

## What Exactly Is an Unusual Sexual Fantasy?

Christian C. Joyal, PhD,\*† Amélie Cossette, BSc,\* and Vanessa Lapierre, BSc\*

\*Department of Psychology, Université du Québec à Trois-Rivières, Trois-Rivières, Québec, Canada; †Philippe-Pinel Institute of Montreal, Montreal, Québec, Canada

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### ABSTRACT

**Introduction.** Although several theories and treatment plans use unusual sexual fantasies (SF) as a way to identify deviancy, they seldom describe how the fantasies referred to were determined to be unusual.

**Aim.** The main goal of this study was to determine which SF are rare, unusual, common, or typical from a statistical point of view among a relatively large sample of adults recruited from the general population. A secondary goal was to provide a statistical comparison of the nature and intensity of sexual fantasies for men and women. This study also aims at demonstrating with both quantitative and qualitative analyses that certain fantasies often considered to be unusual are common.

**Methods.** An Internet survey was conducted with 1,516 adults (799 ♀; 717 ♂) who ranked 55 different SF and wrote their own favorite SF. Each SF was rated as statistically rare (2.3% or less), unusual (15.9% or less), common (more than 50%), or typical (more than 84.1% of the sample).

**Main Outcome Measures.** An extended version of the Wilson's Sex Fantasy Questionnaire with an open question.

**Results.** Only two sexual fantasies were found to be rare for women or men, while nine others were unusual. Thirty sexual fantasies were common for one or both genders, and only five were typical. These results were confirmed with qualitative analyses. Submission and domination themes were not only common for both men and women, but they were also significantly related to each other. Moreover, the presence of a single submissive fantasy was a significant predictor of overall scores for all SF in both genders.

**Conclusion.** Care should be taken before labeling an SF as unusual, let alone deviant. It suggested that the focus should be on the effect of a sexual fantasy rather than its content. **Joyal CC, Cossette A, and Lapierre V. What exactly is an unusual sexual fantasy? J Sex Med 2015;12:328–340.**

**Key Words.** Paraphilia; Sexual Fantasies; General Population

### Introduction

The Diagnostic and Statistical Manual of Mental Disorders defines paraphilia as unusual [1], atypical [2] or anomalous [3] sexual fantasies (or urges or behaviors, criterion A; see also criterion G1 of the ICD-10 [4]). What constitutes an unusual (or usual) sexual fantasy is not clear, however. Sexual fantasies (SFs) are generally defined as any mental imagery that is sexually arousing or erotic to the individual [5]. From a clinical point of view, determining when a sexual fantasy, usual or not, is a disorder is fairly straightforward: it is obligatory, compulsive, and/or results

in sexual dysfunction or causes distress or impairment to the individual (criteria B of the DSM-V and G2 of the ICD-10). From a legal perspective, a criminal sexual interest clearly involves a non-consenting or a minor partner. But beyond this, what exactly is an unusual SF? The DSM-5 and the ICD-10 provide roughly the same eight examples of unusual SF: fetishism, masochism, sadism (sado-masochism in the ICD-10), frotteurism, exhibitionism, pedophilia, transvestism, and voyeurism. The grounds on which these fantasies are considered unusual are not specified, however. Clarifying the ambiguous boundaries between usual and unusual SFs is important for both clinical and

theoretical purposes. Surprisingly, such clarification is seldom available.

A landmark review of the literature concerning the nature of SF of individuals recruited from outside clinical populations was published by Leitenberg and Henning nearly 20 years ago [5]. They reported that although both men and women tend to have similar fantasies, men seem to fantasize more about impersonal relationships and domination, whereas women seem to fantasize more about romance and submission. The authors stress, however, that their data were obtained largely from college students. Given that age (lower) and education (higher) are known to be associated with a greater diversity of sexual fantasies [6–10], in order to obtain a more accurate picture, participants should be recruited from outside college settings. Leitenberg and Henning [5] underlined another limit in studies of SF: their tendency to use cluster analyses and bias responses by reporting sexual interest related to items that have necessarily been preselected for inclusion in the questionnaire. It comes as no surprise, for instance, that questionnaires containing items related to sadomasochism will generate a statistical cluster of items related to sadomasochism (e.g., Ref. 11). In the same vein, one would expect that sadomasochist persons would obtain higher scores than others on a sadomasochistic subscale [12]. To partially avoid this circular logic, items used in closed-question questionnaires should be varied and selected on the basis of objective criteria. Furthermore, open questions should be included in the questionnaire.

