to test the direction of the relationship between sexual passion and extradyadic sex experiences over approximately a year in partnered participants using a prospective design. As extradyadic sex has been linked to sex, age, attachment, sexual satisfaction, sexual desire, and couple adjustment (e.g., Allen et al., 2005; Allen & Baucom, 2004), we controlled for these covariates in the studies.

We expected that only OSP would be associated with having had extradyadic sex in the past. Furthermore, when followed over 1 year, only OSP should prospectively predict extradyadic sex, frequency of extradyadic sex, and number of extradyadic partners. Finally, both HSP and OSP should be associated with physical motives for having extradyadic sex, but only OSP should also be associated with ego-invested motives (i.e., motives that are not directly associated with sexual pleasure, but compensatory or ego-threatening in nature) for having extradyadic sex (e.g., for revenge, to boost self-esteem) and with difficulty in maintaining long-term relationships because of sex interest.

Study I

Study 1 examined whether HSP and OSP would be associated with past experiences of extradyadic sex, in single and romantically involved participants. Because in OSP, sexual passion conflicts with other life aspects, such as romantic relationships, we expected that OSP would be positively associated with past extradyadic sex. Conversely, because in HSP sexuality is integrated with other life aspects, we expected HSP to be unrelated to past extradyadic sex. In addition, given that a controlled internalization of sexuality leads to interference between sexuality and other life aspects (Young et al., 2015), we expected that OSP would be associated with conflict between sexuality and the maintenance of long-term romantic relationships, whereas HSP would not.

We also expected OSP and HSP to be associated with different hypothetical motives to engage in extradyadic sex. Given that participants were asked to identify motives for which they would engage in extradyadic sex *if* they were ever in a position to engage in such behaviors and given that both HSP and OSP are indicative of an interest in sexual activities (Philippe et al., 2019), we expected both to be associated with physical hypothetical motives for extradyadic sex. However, only OSP reflects a sexuality that is associated with contingencies such that sexuality can be used to fulfill sexual needs as well as other needs and desires. On the other hand, HSP reflects a sexuality that has been autonomously internalized and that should not be associated with contingencies. Therefore, we hypothesized that OSP would be associated with ego-invested (e.g., to boost self-esteem) or compensatory (e.g., to attenuate feelings of loneliness, for revenge) motives for having extradyadic sex, whereas HSP would not. None should seek extradyadic sex to find love, because love represents a relational motive to engage in extradyadic sex; in HSP, relational incentives should be obtained through the relationship with the primary partner, whereas in OSP, sexuality is not enmeshed with relational motives (Philippe et al., 2017). Based on past findings (Philippe et al., 2017), we expected to find the same pattern of associations for single and coupled participants regarding extradyadic sex occurrence and its underlying motives. However, as singles may now be single because of their difficulty balancing their sexuality and romantic life, they may report experiencing greater conflict between sexuality and the maintenance of romantic relationships. In all analyses, we controlled for age, sex, attachment, and sexual satisfaction.

Method

Participants and procedure

Participants were 631 undergraduate and graduate psychology students recruited in a Canadian university (439 females and 192 males). Their mean age was 24.92 years ($SD = 5.47$ years), 436 participants were currently in a romantic relationship, and 195 were single. They were invited to participate in an online study on the topic of sexuality in exchange of being entered into a draw for one of three prizes of Can \$125.

Measures

Sexual passion. The Sexual Passion scale (Philippe et al., 2017) is a 6-item scale based on the Passion scale (Marsh et al., 2013; Vallerand et al., 2003) that assesses two types of passion that characterizes people's engagement in sexual activities. The scale consists of two subscales, assessing HSP (3-item subscale; e.g., "Sex is in harmony with the other activities in my life"; $\alpha = .89$) and OSP (3-item subscale; e.g., "I have difficulty to control my need for sex," $\alpha = .83$). Participants made their ratings on a 7-point Likert-type scale (1 = *Strongly disagree*, 7 = *Strongly agree*).

Passion criteria. Three criteria have been identified to determine whether a person is passionate for a given activity (Marsh et al., 2013; Vallerand et al., 2003). They were

adapted to assess participants' level of sexual passion ($\alpha = .79$), that is, how much they like or love sex ("I love sex"), value it ("Sex is important for me"), and invest time and energy in it ("I spend a significant amount of time engaging in various sexual activities"; Philippe et al., 2017). Participants responded to these items on a 7-point Likert-type scale (1 = *Strongly disagree*, 7 = *Strongly agree*).

