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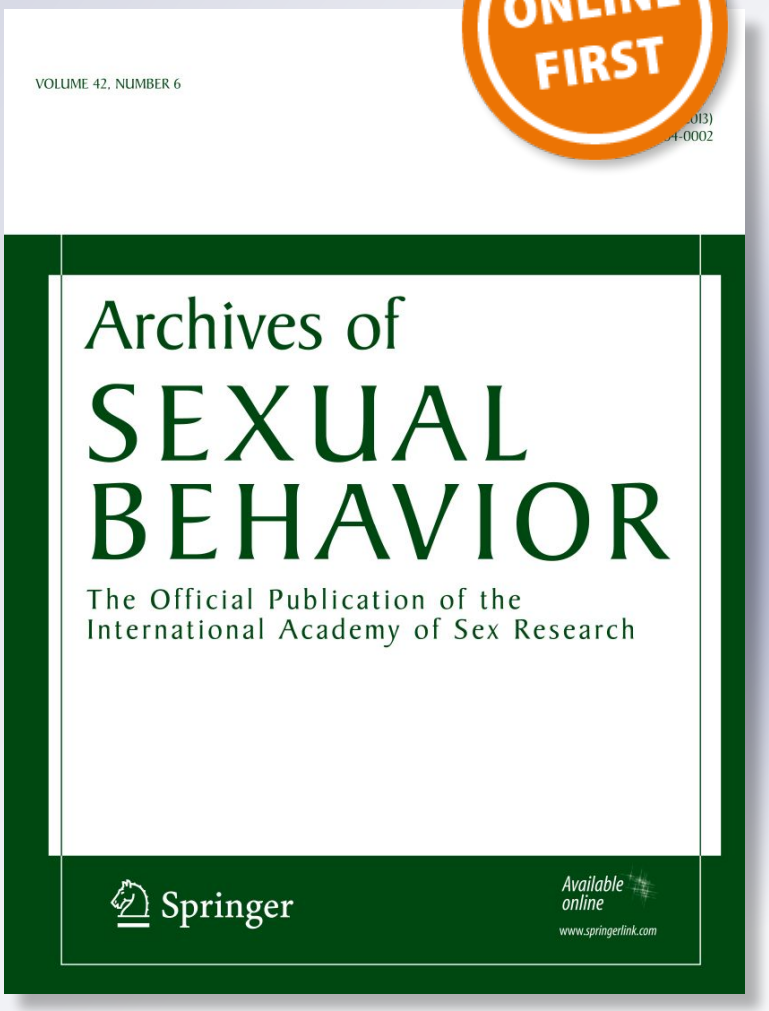

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ORIGINAL PAPER

Development of a Dualistic Model of Sexual Passion: Investigating Determinants and Consequences

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Abstract
In empirical research, sexual passion has frequently been conceptualized as the interdependent dynamics experienced with a partner and as following a unidimensional continuum of intensity. A recent theoretical model conceptualized sexual passion as an intrapersonal motivation, which can energize both partnered and non-partnered sexual behaviors (Philippe, Vallerand, Bernard-Desrosiers, Guilbault, & Rajotte, 2017). This model also departs from the typical unidimensional continuum by positing the existence of two types of sexual passion: harmonious sexual passion (HSP) and obsessive sexual passion (OSP). The purpose of the present research was to extend the development of such a dualistic model by examining key theoretical determinants and consequences of each type of sexual passion. Study 1 provided empirical evidence of discriminant validity for such a model with respect to key-related constructs in the sex literature (e.g., sexual desire, hypersexuality, self-determined motives). The results of Study 2 showed that both types of sexual passion were associated with a high engagement in various sexual activities, but that only HSP combined it with couple adjustment. Finally, Study 3 indicated that both HSP and OSP were associated with common as well as distinct determinants, while being conducive to different personal and interpersonal consequences. Overall, there were very few moderations by biological sex. The results of these three studies provide empirical support for the sexual passion model and pave the way for new research directions.

Keywords Sexual passion · Dualistic model · Sexual desire · Sexuality · Relationship

Introduction

Sexual passion in the scientific literature has typically been defined as sexual desire for union with a partner or as a mixture of romance and physical attraction (e.g., Hatfield & Walster, 1978; Sternberg, 1986). Sometimes, it has been described as an emotion (Fehr, 1988; Vohs & Baumeister, 2004), other times as a relatively stable characteristic of couples (e.g., Davis, Shaver, & Vernon, 2004). In all cases, sexual passion is expected to emerge from the interdynamics between two partners engaged in a relationship. We believe that such a definition is restrictive and relies on a conventional conception that sexuality is only expressed and manifested with a partner. In the present work, we propose to revisit the concept of sexual passion by suggesting that sexual passion may be experienced within a relationship or not and with a partner or alone. In addition, we posit the existence of two distinct types of experience of sexual passion that differ in their level of integration of sexual and relational representations and examine their consequences on both personal and interpersonal outcomes.

Redefining Sexual Passion

A recent conceptualization (Philippe et al., 2017) has proposed to redefine the concept of sexual passion by drawing from the concept of passion for activities (Vallerand, 2015; Vallerand et al., 2003). In this literature, passion is defined using affective, cognitive, and behavioral criteria. To be passionate about an activity entails that the person has a high inclination toward engaging in the activity and experiences a

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strong positive emotional connection with the activity. Cognitively, the person highly values and finds engaging in the activity important. Finally, passion leads people to purse the activity with energy on a long-term basis (Vallerand, 2015). It has been suggested that the same conceptualization could be applied to the sphere of sexuality since a sexual passion should be reflected by people's strong emotional connection with sex, high valuation of it, and frequent engagement in sexual activities (Philippe et al., 2017). Henceforth, we define sexual passion as a stable motivational drive that can vary in intensity from an individual to another, that is not restricted to sexual desire for a partner, and that can lead to various kinds of behaviors, including both sexual and relational behaviors, but also non-partnered sexual behaviors. Consequently, a person who enjoys engaging in a variety of sexual activities alone can be characterized by a high sexual passion to the same extent as someone who experiences great pleasure from sexual intercourses with a loved long-term partner.

Of importance, sexual passion is not just a sexual motivational force or sexual incentive motivation (Toates, 2009). The literature on passionate activities (Vallerand, 2015; Vallerand et al., 2003) also proposes that two types of sexual passion exist—harmonious and obsessive (Philippe et al., 2017). Both types of passion are characterized by loving, valuing, and engaging frequently in the activity. However, they fundamentally differ in the way the activity has been cognitively processed and internalized. An obsessive sexual passion (OSP) is developed when the sphere of sexuality has been internalized in the self in a controlled fashion (Vallerand, 2015). According to self-determination theory (Ryan & Deci, 2017), a controlled internalization occurs when people feel pressured to make choices, adopt values, and behave according to contingencies they have learned in the past. For example, regarding sexuality, a person could feel compelled to dress and look according to what media promote, as a function of what is socially perceived as physically attractive, or to perform sexual intercourse as a function of commonly held beliefs (e.g., sexual intercourses should be vigorous and last long). These predetermined sexual attitudes, values, and behaviors are much less likely to reflect the person's authentic values and self-aspects and are therefore experienced as alienating the self and do not facilitate a coherent and integrated self. Consequently, they remain separated from other self-aspects and are likely to conflict with them. Such a controlled internalization of sexuality therefore prevents the integration of sexual representations to other types of mental representations, notably relational representations (Philippe et al., 2017).

A harmonious sexual passion (HSP) stems from an autonomous internalization of sexuality in the self. An autonomous internalization occurs when people make their own choice regarding sexuality and orient their own values and behaviors according to what they believe is important and enjoyable (Deci & Ryan, 2000; Vallerand, 2015). Consequently, people can orient these choices and behaviors in line with their other self-aspects, leading to a coherent and unified integration of sexuality in their self without conflict with other self-aspects (Weinstein, Deci, & Ryan, 2011). An autonomous internalization of the sphere of sexuality that excludes contingencies is therefore more likely to be well integrated with other important self-aspects, such as relational representations.