We systematically reviewed the literature published since 1995 (or not included in Leitenberg and Henning) on SF among samples of individuals recruited from nonclinical settings in an attempt to determine which sexual fantasies are unusual. The search was exhaustive and performed with four major engines (Google Scholar, Web of Science, Medline, and Dissertation and Theses), using the keywords “sex,” “sexual fantasies,” “general,” and “general population” for studies published until the end of 2012. In all, 17 studies published in English or French were identified. As shown in Table 1, most of these studies are either based on samples of participants recruited in college settings or fail to provide inferential or comparative statistical analyses. One study used open questions with persons recruited among the community, although the qualitative analyses were based on a limited number of themes [22]. Only one study adopted a hybrid design (quantitative

and qualitative analyses), although it was limited to college female students [19]. Still, these studies confirm that although men tend to report a higher diversity of sexual fantasies than women, both genders acknowledge themes that are often labeled as unusual (Table 1; see also Ref. 36 for paraphilic interests, not fantasies, among college students).

Few investigations of SF have been performed with persons recruited from the general population. Ogas and Gaddam [37] compiled keywords entered in Internet search engines between July 2009 and July 2010 and found that among the 20 most popular sexual topics, 7 could be labeled unusual or abnormal (youth, incest, domination, submission, bestiality, transsexual, and grannies, in that order of incidence). Of course, this study was not directly related to individuals' fantasies and young educated males are overrepresented among Internet users searching for sexual content. Still, their findings make it possible to generate some hypotheses.

The same year, Ahlers and colleagues [30] reported that among 367 men aged between 40 and 79 and living in Berlin, more than half (58.6%) acknowledged at least one “paraphilic” SF, including voyeurism (34.9%), fetishism (30%), and sadism (21.8%). Again, these ratios might apply only to older and particularly libidinal men living in Berlin (the response rate was only 19%), but they contradict the idea that such fantasies are unusual or atypical. Five large-scale surveys of sexual fantasies or interests among samples representative of populations were recently obtained in Europe (in France: Brenot [9],  $N = 2,153$  men, and Brenot [10],  $N = 3,404$  women; French Institute of Public Opinion, 2009,  $N = 1,016$  men and women [28], and French Institute of Public Opinion, 2011, [29]  $N = 579$  women; in England: Khar [25,26],  $N = 18,299$  men and women; see Table 1). However, none of these large-scale studies included quantitative (statistical) or qualitative analysis of the data. Basic statistical analyses are warranted to determine the extent of deviation from the norm, if any, of each sexual fantasy, as well as the level of difference, if any, between genders. Qualitative analyses of open responses are also needed to determine whether sexual interests related with themes not included in predetermined lists of items would emerge.

The cases of masochism and sadism are particularly interesting. First, clinical settings have typically considered these fantasy themes to be unusual (e.g., Ref. 38). Fantasies involving spanking, forcing someone to have sex, tying someone

**Table 1** Studies of sexual fantasies in samples drawn from nonclinical populations published since (or not included in) the review in Leitenberg and Henning, 1995 [5] (in chronological order)