Past extradyadic sex. One item was used to assess the frequency of past engagement in extradyadic sex ("Have you ever had a romantic/sexual relationship with another person while you were in a relationship with a partner?"). Participants were informed that these extradyadic relationships had to occur in violation of their partner's understanding that the relationship was monogamous. This item was responded to on a 7-point Likert-type scale (1 = *Never*, 7 = *Extremely often*). A total of 46.2% of the sample reported at least one instance of past extradyadic sex.

Sex-relationship conflict. A short 3-item scale adapted from Vallerand et al. (2003; Study 1) was devised for the present study to assess participants' conflict between sex and their engagement in a long-term romantic relationship ($\alpha = .77$; e.g., "My interest in sexuality is too high to stay with the same partner for a long period of time"). Participants responded on a 7-point Likert-type scale (1 = *Strongly disagree*, 7 = *Strongly agree*).

Motives for extradyadic sex. A total of 20 items drawn from Glass and Wright (1992) were used to assess participants' motives in the hypothetical event that they would engage in extradyadic sex. Participants were asked to complete the following sentence: "I could have a romantic or sexual relationship outside of my couple . . ." A factor analysis using Principal Axis Factoring on the current data with a varimax rotation revealed that items were organized in five dimensions: *physical needs* (Eigenvalue = 8.51; 42.53% of variance explained; 7 items; e.g., "To experience a strong sexual excitement"; $\alpha = .90$), *self-esteem* (Eigenvalue = 1.86; 9.128% of variance explained; 4 items; e.g., "To increase my self-esteem"; $\alpha = .83$), *revenge/anger* (Eigenvalue = 1.49; 7.43% of variance explained; 4 items; e.g., "To get even with my partner"; $\alpha = .80$), *loneliness* (Eigenvalue = 1.21; 6.05% of variance explained; 3 items; e.g., "To not feel alone"; $\alpha = .85$), and *love* (Eigenvalue = 1.02; 5.12% of variance explained; 2 items; e.g., "To fall in love with another person"; $\alpha = .70$). Standardized factor loadings ranged from .49 to .78.

Attachment. The ECR-S (Wei, Russell, Mallinckrodt, & Vogel, 2007) is a short 12-item version of the Experiences in Close Relationships scale (Brennan, Clark, & Shaver, 1998) used to measure two adult romantic attachment dimensions (avoidance and anxiety), each with six items. Evidence of validity and reliability highly similar to the original full scale has been reported for this short scale (Wei et al., 2007). In the present study, α s were .66 and .72 for the avoidance and anxiety subscales, respectively. Items were responded on a 7-point Likert-type scale (1 = *Strongly disagree*, 7 = *Strongly agree*).

Sexual satisfaction. One item used in past research (Beaulieu-Pelletier et al., 2011) was used to assess participants' current sexual satisfaction ("To what extent are you currently

sexually satisfied in your life?”). This item was responded to on a 5-point Likert-type scale (1 = *Not satisfied at all*, 5 = *Totally satisfied*). This item was shown to correlate at .79 with the Pinney Sexual Satisfaction Inventory (Pinney, Gerrard, & Denney, 1987), based on other data of ours (Philippe et al., 2017).

Results and discussion

Preliminary analysis

Means, standard deviations, and correlations among all study variables are shown in Table 1. We first wanted to replicate the finding that both types of sexual passion are related to the passion criteria. A hierarchical multiple regression was conducted with sexual passion criteria as the dependent variable to examine these relations. In Step 1, age, sex, relationship status, attachment, and sexual satisfaction were entered. The two types of sexual passion were entered in Step 2. The interaction terms between sex or status and HSP and OSP were entered in Step 3. Results from Step 1 showed that sex and sexual satisfaction were positively associated with passion criteria and that attachment avoidance was negatively related to them. As hypothesized, Step 2 revealed that the two types of sexual passion were positively associated with the sexual passion criteria over and above the control variables. No interaction terms reached the significance (see Table 2).