Evidence Supporting a Dualistic Model of Sexual Passion

Recent evidence (Philippe et al., 2017) supported the present conceptualization of sexual passion. A scale of sexual passion was developed to assess each type of sexual passion, and its factor structure and reliability have been supported. Both types of sexual passion were also found to be strongly positively correlated with the passion criteria of loving sex, valuing it, and investing time and energy in sexual activities. However, support was also found for the hypothesis that HSP is underlain by a greater integration of sexual and relational representations, suggesting a more autonomous and less conflicted mental organization of sexual representations. Conversely, OSP revealed a much weaker integration of those representations, suggesting a more controlled, segregated, and conflicted mental organization of sexual representations. More specifically, participants were asked to list as many words associated with the word "sex" as they could in 1 min. HSP was positively associated with a greater ratio of words listed with both a relational and a sexual connotation (e.g., intercourse, fellatio, intimate) as compared to pure sexual words (e.g., tits, penis, vibrator). The exact opposite results were found for OSP, as it was positively associated with a greater report of sexual words as compared to relational-sexual words.

Given the way mental sexual representations are organized in HSP and OSP, each type of sexual passion should be associated with distinct personal and interpersonal consequences. More specifically, because OSP is characterized by sexual representations that share little integration with other types of representations (notably relational), when those sexual representations are activated, they remain strongly active. Consequently, intrusive sexual thoughts and conflict between sexuality and other life spheres are frequent. Conversely, under HSP, sexual representations are well integrated with other types of representations. Consequently, activation freely flows through complex and varied networks of representations. HSP can therefore facilitate the processing of sexual stimuli and support their integration into broader life spheres, such as romantic relationships. Corroborating these claims, OSP was found to be positively associated with intrusive sex thoughts (Philippe et al., 2017). In addition, the mere unconscious activation of attractive targets under OSP was enough to distract from a sex-unrelated task and increase processing time to complete this task. Conversely, HSP was unrelated to intrusive thoughts and helped to inhibit task-unrelated sexual stimuli activation. OSP was also associated with

lower relationship quality and contributed to the dissolution of long-term relationships over time, whereas HSP was positively associated with relationship quality and was not contributing to relationship breakup over time.

The Present Research

A first purpose of the present research was to extend the development of a dualistic model of sexual passion by highlighting discriminant evidence of validity of sexual passion as compared to other related constructs from the sex literature. HSP and OSP have been found to be theoretically and empirically distinct from existing constructs such as attachment anxiety and avoidance, psychological distress, personal self-control, romantic passion, sexual satisfaction, relationship quality, and sociosexuality (see Philippe et al., 2017). Yet, there are still other existing constructs, such as sexual desire, sexual compulsivity, or self-determined sexual motives that are in certain ways related to the present conceptualization of sexual passion. However, we believe they are theoretically different in important ways.

Sexual desire takes different definitions in the sex literature (Brotto & Smith, 2013). It is often defined as a situational physiological, emotional, and cognitive response (e.g., Goldhammer & McCabe, 2011), closely associated with sexual arousal (Goldey & van Anders, 2012; Rosen et al., 2000), which can vary in intensity and from situation to situation (Levine, 2002). However, clinical diagnosis or empirical assessment of sexual desire typically focuses on the frequency at which sexual desire is experienced (e.g., Rosen et al., 1997), thereby targeting the chronic level of sexual desire rather than the intensity of single responses or their variability over different situations. Sexual passion is a relatively stable person–sexuality interface, which is closer to the definition of experiencing chronically high levels of sexual desire. However, there is no full overlap between those two concepts. While having a sexual passion certainly entails having sexual desire, having high sexual desire does not necessarily imply that one has sexual passion. In other words, frequently feeling sexual desire or arousal does not mean that one likes sexuality, finds it important, and spends time and energy engaging in various sexual activities (Baumeister, Catanese, & Vohs, 2001; Levine, 2002). Finally, according to a dualistic model of sexual passion, its key aspect is not how strong one sexual passion is or how frequently it is experienced, but rather how this sexual passion is cognitively organized, either as HSP or OSP. This departs from the unidimensional intensity or frequency focus that has characterized the topic of sexual desire.

Sexual passion is also distinct from sexual compulsivity or hypersexuality, defined as repetitive, continued sexual behaviors that cause clinical distress and impairment (Kafka, 2010). Both types of sexual passion should lead to a frequent engagement in sexual activities, but not to distress (Philippe et al., 2017). Rather, HSP and OSP were shown to be associated with an enjoyment of sexual activities (Philippe et al., 2017), whereas sexual compulsivity should not.

Finally, the present dualistic model of sexual passion extends the construct of self-determined sexual motives in that two qualitatively distinct types of enjoyable and intrinsic engagements are posited under the dualistic model of sexual passion, whereas self-determination theory proposes that intrinsically interesting activities do not require internalization or are internalized in an autonomous fashion (Deci & Ryan, 2000). Sexual passion also differs from extrinsic or external motives as these refer to motivation to engage in non-enjoyable activities (Deci & Ryan, 2000), whereas passion involves activities that the person deeply loves and finds intrinsically enjoyable.

Study 1 sought to replicate the findings of past studies, while controlling for these related constructs, that is, solitary and dyadic sexual desire, sexual compulsion, and self-determined sexual motives. A second purpose of the present research was to test that both types of sexual passion are similarly associated with a high engagement in sexual activities, but that only HSP combines it with couple adjustment (Study 2). Finally, a third purpose investigated in Study 3 was to show that both types of passion have common (e.g., sexual self-definition, sexual desire), but also distinct determinants (e.g., internalization orientation, sexual contingencies), which are associated with distinct personal and interpersonal consequences, such as sexual satisfaction, couple adjustment, and extradyadic intentions, with HSP being associated with more adaptive outcomes overall. Study 3 tested a mediational sequence in which both types of sexual passion act as distinct mediators between those specific determinants and outcomes. Across studies, based on past findings (Philippe et al., 2017; Guilbault, Bouizegarene, Philippe, & Vallerand, in press), few moderations by biological sex were expected, as the effects of sexual passion have typically been shown to be similar for both men and women.

Study 1

The purpose of Study 1 was to extend the dualistic conceptualization of sexual passion by distinguishing it from other known constructs in the sex literature. Study 1 sought to replicate past findings of sexual passion with personal and interpersonal outcomes, while controlling for key-related constructs. We chose to replicate the results of Study 2 of Philippe et al. (2017) which measured the passion criteria and outcomes of relationship quality, sexual satisfaction, sex conflict, attentiveness to alternatives, and reactions to jealousy. As explained above, both HSP and OSP should be positively associated with the passion criteria. However, they should differ in their prediction of outcomes. Following the results of Philippe et al.,

HSP should be associated with relationship quality and sexual satisfaction, whereas OSP should be positively associated with sex conflict, attentiveness to alternatives, and violent behavior in response to jealousy. We also sought to replicate the results that OSP is associated with a predominance of sexual over relational representations, whereas HSP is associated with a more balanced ratio. Potential moderations by sex, age, and relational status were also examined. Based on past findings, few moderations were expected, including those with sex, and all should be small. In addition, given that the conception of sexual passion does not require a partner, results should be the same for both people currently engaged in a romantic relationship (dating, living together, married) and singles. Finally, we expected that all of the above associations would remain significant even after controlling for three constructs related to sexual passion: solitary and dyadic sexual desire, sexual compulsivity, and self-determined sexual motives.