Study	Sample	Measure	Outcome summary	Statistics
Tantillo, 1980 [13]	College students $N = 901$ $N = 436$ ♂; $N = 465$ ♀	Unpublished questionnaire 116 items	Males > females significantly more frequent general-typical, fetishism and social group sexual fantasies Females > males significantly more frequent submissive fantasies More sexual fantasies = more active sexual life Heterosexual women evidenced more positive dispositions toward sexual fantasy	Principal component four factors: General-typical; Fetishism; Sadomasochistic; Groups. NS
Hurlbert, 1993 [14]	College students $N = 68$ ♀ $N = 34$ heterosexuals $N = 34$ homosexuals	NS		NS
Hsu et al., 1994 [15]	College students; $N = 160$ $N = 54$ ♂, $N = 106$ ♀ Mean age: 25 years old	NS	Men fantasize more than women	NS
Laumann et al., 1994 [8]	Representative sample (United States) $N = 3,432$ ; 1,511 ♂; 1,921 ♀ Age: 18–59	Custom-made questionnaire Section 7: "Fantasy"	Receiving oral sex: 45% ♂ vs. 28.8% ♀ = very appealing Giving oral sex: 33.5% ♂ vs. 16.5% ♀ = very appealing Watching others: 5.3% ♂ vs. 1.5% ♀ = very appealing Sex with a stranger: 4.1 ♂ vs. 0.9 ♀ = very appealing	No comparative statistics
O'Donohue et al., 1997 [16]	Adult convicted child molesters $N = 37$ (final sample) College students $N = 76$ (final sample)	Sexual Fantasy Questionnaire (SFQ)	Few differences between sex offenders and students Child offenders > college students about children College students > child molesters about bondage	t-tests
Plaud and Bigwood, 1997 [17]	College students $N = 116$ ♂	Wilson Sex Fantasy Questionnaire (WSFQ)	These males had significantly more exploratory, intimate, impersonal, and total sexual fantasies than sexual fantasies reported by female respondents in the older, original study using the WSFQ (Wilson, 1981; $N = 45$ ). Significantly more intimate, impersonal, and total sexual fantasizing when compared with males in Wilson (1981). College students in this study reported fewer deviant themes of sexual fantasizing when compared with a group of sexually variant men in Wilson (1988).	Principal component analyses No results for single items
Daleiden et al., 1998 [18]	College students $N = 135$ ♂ Incarcerated non-sex offenses Juvenile offenders $N = 164$ ♂ Incarcerated sex offenses juvenile offenders $N = 302$ ♂	Unpublished questionnaire 127 items	The highest mean score for college students was on the Traditional/Romantic subscale The second highest score for college students was on the Variety of Partner subscale College students obtained significantly higher scores (and no significantly lower score) than sex and non-sex offense juvenile offenders on four fantasy subscales: Nondeviant, Traditional/Romantic, Variety of Setting, and Mildly Coercive.	MANCOVA Scheffe corrected
Strassberg and Lockerd, 1998 [19]	College students: $N = 137$ ♀ Mean age: $21.1 \pm 3.6$ ; 80% single	The Sexual Fantasy Checklist* Fantasy log for three favorite sexual fantasies	Virtually every woman reported engaging in sexual fantasy on a regular basis. More than half the subjects reported having engaged in a fantasy involving force. Women reporting fantasies involving force scored as less sexually guilty and more erotophilic than those not reporting such fantasies. Women reporting fantasies involving force also had more sexual experience and engaged in more fantasizing about non-forced experiences than the other subjects. A history of exposure to sexual force or coercion was unrelated to the report of fantasies involving force.	Frequencies Qualitative analyses
Renaud and Byers, 1999 [20]	College students $N = 144$ ♂; $N = 148$ ♀ Mean age: $19.8 \pm 3.0$	Wilson Sex Fantasy Questionnaire	Males > females: Having sex with two other people, participating in an orgy, having sex with anonymous strangers, looking at obscene pictures, watching others have sex, having sex with someone I know, having sex with someone much younger Females > males: Wearing clothes of the opposite sex, Exposing myself provocatively, activities contrary to my sexual orientation, tying someone up, kissing passionately Having my clothes taken off, being spanked, hurting a partner.	ANOVA (Bonferonni corrected)
Robinson and Parks, 2003 [21]	Community sample $N = 129$ ♀ in couples (85 lesbians; 44 bisexuals)	15 fantasy questions from Hariton and Singer (1974)	79.1% endorsed "nontraditional" sexual fantasies. 62.8% endorsed power-dominance sexual fantasies.	Frequencies No comparison group