Main analyses

A set of multiple regression analyses were conducted to examine the associations between each type of sexual passion and past extradyadic sex, conflict between sex and romantic relationships, and hypothetical motives to engage in extradyadic sex. All regressions included the same independent variables and interaction terms used in the preliminary analysis, and each was entered in the same order and number of steps (see Table 2). A first multiple regression was conducted to examine whether HSP and OSP would be related to past extradyadic sex. In Step 1, results showed that age and attachment avoidance were positively associated with past extradyadic sex. In Step 2, only OSP was positively associated with past extradyadic sex, over and above all control variables. Moreover, these results were not moderated by sex or relationships status.¹

Another hierarchical multiple regression was conducted on conflict between sex and long-term romantic relationships. Results revealed that being a man, attachment avoidance, and attachment anxiety were positively associated with conflict. As expected, results revealed that OSP was positively associated with conflict, whereas HSP was not. Also, there was a significant interaction between OSP and relationship status on conflict. Simple slopes analysis revealed that among individuals with an OSP, those who were not partnered were more inclined to experience conflict between sex and long-term romantic relationships ($\beta = .54, p < .001$) than those who were partnered ($\beta = .30, p < .001$), even though the associations remained significant in both cases. It thus appears that among individuals with an OSP, even partnered participants experience difficulties in maintaining their relationship because of their strong interest in sex.

Table 1. Ms, SDs, and correlations among variables (Study 1).

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. HSP	4.92	1.09	—											
2. OSP	2.17	1.02	.13**	—										
3. Passion criteria	4.95	1.13	.62**	.43**	—									
4. Past extradyadic sex	1.85	1.23	.05	.20**	.12**	—								
5. Conflict	1.62	1.03	.01	.49**	.22**	.42**	—							
6. Sexual satisfaction	3.56	1.10	.37**	-.06	.21**	.00	-.08*	—						
7. Attachment avoidance	2.58	0.90	-.32*	.24**	-.17**	.14**	.36**	-.29**	—					
8. Attachment anxiety	3.34	1.08	-.03	.22**	.04	-.02	.12**	-.17**	.11**	—				
9. Physical	3.52	1.62	.02	.27**	.17**	.35**	.35**	-.17**	.24**	.12**	—			
10. Lonely	2.88	1.71	-.01	.12**	.03	.14**	.13**	-.16**	.14**	.31**	.58**	—		
11. Revenge/anger	2.07	1.27	.05	.22**	.10*	.05	.17**	-.07	.15**	.25**	.44**	.45**	—	
12. Self-esteem	2.07	1.21	.02	.27**	.10*	.25**	.30**	-.11**	.23**	.23**	.66**	.55**	.51**	—
13. Love	2.41	1.34	-.04	.05	-.03	.13**	.18**	-.12**	.25**	.10*	.53**	.54**	.36**	.45**

Note. M = mean; SD = standard deviation; HSP = harmonious sexual passion; OSP = obsessive sexual passion. $n = 631$.

* $p < .05$; ** $p < .01$.

Table 2. Hierarchical regression analyses of type of passion and control variables on study outcomes (Study 1).

Steps	Variables	Sexual passion criteria		Past extradyadic sex		Conflict	Physical	Lonely	Revenge/anger	Esteem	Love
		β	$\Delta R^2 =$	β	$\Delta R^2 =$						
Step 1	Age	-.02		.16**		.01	.05	.07	-.03	-.01	.05
	Sex	.20**		-.04		.26**	.12**	-.02	.08	.15**	-.01
	Relational status	-.06		-.03		-.02	.09*	-.06	-.01	.02	-.02
	Attachment avoidance	-.17**		.11**		.31**	.20**	.09*	.12**	.18**	.23**
	Attachment anxiety	.12**		-.02		.12**	.11*	.26**	.24**	.23**	.05
Sexual satisfaction		.21**		.02		.04	-.12**	-.08	.01	-.04	-.04
		$\Delta R^2 = .10$		$\Delta R^2 = .05$		$\Delta R^2 = .21$	$\Delta R^2 = .10$	$\Delta R^2 = .12$	$\Delta R^2 = .08$	$\Delta R^2 = .12$	$\Delta R^2 = .07$
HSP		.49**		.07		.05	.10**	.04	.05	.01	-.01
		.47**		.18**		.39**	.22**	.11**	.17**	.16**	-.01
OSP		$\Delta R^2 = .35$		$\Delta R^2 = .05$		$\Delta R^2 = .12$	$\Delta R^2 = .04$	$\Delta R^2 = .01$	$\Delta R^2 = .02$	$\Delta R^2 = .02$	$\Delta R^2 = .01$
		-.01		.01		.08	.04	.06	-.06	.03	.02
Step 3	HSP \times Sex	-.02		-.03		.03	.07	-.04	-.02	.07	.03
	OSP \times Sex	-.04		-.0		-.06	-.01	.06	.05	.03	.01
	HSP \times Status	.01		-.08		-.20**	-.10	-.05	-.01	-.09	-.11
	OSP \times Status	$\Delta R^2 = .00$		$\Delta R^2 = .01$		$\Delta R^2 = .02$	$\Delta R^2 = .01$	$\Delta R^2 = .01$	$\Delta R^2 = .01$	$\Delta R^2 = .01$	$\Delta R^2 = .01$