Method

Participants and Procedure

Each study reported in this article was approved by an institutional review board and participants provided informed consent prior to taking part in the studies and their rights were protected. This information will not be repeated in the other studies. Participants in Study 1 were 280 adults (M = 36.15 years, SD 12.53, 53% female) recruited from the Crowdflower interface, a crowdsourcing data acquisition platform. The advertisement described a 15-min online study on sexuality, and participants were paid $0.25 CAD for completing the questionnaire. This small amount is typical of crowdsourcing platforms (Buhrmester, Kwang, & Gosling, 2011). Partnered (64%) and single participants could respond to the survey, but given the semantic task used in the study, we excluded people for whom English was not their mother-tongue language (n = 42, final n = 280). We based our power analysis on the analyses requiring the most power, that is, moderations within multiple regression analyses among sexual passion and demographics. A power analysis in G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009) based on an alpha of .05 and a power of .80 revealed that a sample size of 279 participants was required to detect significant moderations of small effect sizes (f^2 = .05) among sexual passion, sex, age, and relational status (6 tested predictors among 11 independent variables).

Measures

Sexual Passion

The Sexual Passion Scale (Philippe et al., 2017) is a 6-item scale assessing the type of sexual passion people hold. Three items measure HSP, that is, "Sex is in harmony with the other things that are part of me," "Sex is well integrated in my life," and "Sex is in harmony with the other activities in my life." Three items measure OSP, that is, "I have almost an obsessive feeling for sex," "Sex is the only thing that really turns me on in my life," and "I have the impression that sex controls me." The items of this scale and those of all other scales presented below (except when mentioned otherwise) were responded to on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). Alphas in this study were .92 and .88 for HSP and OSP, respectively.

Passion Criteria

The passion criteria (Philippe et al., 2017) assess core characteristics of the definition of sexual passion, that is, how much the individual likes or loves the activity ("I love sex"), values it ("Sex is important for me"), and invests time and energy in it ("I spend a significant amount of time engaging in various sexual activities"). Alpha for these items was .75. The passion criteria assess the intensity of the motivational force underlying sexual passion, whereas the Sexual Passion Scale evaluates the extent to which the sexual passion is harmonious or obsessive. The present passion criteria were therefore used as a validity check to ensure that both HSP and OSP correspond to the definition of a sexual passion.

Control Variables

Self-Determined Motives for Sex

We used an adapted version of the Perceived Locus of Causality for Sex (Brunell & Webster, 2013; Jenkins, 2003). This scale assesses four types of motive to engage in sexual activities ("Why do you generally engage in sexual activities?") that vary on a scale of self-determination that includes intrinsic motives (e.g., "Because I think it will feel good"), identified regulation (e.g., "Because I see sex as a healthy activity or exercise"), introjected regulation (e.g., "Because I want to show that I am capable of performing"), and external regulation (e.g., "Because I want to feel more powerful or dominant"), with intrinsic motives being the most self-determined form of motivation and external regulation the least self-determined one. We adapted this scale by deleting or modifying items that had a reference to a partner, so that participants who were single could also respond to this scale. Each subscale of our adapted scale had five items, except for identified regulation, which had four. Alphas were .91 .87, .91, and .86 for the intrinsic, identified,

introjected, and external regulation subscales, respectively. We computed a composite index assessing self-determined motives by weighting each subscale by a score reflecting their order on the self-determination continuum (intrinsic*2 + identified*1 + introjected*−1 + external*−2), as is commonly done by self-determination researchers (e.g., Brunell & Webster, 2013; Sheldon, Osin, Gordeeva, Suchkov, & Sychev, 2017).

Solitary and Dyadic Sexual Desire

The Sexual Desire Inventory-2 (Spector, Carey, & Steinberg, 1996) was used to assess solitary and dyadic forms of sexual desire. Nine items measure dyadic sexual desire (e.g., When you first see an attractive person, how strong is your sexual desire?), and four items target solitary sexual desire (e.g., How strong is your desire to engage in sexual behavior by yourself?). Alphas in this study were .91 and .88 for dyadic and solitary sexual desire, respectively.

Sexual Compulsivity

Sexual compulsion or hypersexuality was measured with the 10-item Sexual Compulsivity Scale (Kalichman & Rompa, 1995), the most widely used scale in that area (Hook, Hook, Davis, Worthington, & Penberthy, 2010). A sample item of this scale is "My sexual thoughts and behaviors are causing problems in my life." Alpha was .93 in the present study.

Outcomes

Sexual/Relational Semantic Representations

The task used by Philippe et al. (2017) was used to measure the organization of sexual and relational semantic representations. Participants were asked to list as many words as they could that are related to the word "sex" in 1 min by typing them down in separate textboxes displayed on a web browser page. After the minute had elapsed, the page was automatically refreshed to another page, data were saved, and participants were prevented from going back to the previous page. Two judges, masked to the participants' other data, coded these words for whether they corresponded to purely sexual words (e.g., penis, breasts, vibrator), sexual-relational words (intimate, caress, intercourse), or other (e.g., energy). Inter-rater reliability was adequate, intraclass rs > .88. A ratio of sexual versus relational words was calculated by dividing the number of sexual words (incremented by 1) by the number of relational words (incremented by 1). As such, a high score on this index represents a greater number of sexual over relational semantic representations.

Sexual Satisfaction

Sexual satisfaction was measured with three items from the Pinney Sexual Satisfaction Inventory (Pinney, Gerrard, & Denney, 1987). We kept the items that had no reference to a partner or to sexual intercourse (e.g., "Generally, I am satisfied with my sex life"). Alpha was .89.

Perceived Relationship Quality

Relationship quality was assessed with the 7-item Perceived Relationship Quality Components Inventory (Fletcher, Simpson, & Thomas, 2000). This measure assesses seven components of romantic relationships (satisfaction, commitment, intimacy, trust, passion, love, and romance), each with one item. The passion item was dropped in this study to avoid construct overlap with sexual passion and sexual satisfaction. Participants currently in a relationship were asked to respond to the scale per this relationship, whereas singles responded as a function of their last or most important prior relationship. Alpha was .91.

Attentiveness to Alternatives

Attention to alternative partners was assessed with the 6-item Attentiveness to Alternatives Index scale (Miller, 1997). This scale assesses the extent to which participants are alert to other potential partners (e.g., "I am distracted by other people that I find attractive"). Alpha was .77.

Sex Conflict

A short 3-item scale assessed participants' conflict between sex and other aspects of their lives (e.g., "My sexuality conflicts with other aspects of my life", Philippe et al., 2017). Alpha was .81.

Violent Jealous Behavior in Response to Relational Threats

Participants read a scenario from Djkstra and Buunk (1998) in which their current (or imaginary) partner is flirting with a member of the opposite sex:

You are at a party with your girlfriend [boyfriend] and you are talking with some of your friends. You notice your girlfriend [boyfriend] across the room talking to a man [woman] you do not know. You can see from his [her] face that he [she] is very interested in your girlfriend [boyfriend]. He [She] is listening closely to what she [he] is saying and you notice that he [she] casually touches her [his] hand. You notice that he [she] is flirting with her [him]. After a minute, your girlfriend [boyfriend] also begins to act flirtatiously. You can tell from the way she [he] is looking at him [her] that she [he] likes him

Table 1 Multiple regressions of HSP and OSP on outcomes, controlling for demographics, and moderations by demographics: Study 1

Steps	Independent variables	Dependent variables						
		Passion criteria	Ratio sex/relational	Sexual satisfaction	Relationship quality	Attentiveness to alternatives	Sex conflict	Violent behavior
Step 1	HSP	.50**	−.19**	.80**	.61**	−.19**	−.09*	.08
	OSP	.43**	.24**	−.07	−.11*	.55**	.77**	.50**
Step 2	HSP	.49**	−.15*	.80**	.51**	−.09	−.03	.06
	OSP	.41**	.14*	−.14**	−.07	.51**	.71**	.40**
	Sex	.07	.08	.08*	.03	.06	.05	.09
	Status	−.03	.04	−.03	−.23**	.25**	.13*	−.13*
	Age	.01	−.17**	−.11**	.06	.07	−.07	−.26**
Step 3	HSP × sex	.08	−.09	.02	.05	.20**	.09	.01
	OSP × sex	−.16*	−.04	.11	.04	−.01	−.08	−.06
	HSP × status	−.08	−.02	−.10	−.11	.17*	.01	.12
	OSP × status	.01	.04	−.01	.11	−.12	−.08	−.06
	HSP × age	−.03	.06	.07	−.05	−.06	−.01	−.06
	OSP X age	.03	.04	.02	.11*	−.05	−.07	−.13*

$N = 280$. Each column represents a separate multiple regression analysis

HSP harmonious sexual passion, *OSP* obsessive sexual passion

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

[her] a great deal. They seem completely absorbed in each other.