Note: HSP = harmonious sexual passion; OSP = obsessive sexual passion. $n = 631$.

* $p < .05$; ** $p < .01$.

Five hierarchical multiple regressions were conducted to examine how HSP and OSP would relate to the various motives that can underlie a hypothetical engagement in extradyadic sex. In Step 1, men were more likely to report physical and self-esteem motives to engage in extradyadic sex. Partnered participants mentioned physical motives more frequently. Also, both attachment dimensions were positively associated with motives of physical needs, loneliness, revenge/anger, and self-esteem, and attachment avoidance was positively associated with love as a motive to engage in extradyadic sex. Sexual satisfaction was also negatively associated with physical needs as motives to engage in extradyadic sex. As expected, in Step 2, both HSP and OSP were positively associated with physical needs to engage in extradyadic sex. However, only OSP was related to ego-involved motives of loneliness, revenge/anger, and self-esteem to engage in extradyadic sex. Neither HSP nor OSP endorsed love as a motive to engage in extradyadic sex. There were no interactions between each type of passion and sex or relational status.

Overall, our findings are consistent with our hypotheses. Although both HSP and OSP correspond to a sexual passion, as assessed by the passion criteria, only OSP was associated with self-reported past extradyadic and with conflict between sex and long-term romantic relationships. In addition, only OSP was related to ego-involved hypothetical motives to engage in extradyadic sex, such as loneliness, revenge/anger, and self-esteem. This suggests that people with an OSP might be driven to engage in extradyadic sex to cope with negative feelings that are unrelated to sexuality. Also, results showed that for both HSP and OSP, physical need would be a motive for seeking extradyadic sex, whereas love would not. It thus seems that in the hypothetical event that one would engage in extradyadic sex, having a sexual passion is associated with engaging in extradyadic sex for the pleasure derived from sex, not for love. This result is in line with the past finding, showing that both HSP and OSP are associated with sociosexual orientation (Philippe et al., 2017). As for love, in HSP, individuals should seek love through their primary romantic relationship. In OSP, sexual representations are mostly dissociated from relational representations (Philippe et al., 2017), which should make it unlikely that individuals with an OSP seek love through sexuality.

Study 2

Study 2 was designed to test the direction of the effect between sexual passion and extradyadic sex using a prospective design. To do so, we focused on participants already involved in a romantic relationship. As we were primarily interested in the sexual aspect of extradyadic sex, we also improved our measure of extradyadic sex by constricting our definition of extradyadic sex only to sexual involvements rather than both romantic and sexual involvements as in Study 1. Indeed, results of Study 1 showed that romantic motives for having extradyadic sex were unlikely in both HSP and OSP. We expected OSP, but not HSP, to predict the prospective occurrence of extradyadic sex, the number of times it occurred, and the number of different partners with which it occurred in approximately a year. In all analyses, we controlled again for age, sex, attachment, sexual satisfaction, as well as for sexual desire and couple adjustment as these two latter

variables have been shown to be sexual and relational factors, respectively, influencing extradyadic sex.

Method

Participants and procedure

A total of 84 undergraduate and graduate psychology students (71 females and 13 males) took part in this two-phase prospective study lasting 10 months.² They were recruited in a Canadian university and were aged 28.49 years on average ($SD = 7.81$ years). Among the 84 participants, 52 participants remained with their partner over the 10-month period, 13 separated and were single at Time 2, 10 were single at Time 1 and found a partner with which they remained at Time 2, and 9 were single at Times 1 and 2, but experienced at least one serious romantic relationship between Times 1 and 2. This sample size is adequate to detect an expected odds ratio of 2.00 with a power of .80 in a logistic regression. At Time 1, participants were asked to complete the scales presented below. At Time 2, 10 months later, they indicated whether they had engaged in extradyadic sex over this period and completed other scales that will not be used in the present study.