Participants were instructed to imagine experiencing this situation with their current (or imaginary) partner and to imagine their reactions with respect to their partner and to the other person in the scenario and how they (participants) would feel. They were then presented with 13 attitudes and behaviors of which five included physical and verbal violence actions (e.g., "I would yell at my partner," "I would hit the person flirting with my partner", $\alpha = .92$). Other filler items measured partner distrust (e.g., "I would question the trustworthiness of my partner") and communicative actions (e.g., "I would discuss this situation with my partner afterward").

Results

A first objective was to examine the associations among each type of sexual passion and the measured outcomes. A second objective was to investigate any moderation by sex, relational status (0 = in a relationship; 1 = single), or age in these associations. Hierarchical multiple regression analyses were conducted to respond to these questions. At Step 1, the two types of sexual passion were entered. At Step 2, demographics of sex, relational status, and age were entered to control for these variables. Finally, at Step 3, the interaction terms among each type of sexual passion and each demographic variable were entered.

Table 1 shows the results for each of these three steps and for each dependent variable, separately. Step 1 shows the associations among HSP and OSP and the outcomes. Overall, results corroborated past findings such that both HSP and OSP were positively associated with the passion criteria. However, HSP and OSP were differently associated with the other outcomes. Replicating the findings of Philippe et al. (2017, Study 2), HSP was negatively associated with a higher ratio of semantic sexual representations over relational ones, whereas OSP was positively associated with it. This result suggests that sexual representations are predominant in OSP and poorly integrated with relational representations, whereas sexual and relational representations are more balanced and integrated with HSP. HSP was also positively associated with sexual satisfaction and relationship quality, whereas OSP was negatively associated or unrelated to these variables. OSP was positively associated with attentiveness to alternatives, sex conflict, and endorsement of violent jealous behavior, whereas HSP was either negatively associated or unrelated to these variables. At Step 2 (see Table 1), results showed that after controlling for the demographics of sex, relational status, and age, most of the significant results of sexual passion remained significant and decreased only slightly.

Finally, Step 3 included the interaction terms involving sexual passion and each demographic variable. Results showed that there were very few moderations, that is, five significant interaction terms out of 42 possibilities. There was a significant OSP X Sex interaction on the passion criteria, such that, in females, OSP was more strongly associated with the criteria of passion ($\beta =$

Table 2 Multiple regressions of HSP and OSP on outcomes, controlling for related constructs: Study 1

Steps	Independent variables	Dependent variables						
		Passion criteria	Ratio sex/relational	Sexual satisfaction	Relationship quality	Attentiveness alternatives	Sex conflict	Violent behavior
Step 1	HSP	.50**	−.19**	.80**	.61**	−.19**	−.09*	.08
	OSP	.43**	.24**	−.07	−.11*	.55**	.77**	.50**
Step 2	HSP	.37**	−.16*	.81**	.51**	−.17**	−.07	.10
	OSP	.34**	.22*	.01	−.04	.22**	.40**	.27**
	Self-determined motives	.18**	−.04	.05	−.07	−.19**	−.04	−.28**
	Solitary sexual desire	.15**	.01	−.08	−.06	.02	.10*	.02
	Dyadic sexual desire	.21**	−.05	−.01	.33**	.22**	.07	.20**
	Sexual compulsivity	−.02	.02	−.09	−.27**	.20**	.34**	.07

$N = 280$. Each column of dependent variables represents a separate multiple regression analysis. All associations with sexual passion also remained significant after controlling for sexual satisfaction

HSP harmonious sexual passion, *OSP* obsessive sexual passion

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

.53, $t[268] = 6.82$, $p < .01$) than in males ($\beta = .31$, $t[268] = 4.24$, $p < .01$), although both associations were significant. There was also a significant HSP × Sex on attentiveness to alternatives. HSP was more negatively associated with attentiveness to alternatives in females ($\beta = -.31$, $t[268] = 3.99$, $p < .01$) than in males ($\beta = -.03$, $t[268] = 0.29$, ns). There was also a HSP × Status interaction on attentiveness to alternatives. In singles, HSP was more negatively associated with attentiveness to alternatives ($\beta = -.31$, $t[268] = 3.99$, $p < .01$) than in partnered participants ($\beta = -.03$, $t[268] = -0.23$, ns). Finally, in terms of moderation by age, in older participants (+ 1 SD), OSP was not associated with relationship quality ($\beta = .03$, $t[268] = 0.28$, ns), whereas it was negatively associated with it in younger (− 1 SD) participants ($\beta = -.27$, $t[268] = -2.67$, $p < .01$). This last result may suggest that people with OSP could learn to better regulate interpersonal relationships as they age. Further reinforcing this claim was the significant OSP × Age interaction on violent jealous behavior, showing that OSP was strongly positively associated with violence in younger participants ($\beta = .58$, $t[268] = 5.54$, $p < .01$) but more moderately associated with it ($\beta = .24$, $t[268] = 2.10$, $p < .05$) in older participants. Interestingly, the positive association between HSP and relationship quality was not moderated by status, indicating that even for those who were single and responded to the scale according to their prior relationship, people with HSP still considered that relationship as of high quality, despite a separation. Overall, there were few moderations and those that were significant mostly showed that the relationship between OSP or HSP and an outcome was slightly more significant for one group of participants compared to another.

A third objective was to examine whether sexual passion would still predict the measured outcomes after holding constant the control variables, that is, theoretically related constructs.[1] To address this research question, multiple regression analyses were conducted again on each dependent variable. At Step 1, the two types of sexual passion were entered, and at Step 2, the control variables (e.g., self-determined motives, solitary and dyadic sexual desire, and sexual compulsivity) were entered. As can be seen in Table 2, all relationships between sexual passion and the outcomes remained significant, even after accounting for the control variables. Some of the relationships were reduced by the inclusion of the control variables, implicating that these constructs share common variance. However, none of the outcomes were better explained by the control variables. These results also held after controlling for sexual satisfaction in all regressions, further suggesting that sexual passion is also more than just sexual satisfaction. A noteworthy result, helping to distinguish sexual compulsivity from OSP, is that sexual compulsivity did not predict the passion criteria, whereas OSP was positively associated with them. This is supporting evidence for the claim that sexual compulsivity should be conceptualized as a lack of pleasure withdrawn from sexual activities, whereas for OSP sexual activities remain enjoyable. To be sure, the same regression analysis was conducted again on the sole and specific criterion of loving sex. Results were the same.

In sum, the results of Study 1 showed that both HSP and OSP were distinct from some existing constructs in the sex literature. In addition, the findings supported a dualistic conceptualization of sexual passion as HSP and OSP were

[1] HSP was correlated .39,* .21,* .24,* and .08 with dyadic sexual desire, solitary sexual desire, self-determined motives for sex, and sexual compulsivity, respectively, whereas OSP was correlated .51,* .52,* −.26,* and .76* with those variables, respectively. *$p < .05$.

successfully differentiated in their prediction of outcomes, with HSP leading to more adaptive outcomes than OSP overall.

Study 2

The purpose of Study 2 was to test the claim that both HSP and OSP can lead to a high and frequent engagement in various sexual activities, but that only HSP combines it with couple adjustment. In Study 2, we measured several constructs and behaviors related to sexual activity engagement, such as sexual desire, numbers of sex life partners, frequency of sexual activities, and frequency of engagement in various sexual behaviors. It was expected that both HSP and OSP would be independently and positively associated with those measures and behaviors, implying that a high engagement in sexual activities can reflect either HSP or OSP. However, because of the greater integration of the sexual representations to the relational representations in HSP, only HSP should combine this high engagement with couple adjustment, whereas OSP should not. In addition, it was posited that these relationships should hold even at a high frequency of sexual engagement. To test these hypotheses, two samples of participants were recruited—students and attendees of an erotic exhibition—with the expectation that this latter sample would be composed of people with higher levels of sexual passion than student populations. As per the results of Study 1 and of past studies (Philippe et al., 2017), we did not expect the hypothesized associations to differ as a function of participants' sex, relational status, or age. Therefore, we did not make hypotheses to this effect, but controlled for these variables in the analyses. Given the way one sample of participants was recruited (during an erotic exhibition), we used short scales to measure the constructs in this study.

Method

Participants and Procedure

As in Study 1, power analysis revealed that based on an alpha of .05 and a power of .80, a sample size of 279 participants was required to detect significant moderations of small effect sizes ($f^2 = .05$) among sexual passion, sex, relational status, and age. Final sample consisted of 336 attendees (58% females) of an erotic exhibition held in Montreal, Quebec, of which 83% were engaged in a relationship with someone (i.e., at minimum a dating relationship or seeing someone for romantic/sexual purposes on a regular basis). Mean age was 27.27 years (SD 9.66). Three research assistants had a small booth with tables and chairs during the erotic exhibition, and they invited attendees to take part in a study on sexuality in exchange of being entered into a draw for three prizes of $125. We did not keep track of the number of participants who were approached and refused to participate, but the vast majority of the attendees accepted to participate (approximately 70%). To compare this group of participants characterized by a presumably higher level of sexual passion to a group with a comparatively lower level, another sample of senior undergraduate students was also recruited. Power analysis revealed that to detect small mean differences of $\eta^2 = .03$ in effect size between the two groups in an ANCOVA (controlling for age) at least 128 participants in each group was required. Accordingly, 167 students (62% females; *M* age = 23.47 years, SD 5.30; 58% in a relationship) were recruited and administered a questionnaire in one of three different classrooms before the beginning of their class. They were not offered compensation. Most students accepted to participate in the study with a few exceptions (i.e., approximately 5 or 6 students per classroom refused).

Measures

Sexual Passion

The Sexual Passion Scale (Philippe et al., 2017) was used again. Alphas were .79 and .74 for HSP and OSP, respectively, in the attendee sample and .80 and .76 in the student sample.

Sexual Desire

The two items measuring sexual desire from the International Index of Erectile Function (Rosen et al., 1997) or the Female Sexual Function Index scale (Rosen et al., 2000) were used. These items were chosen because they reflect a general sexual drive and correspond to a general subjective feeling with no reference to a partner or a romantic relationship. A sample item is "How frequently do you feel sexual desire?" Both items were responded to on a 7-point Likert scale (1 = *never*, 7 = *extremely often*). Inter-item correlations were .75 and .59 in the attendee and student samples.

Number of Sex Partners in Life

Participants were asked to report the number of sex partners they have had in their lives. No definition of a sex partner was given to the participants. To avoid extreme values, this variable was log transformed.

Frequency of Sex Engagement

We used one item to assess participants' frequency of engagement in sexual activities: "At what frequency is it necessary for you to engage in a sexual activity (e.g., sexual intercourse, masturbation, oral sex, etc.)?" This item was responded to on a Likert scale ranging from 1 (*never*) to 8 (*several times per day*), with 6 corresponding to *several times per week* and 7 to *about once per day*. Given that a high level of sexual engagement is often defined as engaging in at least seven sexual activities per week that can lead to orgasms (Kafka & Hennen, 2003; Kinsey, Pomeroy, & Martin, 1948), we were interested in people who would score 7 and above.

Frequency of Sexual Behavior

Participants were asked to what frequency (1 = *never*, 8 = *several times per day*) they engaged in solo-masturbation, watched erotic films, looked at erotic photographs, and attended strip clubs. Factorial analysis (maximum likelihood) revealed one single factor accounting for 42.16% of the variance with factor loadings ranging from .40 to .77. Therefore, all items were averaged to measure the frequency of sexual behavior. Alphas were .70 and .73 in the attendee and student samples.

Couple Adjustment

The short 4-item scale (Sabourin, Valois, & Lussier, 2005) of the Dyadic Adjustment Scale (Spanier, 1976) was used to assess couple adjustment. A sample item is "Do you confide in your mate?" It should be noted that this short version of the DAS does not include any item assessing sexual satisfaction or sexual communication within the couple. Participants currently in a relationship were asked to respond to the scale per this relationship, whereas singles responded as a function of their last or most important former relationship. Alphas were .82 and .89 in the attendee and student samples, respectively.

Results

To ensure that the attendees of the erotic exhibition indeed had high levels of sexual passion and desire and engaged frequently in sexual behaviors, we compared the means of HSP and OSP, sexual desire, number of sex partners, and frequency of sex engagement and sexual behavior between the attendees and students. Separate ANCOVAs were conducted between the two samples on each variable of interest, controlling for participants' age. As expected, attendees reported higher means on all variables (all $Fs > 6.67$, $p < .001$, $\eta^2 > .02$), thus confirming that the attendee sample included participants displaying higher levels of passion and engagement in sexual activities than the student sample.

Hierarchical multiple regressions analyses were conducted on all key dependent variables: sexual desire, frequency of sexual engagement, sexual behavior, number of sex partners, and couple adjustment. At Step 1, independent variables were the two types of sexual passion, sample type (1 = attendees, 0 = students), sex (1 = male, 0 = female), age, and relational status (1 = in relationship; 0 = single). At Step 2, moderations between each type of sexual passion and sample type, sex, age, and relational status were assessed. Results of Step 1, shown in Table 3, revealed that both HSP and OSP were independently and positively associated with all variables reflecting a high sexual engagement, that is, sexual desire, frequency of sexual engagement, sexual behavior, and number of sex partners. However, as expected, only HSP was positively associated with couple adjustment, whereas OSP was unrelated to it.

At Step 2, results showed again few moderations. Only OSP was moderated by sample type on sexual desire and frequency of sex engagement. In both cases, results showed that OSP was more strongly positively correlated with these dependent variables in the student sample (sexual desire: $t[490] = 10.15$, $p < .01$; frequency of engagement: $t[490] = 5.71$, $p < .01$) than in the attendee sample (sexual desire: $t[490] = 6.31$, $p < .01$; frequency of engagement: $t[490] = 3.34$, $p < .01$), but slopes in both samples were statistically significant. OSP was also moderated by sex on sexual desire, revealing that this relationship was stronger for males ($t[490] = 9.44$, $p < .01$) than females ($t[490] = 6.32$, $p < .01$), but remaining significant for both sexes. Again, the association between HSP and couple adjustment was not moderated by relational status, implying that the positive association between HSP and couple adjustment held even when singles rated former relationships.

Given that a high level of sexual engagement is often defined as engaging in at least seven sexual activities per week that can lead to orgasms (Kafka & Hennen, 2003; Kinsey et al., 1948), the frequency of sex engagement variable was split in two at the cutoff score of 7 and above (about one or more sexual activities every day) to create two groups: (1) low-to-moderate engagement in sexual activities and (2) high engagement. A total of 23.5% of the participants in the erotic exhibition attendee sample reported such a high level of engagement compared to 8.8% in the student sample, $\chi^2(3) = 15.44$, $p < .001$. A logistic regression, with this group variable as the dependent variable and with the same independent variables as above, revealed that in addition to sex ($B = .94$, SE .27, Wald = 12.46, $p < .01$), age ($B = -.07$, SE .02, Wald = 14.40, $p < .01$), and sample type ($B = -1.12$, SE .35, Wald = 10.48, $p < .01$), both HSP ($B = .37$, SE .14, Wald = 7.36, $p < .01$) and OSP ($B = .49$, SE .10, Wald = 25.13, $p < .01$) independently predicted membership to the high sex engagement group. These results suggest that sexual engagement, even one at a very high level (one orgasm a day), can be the result of either a HSP or an OSP.