Measures

Sexual passion scale. We used the same scale as in Study 1. α s were .79 and .74 for HSP and OSP, respectively.

Extradyadic sex. Participants who were currently engaged in a romantic relationship at Time 2 were asked to respond to the following item: "From the time you have been with your current partner and only considering the time elapsed from Time 1 [exact date was presented], have you ever had a sexual intercourse with someone other than your current partner?" Participants who were engaged in a romantic relationship at Time 1 but who had separated between Times 1 and 2 were asked to respond to the following item: "From Time 1 [exact date] up until the time of your separation, have you ever had a sexual intercourse with someone other than your primary partner?" Participants were also informed that these extradyadic relationships had to occur in violation of their partner's understanding that the relationship was monogamous. These items were responded to on a yes (1) or no (0) basis. A total of 13.1% of the current sample of participants reported having engaged in at least one extradyadic sex episode over the 10-month period, which is around the prevalence rate of extradyadic sex found in past research in young adult population (e.g., Frisco et al., 2017). Participants also indicated how many times extradyadic sex occurred and with how many different partners.

Control variables. We used the same scales as in Study 1 for attachment (α s were .73 for avoidance and .70 for anxiety) and sexual satisfaction. The short 4-item version (Sabourin, Valois, & Lussier, 2005) of the Dyadic Adjustment Scale (DAS; Spanier, 1976) was used to assess couple adjustment. It should be noted that this short version of

Table 3. Ms, SDs, and correlations among variables (Study 2).

Variable	M	SD	1	2	3	4	5	6	7	8
1. HSP	5.21	1.33	—							
2. OSP	2.26	1.24	.01	—						
3. Sexual satisfaction	3.55	1.21	.47**	-.12	—					
4. Sexual desire	4.64	0.87	.26*	.51**	-.08	—				
5. Extradysadic sex	0.13	0.34	.08	.43**	.03	.38**	—			
6. Attachment avoidance	2.62	1.03	-.05	.12	-.05	-.10	.19	—		
7. Attachment anxiety	3.38	1.04	-.23*	.18	-.33**	.13	-.08	.15	—	
8. Number of extradysadic partners	0.25	0.77	.02	.33**	-.01	.44**	.73**	-.02	-.19	—
9. Frequency of extradysadic sex	0.90	2.84	.02	.36**	-.02	.40**	.76**	.13	-.17	.88**

Note. M = mean; SD = standard deviation; HSP = harmonious sexual passion; OSP = obsessive sexual passion. $n = 84$.

* $p < .05$; ** $p < .01$.

the DAS does not include items assessing sexual satisfaction or sexual communication within the couple. The DAS-4 uses a 6-point Likert-type scale (0 = *Always disagree*, 5 = *Always agree*). A sample item is “In general, how often do you think that things between you and your partner are going well?” α was .89. Sexual desire was measured with 4 items derived from past research representing both cognitive and behavioral aspects of sexual desire (Rosen et al., 1997; Sills et al., 2005; Spector, Carey, & Steinberg, 1996). Items were “How frequently do you feel sexual desire?” (1 = *Never*; 7 = *Extremely often*), “How frequently do you have sexual thoughts?” (1 = *Never*; 7 = *Extremely often*), “How long could you go comfortably without having sexual activity of some kind?” (1 = *Forever*; 7 = *Less than 1 day*), and “How frequently do you engage in a sexual activity (ex. sexual intercourse, masturbation, etc.)?” (1 = *Never*; 7 = *Many times a day*). This short scale has displayed adequate indices of reliability and validity in past research (Beaulieu-Pelletier et al., 2011). In this study, α was .64, and all 4 items saturated one factor in an Exploratory Factor Analysis.

Results and discussion

Means, standard deviations, and correlations among study variables are shown in Table 3. Point-biserial correlations between passion types and extradysadic sex revealed a moderate positive association between OSP and extradysadic sex ($r_{pb} = .44, p = .001$), while HSP was unrelated to it ($r_{pb} = .08, p = .423$). A logistic regression with attachment avoidance, attachment anxiety, sexual desire, and the two types of passion was conducted. Results revealed that attachment avoidance ($B = .98, SE = .43, Wald = 5.11, p = .024$), sexual desire ($B = 1.39, SE = .61, Wald = 5.01, p = .024$), and OSP ($B = .80, SE = .39, Wald = 4.15, p = .038$) were positively associated with extradysadic sex. Attachment anxiety was unrelated to extradysadic sex ($Wald = -3.03, p = .083$) and HSP

as well (Wald = .09, $p = .741$). For each one-point increase in OSP, the odds of getting involved in extradyadic sex over the year increased of 2.22 times. Controlling for sex, age, or sexual satisfaction did not affect the present results and there were no interactions between each type of passion and sex. Sex (Wald = .56, $p = .453$), age (Wald = .01, $p = .930$), and sexual satisfaction (Wald = .31, $p = .576$) did not significantly predict extradyadic sex. The same logistic regression was conducted again, this time controlling for couple adjustment (only including participants with this measure available at Time 1, $n = 66$). Results remained the same and couple adjustment was unrelated to extradyadic sex (Wald = 1.09, $p = .304$).³

Multiple regression analyses were conducted with the same independent variables to examine whether OSP would predict the number of times extradyadic sex occurred and the number of extradyadic partners. The same variables as in the logistic regression were entered. Results revealed a significant main effect for sexual desire ($\beta_s > .36$, $ps < .001$) as well as a significant OSP \times Sex interaction in both cases ($\beta_s > .27$, $ps < .039$). Simple effects revealed that OSP was predictive of the number of times extradyadic sex occurred and of the number of extradyadic partners for men ($ts > 3.32$, $ps < .001$), but not for women ($ts < 1.00$, $ps = .352$).

Overall, these results confirm our hypothesis and further support the expectation that OSP is associated with extradyadic sex, whereas HSP is not. There are, however, sex differences when the number of times and partners of extradyadic sex are considered.

General discussion

The objective of the present research was to investigate the role of sexual passion in extradyadic sex involvement and the hypothetical motives underlying this engagement. Replicating past findings (Philippe et al., 2017, 2019), results revealed that both OSP and HSP were positively associated with sexual passion criteria. However, they also showed different associations with extradyadic sex. Specifically, only OSP was positively related to having had past extradyadic sex in Study 1, and only OSP prospectively predicted extradyadic sex in Study 2. HSP, as expected, was unrelated to past and prospective extradyadic sex. These results conform to the theory that, in OSP, because sexuality has been internalized in a controlled fashion, sexuality is not well integrated with other self-aspects and may conflict with other life aspects (Philippe et al., 2017, 2019). Conversely, the null result between HSP and extradyadic sex suggests that having a sexual passion does not necessarily translate into extradyadic sex. This result is in line with the dualistic model of sexual passion which posits that because HSP reflects a sexuality that has been freely and autonomously internalized, it is well integrated and it does not conflict with other self-aspects, such as one's monogamous romantic relationship (Philippe et al., 2017, 2019). Further supporting the theory, results from Study 1 showed that OSP, but not HSP, was associated with conflict between the sexuality and the maintenance of a long-term romantic relationship, thus replicating past findings (Philippe et al., 2017). Results of the present studies also held when controlling for relevant confounding variables such as attachment dimensions and sexual desire.

Other variables were also related to extradyadic sex and motives. Replicating past research (Allen & Baucom, 2004; Beaulieu-Pelletier et al., 2011), attachment avoidance

was positively associated with extradyadic sex in both studies. Also, in Study 1, attachment avoidance and attachment anxiety were positively related to all motives (except for love that was only related to attachment avoidance), thus showing that individuals with an insecure attachment endorse various motives for engaging in extradyadic sex, including ego-invested motives. In Study 2, sexual desire predicted extradyadic sex and the number of times it occurred, which is in line with past research (Treas & Giesen, 2000).

With regard to motives for extradyadic sex, a fundamental aspect to consider when interpreting the results is that our measure assessed hypothetical motives for which people would engage in extradyadic sex, not actual motives that led individuals to do so. HSP, like OSP, has been associated with an openness to a variety of sexual experiences (Philippe et al., 2019), including having sex without love (sociosexuality, see Philippe et al., 2017), but as shown by the present studies, not to actual extradyadic sex. However, given this openness to diverse sexual experiences, it remains possible that individuals with HSP could consider or fantasize about having extradyadic sex, without having actual intentions of doing it. In fact, fantasizing about it could be an effective mechanism to allow for some sexual satisfaction while maintaining and protecting one's relationship with a primary partner. We did not assess sexual fantasy, but our hypothetical questions about motives might have tapped into it. From this hypothetical point of view, if HSP people were to engage in extradyadic sex, they would do it for physical motives only. Conversely, OSP would be more likely to engage in it for ego-involved motives, namely, loneliness, revenge/anger, and self-esteem.