Table 3 Standardized betas coefficients of regression analyses on sexual and relational outcomes: Study 2

Steps	Independent variables	Dependent variables				
		Sexual desire	Frq. sex engagement	Sexual behavior	Sex partners	Couple adjustment
Step 1	HSP	.25**	.21**	.11**	.12**	.31**
	OSP	.40**	.24**	.27**	.11**	−.06
	Sample type	.21**	.12**	.26**	.15**	.06
	Sex	.14**	.18**	.41**	.05	−.05
	Status	−.03	.17**	−.16**	−.07	.33**
	Age	−.04	−.13**	−.02	.24**	−.07
Step 2	HSP × sample type	.11	.14	.02	−.02	−.05
	OSP × sample type	−.29**	−.17**	−.09	−.03	.06
	HSP × sex	−.03	−.03	−.10	.02	.04
	OSP × sex	.16**	.07	.01	.00	.05
	HSP × status	−.01	−.03	.03	−.06	.06
	OSP × status	−.08	−.13	−.10	−.10	−.03
	HSP × age	−.02	−.02	−.01	−.05	.03
	OSP × age	.02	−.02	−.02	−.08	.00

Sample type (0 = Students; 1 = Attendees)

HSP harmonious sexual passion, *OSP* obsessive sexual passion, *Frq* frequency

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

However, only HSP combines it with the relational system, as reflected by its positive association with couple adjustment.[2]

Study 3

The purpose of Study 3 was to investigate some of the theoretical determinants of each type of sexual passion. As explained in Introduction, having high sexual desire does not imply that one has sexual passion, but having high sexual desire may facilitate the development of a sexual passion. Therefore, sexual desire should be a determinant of both types of sexual passion. In addition, the literature on passionate activities (Vallerand, 2015) suggests that for a passion to emerge, the person needs to strongly identify with the activity, defining himself/herself according to it (e.g., as a guitarist and not merely as someone who plays the guitar). Like the guitarist and his guitar, when sexuality turns into a sexual passion, the person can strongly identify with sexuality and define himself/herself as a person with a high sex drive or as a sexual person (for an inventory of sex-defining traits, see Schmitt & Buss, 2000). As such, sexual self-definition should be associated with both HSP and OSP.

Some other determinants are, however, expected to distinguish HSP from OSP. As explained in Introduction, a general autonomous internalization should have a greater likelihood of developing a HSP, whereas a controlled orientation should be associated with OSP. Similarly, OSP, but not HSP, should be associated with contingencies related to sexuality and to stereotypical norms related to physical attractiveness. Thus, HSP and OSP were expected to be predicted by some common (sexual self-definition, sexual desire), but also distinct determinants (general internalization orientation, sexual contingencies).

We also sought to examine three expected outcomes of sexual passion: sexual satisfaction, couple adjustment, and extradyadic sex intentions. As shown in Studies 1 and 2, only HSP should be positively associated with sexual satisfaction and couple adjustment. However, given the greater conflict between sexuality and other life spheres characterizing OSP, it was expected to be positively associated with extradyadic sex intentions, whereas HSP should be negatively associated or unrelated to them. Finally, we also expected that HSP and OSP would fully mediate the relationships between the determinants (sexual self-definition, sexual desire, internalization orientation, and sexual contingencies) and those outcomes. Because current extradyadic sex intentions were assessed, only participants engaged in a romantic relationship were recruited in this study.

[2] We also examined whether this dichotomous variable assessing low-to-moderate and high level of engagement would moderate HSP and OSP associations with the measured outcomes (sexual desire, sexual behaviors, number of sex partners, and couple adjustment). All results were non-significant, thereby implying that HSP and OSP lead to the same consequences at all levels of sexual engagement.

Method

Participants and Procedure

A Monte Carlo simulation (Muthén & Muthén, 2002) was conducted in Mplus 8 to estimate the sample size required for a path analysis with mediational sequences to detect standardized coefficients of small (.20)-to-medium (.30) effect sizes with a power of at least .80. Known associations among sexual passion and planned determinants or outcomes (e.g., OSP and sexual desire; HSP and couple adjustment) were set based on the results of past studies and at a maximum standardized coefficient of .30, whereas unknown associations (OSP and contingencies) were estimated at a smaller standardized coefficient of .20. Results revealed that a sample size of 170 was required to detect significant effects at an alpha of .05 and power of at least .80 for all estimated associations expected to be significant. A total of 169 (87% females) undergraduate and graduate students currently involved in a romantic relationship for at least three months took part in this study (age: $M = 28.42$ years, SD 8.36 years). They were contacted with their institutional email and invited to take part in an online study on couples and sexual behaviors. A total of 236 participants were recruited, and 67 were dropped because they were currently single. In exchange for their participation, all participants were entered into a draw for one of three prizes of $125. The email invitation was sent to a randomly chosen group of students, and it is therefore not possible to know how many refused to participate or simply did not read the email.

Measures

Sexual Passion

Alphas were .90 and .77 for the Harmonious and Obsessive Sexual Passion subscales in this study.

Sexual Desire

The Solitary Sexual Desire scale used in Study 1 was again used in this study. Item inter-correlation was .72.

Sexual Self-Definition

The extent to which people self-define themselves as sexual was assessed with a single item derived from the Inclusion of Other in Self Scale (IOS: Aron, Aron, & Smollan, 1992). This item is designed with seven pairs of overlapping circles ranging from 1 (*no overlap*) to 7 (*almost complete overlap*). One circle represented the self (Me) and the other circle represented sexuality (Sex). Participants were thus asked to choose the pair of circles that best represented their relationship with sex and sexuality at large.

Internalization Orientation

Participants' types of internalization orientation were measured using the Global Motivation Scale (Pelletier, Dion, Slovinec-D'Angelo, & Reid, 2004; Pelletier, Sharp, Huta, & Beaudry, 2016). This scale is composed of 18 items measuring six types of internalization of which three are autonomous ways to internalize activities and values—intrinsic regulation ($\alpha = .65$), integrated regulation ($\alpha = .81$), identified regulation ($\alpha = .70$)—and three others are controlled ways of internalization—introjected regulation ($\alpha = .82$), external regulation ($\alpha = .83$), and absence of regulation ($\alpha = .71$). A sample item is "In general, I do things…for the pleasure of learning something new" (intrinsic regulation) or "to show others what I am worth" (introjected regulation). A continuum index of internalization was then computed by assigning a weight of + 3 to − 3 to each type of regulation, from the most autonomous internalization type (+ 3) to the most controlled internalization type (− 3). Scores for each subscale were then multiplied by its corresponding weight, and all product terms were added to yield a continuum index of internalization orientation. Thus, a positive correlation with this index corresponds to a general autonomous internalization, while a negative correlation represents a general controlled internalization.

Sexual Contingencies

First, the Ideal Body Stereotype Scale Revised (IBSS-R; Stice, 2001) was used to measure endorsement of feminine body stereotypes with six items (e.g., "Slender women are more attractive"). These same six items were also slightly modified to assess masculine stereotypes. In line with past research that has shown that sexual contingencies for men are associated with muscularity (e.g., Frederick & Haselton, 2007), wordings from the IBSS-R with respect to female thin weight were modified to address muscularity (e.g., "Muscular men are more attractive"). Also, a total of eight items from the Perceived Sociocultural Pressure Scale (Stice & Bearman, 2001) were slightly modified to measure social pressure to dress in a sexually attractive fashion (e.g., "I have felt pressure from my friends to dress in a sexy or attractive manner"). Both males and females indicated their degree of agreement with each item (1 = *do not agree at all*, 7 = *totally agree*). All items were averaged together (correlations among feminine and masculine stereotypes and social pressure ranged from .60 to .71). Alpha for the overall sexual contingencies scale was .90.