Sexual passion and extradyadic sex

Findings from the present research also contribute to the literature on extradyadic sex by highlighting how different types of inclination toward sexuality may lead (or not) a person to engage in extradyadic sex. While past research has suggested that having high sexual desire (Treas & Giesen, 2000) or an unrestricted sociosexuality (Barta & Kiene, 2005) can lead an individual to have extradyadic involvements, the present research suggests that the picture is more nuanced. In fact, only OSP was positively related to past and prospective extradyadic sex. HSP, on the other hand, was not. Thus, even if both HSP and OSP were positively associated with markers of a strong sex drive, such as the passion criteria of loving, valuing, and frequently engaging in various sexual activities (Study 1) and sexual desire (Study 2), this strong sex drive was not enough to predict engagement in extradyadic sex. What fundamentally mattered was whether people held an HSP or an OSP.

The present set of findings also highlight that the motives for which individuals would engage in extradyadic sex depend on the type of sexual passion. Barta and Kiene (2005) found that sociosexuality was only related to sex motives for engaging in extradyadic sex, but not to other motives (i.e., dissatisfaction in the relationship, anger toward a partner, feeling neglected). These other motives were only associated with personality variables such as neuroticism. Using the concept of sexual passion, the present research showed that OSP was related to various motives such as physical interest in sex, loneliness, revenge toward one's partner, and self-esteem boosting, whereas HSP was only

related to a physical motive. These findings contribute to better understanding what could lead certain individuals to engage in extradyadic sex and could inform prevention and intervention strategies. Specifically, it might prove more fruitful to target individuals with an OSP to prevent them from engaging in extradyadic sex. Knowing that having an OSP is associated with ego-invested motives for extradyadic sex, prevention strategies could help individuals with an OSP meet their needs for connection, respect, and self-esteem through other means than sexuality. Clinicians working with individuals with an OSP might thus focus on investigating what psychological needs appear unmet or frustrated in a patient's life.

Sex and relationship status differences in extradyadic sex

Results revealed few sex differences. Men were more likely to endorse physical and self-esteem motives for extradyadic sex than women, which is partly in line with past research showing that men reported intentions for extradyadic sex because of their interest for varied and frequent sexual experiences (Barta & Kiene, 2005). The present research also suggested that men were more likely to experience conflict between sex and relationship maintenance than women. This result is in line with past studies showing that men report more sex partners than women (e.g., Allen & Baucom, 2004), which could conflict with the establishment of long-term relationships. However, sex did not predict extradyadic sex in Studies 1 and 2, and almost none of the associations between sexual passion and extradyadic sex motives and occurrence were moderated by sex. This result counters stereotypical views of women as having a weaker sex drive than men (Baumeister, Catanese, & Vohs, 2001) by showing that both women and men can be characterized by a sexual passion and are equally likely to engage in extradyadic sex and endorse similar motives for extradyadic sex. The only exception found in Study 2 was that men with an OSP engaged more frequently in extradyadic sex and with more partners than women. This result is in line with sexual strategies theory, which posits that men are more likely to engage in extradyadic sex with a greater number of partners than women in order to increase their reproductive success (Buss & Schmitt, 1993). It is also consistent with social role theory, which stipulates that sex differences in sexual behaviors reflect adherence to gender roles that portray men as more agentic than women (Eagly & Wood, 2012). Taken together, these results imply that what is crucial in determining who will engage in extradyadic sex (likely for ego-invested motives) is the type of passion the person holds, regardless of their biological sex.

It is also noteworthy that Study 1 showed the same patterns of findings between each type of passion and extradyadic sex occurrence and motives for partnered and single participants. The only exception was that singles with OSP reported more conflict between sex and long-term romantic relationships than partnered individuals. These results conform to the dualistic model of sexual passion, which conceptualizes sexual passion as an intrapersonal drive to engage in various sexual activities, alone or with other partners, and which should lead to the same consequences, whether individuals are single or partnered (Philippe et al., 2017, 2019).