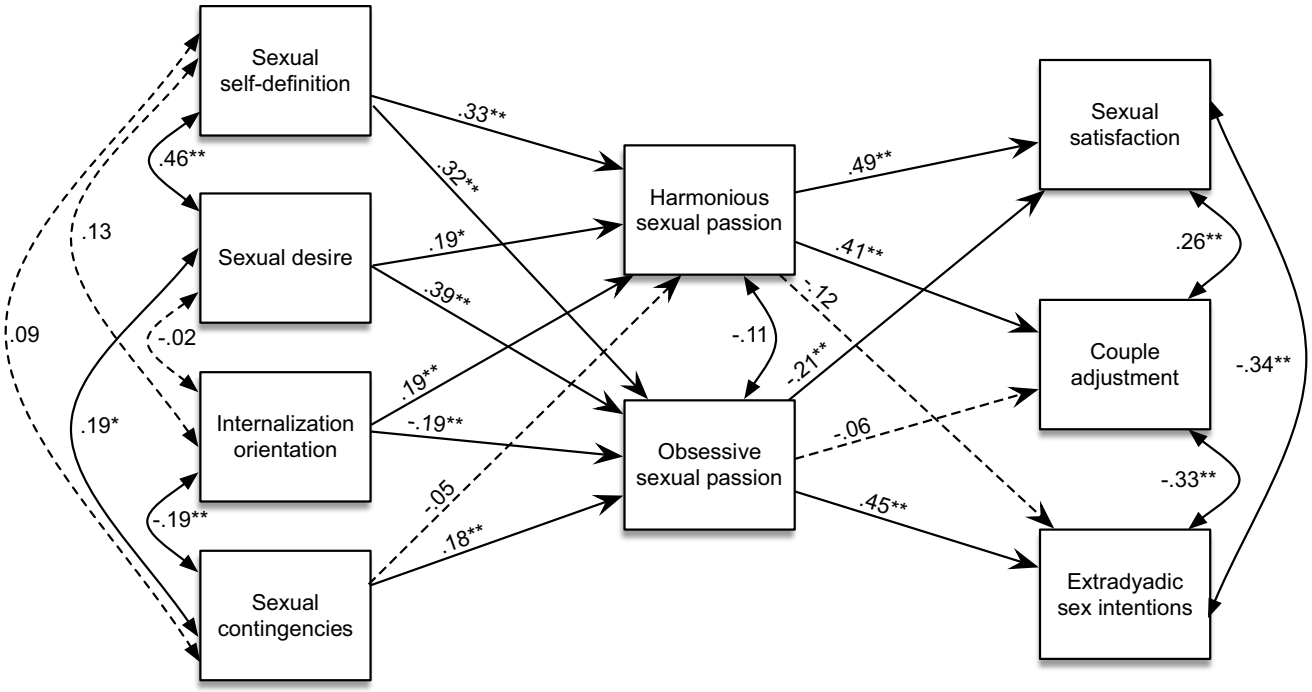

Fig. 1 Path analysis of sexual passion mediating sexual self-definition, sexual desire, internalization orientation, and sexual contingencies on sexual satisfaction, couple adjustment, and extradyadic sex intentions. Dashed lines represent nonsignificant associations: Study 3. *$p < .05$. **$p < .01$

Sexual Satisfaction

One item used in past research (Beaulieu-Pelletier, Philippe, Lecours, & Couture, 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 scale (1 = *not satisfied at all*, 5 = *totally satisfied*).

Couple Adjustment

The short version of the Dyadic Adjustment Scale (Spanier, 1976) used in Study 2 was used again in this study. Alpha was .86.

Extradyadic Sex Intentions

One item used in past research (Beaulieu-Pelletier et al., 2011) on extradyadic sex ("To what extent do you think about being unfaithful to your partner?") and two items from the Susceptibility to Infidelity Scale (Buss & Shackelford, 1997) (To what extent is it probable that you… "kiss passionately someone else than your current partner within the next year?", "have a one-night stand with someone else than your current partner within the next year?") were responded to on a scale from 1 (*never*) to 7 (*extremely often*) and averaged to measure extradyadic sex intentions. Participants were told to indicate a frequency to these items only for their actions that would occur in violation of their relationship rules and consensual understanding. Alpha was .88.

Results

A path analysis was used to examine the associations between the determinants, sexual passion, and the outcomes. This type of analysis allowed us to examine several dependent variables concomitantly along with mediation effects. The path was conducted in Mplus 8 with maximum likelihood as the method of estimation. Sexual desire, sexual self-definition, internalization orientation, and sexual contingencies were modeled as exogenous variables (i.e., predictors). These variables predicted the two types of passion, which were modeled as endogenous mediator variables, which, in turn, predicted sexual satisfaction, couple adjustment, and extradyadic sex intentions. In addition, covariances were freely estimated among the determinants, between the two types of passion, and among the three outcomes, so that each variable predicting an outcome could be interpreted as being uniquely associated with this outcome.

Results of this model (see Fig. 1) revealed adequate fit indices, $\chi^2(12) = 19.53$, ns, CFI = .98, TLI = .94, RMSEA = .061, SRMR = .033. The nonsignificant p value of this

model indicates that it was not significantly different from a model including all direct effects from all determinants to all outcomes (a saturated model with zero degree of freedom), therefore implying full mediations (i.e., no significant paths from the determinants to the outcomes). As expected, both sexual desire and sexual self-definition were independently and positively associated with each type of passion. However, an autonomous internalization orientation was associated with HSP, as shown by the positive association between these two variables, whereas a controlled internalization orientation was associated with OSP, as shown by the negative association between these variables. In addition, sexual contingencies were positively associated with OSP while being unrelated to HSP. As for the outcomes, HSP was positively associated with sexual satisfaction and couple adjustment, and it was marginally negatively related to extradyadic sex intentions ($p < .10$). Conversely, OSP was positively related to extradyadic sex intentions, negatively related to sexual satisfaction, and unrelated to couple adjustment. There was no interaction as a function of biological sex in the whole model. Finally, controlling for sexual satisfaction at the same level of sexual passion did not affect the results, therefore ruling out again the alternative explanations that HSP is associated with couple adjustment only because of an adequate sexual satisfaction in the relationship or that OSP correlates with extradyadic sex because of unsatisfactory sex.

Bootstrapping was used to examine the significance of the mediations of sexual passion in the relationships among the determinants and the outcomes. A bootstrapping procedure was executed using a total of 5000 resamples. The 95% confidence interval was calculated for each indirect effect from the determinants to the outcomes for which significant associations between the variables of each sequence (*a* and *b* paths) were found in the above model. Results revealed that all mediation effects were significant at $p < .05$, since all bootstrap 95% confidence intervals did not include the value of zero (see Table 4).

Table 4 95% Confidence intervals of bootstrap indirect effects of all possible mediations of sexual passion between determinants and outcomes: Study 3

Mediations	Bootstrap 95% confidence intervals
Identification → HSP → sexual satisfaction	.063; .197*
Sex drive → HSP → sexual satisfaction	.000; .190*
Internalization → HSP → sexual satisfaction	.005; .023*
Identification → OSP → sexual satisfaction	−.099; −.016*
Sex drive → OSP → sexual satisfaction	−.155; −.021*
Internalization → OSP → sexual satisfaction	.001; .012*
Contingencies → OSP → sexual satisfaction	−.105; −.008*
Identification → HSP → couple adjustment	.045; .126*
Sex drive → HSP → couple adjustment	.000; .136*
Internalization → HSP → couple adjustment	.003; .017*
Identification → OSP → extradyadic sex	.061; .242*
Sex drive → OSP → extradyadic sex	.111; .359*
Internalization → OSP → extradyadic sex	−.031; −.005*
Contingencies → OSP → extradyadic sex	.040; .252*

HSP harmonious sexual passion, *OSP* obsessive sexual passion

*$p < .05$

Discussion

The present research extended a dualistic conceptualization of sexual passion. First, findings showed that both HSP and OSP were associated with a high sexual engagement, yet, each led to distinct consequences. Both HSP and OSP were positively associated with criteria of loving sex, finding it important, and investing time and energy in sexual activities (Study 1), with a frequent engagement in various sexual activities and behaviors (Study 2), with sexual desire (Studies 2 and 3), and with sexual self-definition (Study 3). These results suggest that both HSP and OSP correspond to the concept of a passion toward sex. Nevertheless, each was shown to be associated with different outcomes. Study 1 showed that HSP, through a high interest in sex and sexual activities, may build solid personal and interpersonal resources. HSP was indeed positively associated with sexual satisfaction in Studies 1 and 3 and with relationship quality and couple adjustment in Studies 1, 2, and 3. Conversely, despite being associated with an as high engagement in sexual activities as HSP, OSP was more likely to be associated with less adaptive outcomes, such as attentiveness to alternatives (Study 1), extradyadic sex intentions (Study 3), sex conflict, and violent jealous behavior (Study 1). Furthermore, OSP was either negatively associated or unrelated to sexual satisfaction (Studies 1 and 3) and relationship quality (Study 1) or couple adjustment (Studies 2 and 3). Finally, across all three studies there were very few moderations by biological sex, implying that the determinants and outcomes of sexual passion apply similarly for both men and women. Overall, the present findings provide further evidence of validity for the existence of two different types of sexual passion, each one being associated with distinct outcomes.

A second extension of the dualistic model of sexual passion is that novel evidence of discriminant validity was obtained. Notably, HSP and OSP were found to be associated with important personal and interpersonal outcomes, above and beyond solitary and dyadic forms of sexual desire, sexual compulsivity, and self-determined sexual motives. Study 3 further suggested that sexual desire, sexual self-definition, internalization orientation, and sexual contingencies are theoretical determinants of sexual passion rather than fully overlapping constructs. These findings support the idea that both HSP and OSP can fill in a void in the literature and are

important concepts that seem to energize sexual behaviors of all kinds. One related concept that was not addressed in the present research is sexual schema (Andersen & Cyranowski, 1994). Sexual schema is similar to sexual passion in the cognitive perspective it takes to explain sexual behaviors. Sexual schema, like sexual passion, also corresponds to a set of organized mental representations relative to sexuality, which guides information processing. However, the similarity between the two concepts probably ends there, as sexual representations in sexual passion are not organized the same way as in sexual schema. While sexual schemas are typically organized as positive or negative, they mostly reflect approach and avoidance drives with respect to sexuality. The two types of sexual passion reflect two distinct approach drives to sexuality that each differs in the way sexual representations are integrated with other types of representations, reflecting either an autonomous or a controlled internalization of sexuality. While two types of positive self-schemas have been identified (romantic-passionate and behavioral openness), it is not clear how each of these positive schemas would tap into a specific type of sexual passion, as both HSP and OSP have been shown to be associated with passion and behavioral openness (Philippe et al., 2017). Future research is needed to examine the extent to which sexual schema could relate to sexual passion.

Third, the present research also highlighted common, but also distinct determinants of each type of sexual passion. Notably, a general autonomous internalization was found to be related to HSP, whereas a controlled internalization was rather found to be associated with OSP. OSP was also found to be associated with greater contingencies related to sexuality such as sexual social norms and stereotypes, reflecting that, with OSP, sexual representations are imposed or externally driven and not coherently integrated with other types of representations. This was also clearly illustrated by the finding that OSP is associated with a greater proportion of sexual semantic representations over relational representations, whereas HSP corresponds to a much more balanced ratio. Finally, sexual desire and sexual self-definition were also found to be important determinants of both types of sexual passion and to be mediated by sexual passion in their relationship to outcomes. It is noteworthy that variables such as sexual desire and sexual self-definition could indirectly lead to adaptive outcomes such as sexual satisfaction and couple adjustment through HSP, but at the same time be conducive to less adaptive ones, such as extradyadic sex intentions, through OSP. These results suggest that common variables in the sex literature such as sexual desire can sometimes lead to adaptive or less adaptive outcomes, depending on the type of sexual passion that they fuel.

Fourth, the present research supported an important asset of the dualistic model of sexual passion in that sexual passion exists and has similar consequences whether people are engaged in a romantic relationship or single. Indeed, Studies 1 and 2 showed virtually no moderation by relational status, such that the associations between HSP and OSP and outcomes were the same, whether people were partnered or not. These findings extend those of Philippe et al. (2017) who also found very few moderations by relational status on several outcomes. These findings contrast with the classical conceptualization of sexual passion, which has always been defined as a dyadic phenomenon that emerges from the interdynamics developed with a partner. But sexual passion cannot be reduced to partner attraction only. In fact, this observation could go beyond the concept of sexual passion. So many sexuality-related scales make references to partners (e.g., self-determined sexual motives, sexual desire, sexual satisfaction), as if sexuality was necessarily a dyadic phenomenon. We recognize that sexuality is most often expressed with a partner (e.g., partner attraction), but sexuality can also be experienced and fulfilled alone. This idea that sexuality requires a partner seems to be an old resistant stereotype which has perhaps masked the idea that sexuality is initially an intrapersonal drive that can be oriented according to the way sexual representations have been internalized and are cognitively organized. The encounter of a partner appears here as a secondary step in this process.

Sexual Passion and Hypersexuality

The findings of the present research suggest that using the frequency of engagement in sexual activities as a criterion to define normality and pathology can be misleading, as one can engage in frequent sexual activities based on either HSP, OSP, and potentially sexual compulsivity. One obvious illustration of this is the positive association between HSP and couple adjustment, which remains positive even at high levels of sex engagement (about one sexual activity per day), as shown in Study 2. This raises serious concerns with respect to using criteria such as seven and more total sexual outlet/week (Kafka, 2010), exaggerated frequency and focus on sexual behaviors (Reid, Carpenter, Spackman, & Willes, 2008), or high sexual desire (e.g., Štulhofer, Jurin, & Briken, 2016) to define pathological sexual compulsivity or hypersexuality. It can be misleading as constructs such as sexual desire or frequency of sexual behaviors can lead to adaptive or less adaptive outcomes as function of what kind of sexual passion they fuel.

Limitations and Conclusion

Certain limitations related to the present research should be underscored. First, all three studies used cross-sectional designs. Therefore, no definitive claims can be made about causality or even about the direction of the effects. Future prospective studies are needed to determine whether sexual passion actually leads to the outcomes examined in the

present research. Experimental manipulation of sexual passion could also be used to examine causality on certain outcomes (e.g., Bélanger, Lafreniere, Vallerand, & Kruglanski, 2013). Second, almost all samples of the present studies were not representative of the general population (e.g., students or attendees of an erotic exhibition). Therefore, the generalization of the present findings should be done with caution. Third, apart from Study 1 that used a simple semantic task, all studies used self-reports. Future studies could use more objective markers of sexual engagement and behaviors in order to reduce the common variance between the self-reported assessment of sexual passion and the outcomes. Fourth, the sample of Study 3 included more female than male participants. It is unknown whether the results were biased by the composition of the sample. The findings obtained may therefore need to be replicated with a more gender-balanced sample. Fifth, outcomes in the present study were quite common outcomes (e.g., sexual satisfaction, extradyadic intentions). Future research could examine more dysfunctional sexual behavior (e.g., exhibitionism, intrusive sex) and investigate the part that HSP, OSP, and potentially hypersexuality play in those behaviors.

In sum, the present research provides new evidence of validity for a dualistic model of sexual passion by examining some of its theoretical determinants and consequences. We believe that the present concept of sexual passion could be used in the future to better understand various types of sexual attitudes and behaviors that could be fueled by sexual passion.

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