Future research

Results from the present research have implications for better understanding the association between each type of sexual passion and romantic relationship dissolution. Past research has shown that OSP, but not HSP, predicted relationship dissolution (Philippe et al., 2017) and numerous studies have revealed a positive association between extradyadic sex and relationship dissolution (e.g., Frisco et al., 2017). Findings suggest that OSP drives people to engage in behaviors that are detrimental to relationship maintenance, including having extradyadic sex, as shown in the present studies, and being more attentive to attractive alternatives (Philippe et al., 2017, 2019). Over time, these behaviors may contribute to relationship dissolution.

Conversely, HSP has been shown to be unrelated to relationship dissolution (Philippe et al., 2017). HSP was unrelated to extradyadic sex in the present research and was unrelated or negatively related to attentiveness to alternatives in past studies (Philippe et al., 2017, 2019). Literature also suggests that individuals in a committed relationship tend to devalue attractive alternatives, presumably as a way to shield their current romantic relationship (for reviews, see Lydon, 2010). It may be that HSP fosters the use of such strategies, thus resulting in the inhibition of behaviors that may interfere with relationship maintenance, such as attentiveness to alternatives and extradyadic sex. Relatedly, Philippe et al. (2017) have shown that individuals characterized by high levels of HSP were better able to inhibit the unconscious activation of attractive targets so that it did not interfere and conflict with a current goal of completing a sex-unrelated cognitive task. The mechanisms that HSP individuals use to protect their current romantic relationship from potential alternatives represent a fruitful avenue for future research.

Limitations

Some limitations with regard to the present research must be underscored. First, the data in Study 1 are cross-sectional and therefore do not allow for a test of the direction of the association between sexual passion and the outcomes in Study 1, nor do data allow us to draw any causal conclusions between these variables. Yet, the results of Study 2 suggest that sexual passion does predict future occurrences of extradyadic sex, thus providing more confidence in the directionality of this association. A second limitation pertains to the self-reported nature of behaviors. Social desirability may have prevented participants from reporting the full extent of their extradyadic experiences. However, past studies revealed that participants do report engaging in extradyadic sex even though they may underreport it (e.g., Allen & Baucom, 2004; Barta & Kiene, 2005; Frisco et al., 2017). Self-report of actual extradyadic sex is hardly the only way to collect that type of data, and future research could use indirect behavioral measures of interest in attractive alternatives (e.g., level of seductive behavior toward an attractive confederate in the laboratory) as a proxy for intentions of extradyadic sex. A third limitation pertains to the definition of extradyadic sex across the two studies. In Study 1, we used a broader definition, incorporating both romantic and sexual extradyadic involvements, whereas in Study 2, we focused our measure to assess sexual extradyadic involvements only. Readers should keep this information in mind when comparing results from both studies,

as they do not implicate the exact same type of extradyadic involvement. Fourth, the present data were collected with university students (undergraduates and graduates), and future research will be needed to determine if they generalize to the general population. Also, the sample size of Study 2 was fairly small, so it would be preferable to replicate its results within a larger sample size. Data were also collected and analyzed by only considering the participants' perspective. Future studies could use dyadic designs to investigate actor and partner effects of sexual passion on extradyadic sex. Finally, some control variables were composed of very few items, and their alphas were consequently rather modest. Results could therefore be replicated with control measures that rely on more exhaustive inventories.

Conclusion

In sum, past research on extradyadic sex has identified few individual sexual factors explaining extradyadic sex and the various motives to engage in it. Moreover, these factors were limited to the presence or absence of interest or of a drive toward sexuality (e.g., Barta & Kiene, 2005; Mattingly et al., 2011). The present set of studies show that such a one-dimensional perspective on interest in sexuality may be misleading when considering extradyadic sex and suggests that two types of sexual passion should be investigated. Indeed, results suggest that involvement in extradyadic sex stems from more than just a high sex drive. Instead, what also seems to matter is the type of sexual passion people hold. Specifically, having an OSP may push people to engage in extradyadic sex.

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Open research statement

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Notes

1. Results remained the same when we recoded extradyadic sex as a binary variable (0 = no instance of extradyadic sex; 1 = at least one such instance).
2. Part of these data has been published elsewhere (Beaulieu-Pelletier et al., 2011). That study had examined whether attachment avoidance was predictive of extradyadic sex. In the present

study, we controlled for attachment in order to show that sexual passion is a distinct factor, explaining independent and additional variance in extradyadic sex.

3. Dyadic adjustment did not moderate the association between extradyadic sex and HSP or OSP (β s < |.04|, ns).

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