Table 1 Continued

Study	Sample	Measure	Outcome summary	Statistics
Zurbriggen and Yost, 2004 [22]	Community sample N = 162; 85 ♂, 77 ♀ Mean age: 29.7 ≥Bachelor degree: 76.5%	Fantasy log for two sexual fantasies (not necessarily favorite)	Males > females: fantasies about dominance Men tended to focus more on the desire and pleasure of their partner. Men's fantasies of dominance were associated with greater acceptance of rape myths. For women, greater rape myth acceptance was associated with emotional and romantic fantasy themes.	Qualitative analyses
Shulman and Horne, 2006 [23]	Internet survey; N = 261 ♀ Mean age: 27.9 ± 8.8 ≥College degree: 49.1	Sexual suffering subscale of the Female Sexual Fantasy Questionnaire†	Low levels of sex guilt and high levels of erotophilia predicted forceful sexual fantasies	Regressions Correlations
Birbaum, 2007 [24]	From universities and community centers N = 176 (69 ♂, 107 ♀) Mean age: 25.5 ± 4.1 Education 13.7 years ± 2.3	20-item questionnaire	Women > men romantic and emotional fantasies Men > women dominance and unrestricted sexual fantasies Men anxiously attached were more likely to report romantic fantasies Attachment avoidance was negatively associated with romantic themes among men	Factor analysis Correlations Hierarchical regressions
Khar (2007, 2008) [25,26]‡	18,299 ♂ and ♀ Adults from the general population	Interviews	Approximately 30% of the sample reported masochistic fantasies. Being humiliated and inflicting shame is "one of the most popular themes" and several persons vacillate between both (but no stats). 42% never fantasize about their spouse 58% sometimes fantasize about their spouse 30% regularly fantasize about their spouse 55% have actually cheated on their spouse 90% fantasize about cheating 90% fantasize about non-spouse during sex with spouse (men = women) Only 30% fantasize regularly about spouse during masturbation 25% fantasize about celebrities (slightly more men, particularly younger men)	Frequencies No comparative statistics No qualitative analyses
Williams et al., 2009 [27]	College students N = 103 ♂ Mean age: 19.7	MASA adaptation§	95% of the sample reported at least 1 "deviant" sexual fantasy: sadism (62%); bondage (62%); sexual assault (68%); frotteurism (72%); voyeurism (83%)	Frequencies Correlations
IFOP, 2009 [28]	Representative sample N = 1,016 ♂-♀ Adults	Closed questions about pornography	For approximately one-third of males, anal intercourse, breast size, and double penetration are important. More than two-thirds of men need good-looking actors. Similar proportions of men (19%) and women (18%) judge penis size of actors important.	Frequencies
IFOP, 2011 [29]	Representative sample N = 579 ♀ Adults	Closed questions about pornography	Half of women like watching lesbian scenes. 43% like watching cunnilingus. 73% prefer actors with natural look. 65% think realistic scenarios are important.	Frequencies
Ahlers et al., 2011 [30]	Community sample N = 367 ♂ (19.2% of total sample) Individual interviews Mean age: 57.5 ± 10.1	A German questionnaire¶ Fantasies and behaviors related with DSM paraphilia	Presence of at least 1 paraphilic fantasy: 58.6%; voyeurism: 34.9%; etishism: 30.0%; sadistic: 21.8	Frequencies Logistic regressions
Brenot, 2011 [9]	N = 2,153 ♂ via Internet All engaged heterosexual adults (mean age: 43.1) Higher education: 55.5%	Custom-made questionnaire	83.2% reported having sexual fantasies. 61% fantasized about having sex with two women. 10% of masturbatory fantasies involve their spouse.	Few frequencies No comparative statistics No qualitative analyses
Brenot, 2012 [10]	N = 3,404 ♀ via Internet All engaged heterosexual adults (mean age: 35.3) Higher education: 62.5%	Custom-made questionnaire**	71.4% reported having sexual fantasies. Those who reported no sexual fantasies at all (27.7%) were judged to be less satisfied sexually, to masturbate less frequently, to be less interested in pornography, and to have a lower mean number of lifetime sexual partners. Inclusion of the current partner in sexual fantasies = popular. Fantasies about multipartnership = popular.	Few frequencies No comparative statistics No qualitative analyses

\*Adapted from Refs. 31 and 32; this checklist contains only 16 fantasies

†Adapted from Ref. 33; this subscale contains only six fantasies

‡Khar published two books about the same study [25,26], although the updated version [26] contains less statistical information than the original version [25]

§Adapted from Ref. 34

¶Available in German in Ref. 35

\*\*Unfortunately, questionnaires in Refs. 9 and 10 were not identical and some comparisons between genders could not be made (e.g., childhood sexual abuse)

NS = not specified.

up (domination), and being spanked, forced to have sex, or tied-up (submission) have been ranked on various evaluative instruments as deviant (e.g., the Clarke Sex History Questionnaire [39]) or paraphilic (e.g., the Sex Fantasy Questionnaire [11]; the Sexual Fantasy Questionnaire [16]; the Kaufman Sexual Fantasy Questionnaire [18]). Similarly, healthcare providers typically consider fantasies of coercion, sadism, or forcing to be deviant [40]. Gee, Devilly, and Ward [41], for instance, specify that “unlike general sexual fantasy, deviant sexual fantasies may contain themes involving the intentional infliction of harm in a sadistic or otherwise sexually aggressive way” (p.316). However, the grounds on which these (or any) sexual fantasies can be considered as deviating from the fantasies of most of the population are not clear. Large-scale studies of individuals recruited from the general population are essential to answer this question but are surprisingly rare.

Second, SF themes of submission and domination are not unusual, at least among college students, both in women and men [19,42,43] (see Table 1; see Ref. 36 for sexual interests). Between 30% and 50% of female [42] and male [43] college students report submissive SF. Narrative reports of data collected among the general population suggest that SF involving domination, submission, and fetishism are fairly common, although this finding did not include qualitative or quantitative analyses [9,10,26].

Interestingly, women with submissive SF report more intense and more diverse sexual fantasies (erotophilia) than women without submissive sexual fantasies [19,23,43]. A growing number of studies among nonstudent women have focused on the presence of fantasies of submission, being overpowered, or having forced sex, although these studies were based on either small groups of participants [22] or on narrative reports [10,26]. Still, Khar [26] suspected that submissive and dominative SFs are not oppositional but instead tended to be reported by the same individuals. These suggestions should be tested empirically.

The main goal of our study was to survey a relatively large sample of participants recruited among the general population using a comprehensive, validated, and objective questionnaire in order to statistically define rare, unusual, common, and typical SF among men and women. The aim was also to estimate and compare the intensity of interest for each SF. Thus, this study is strictly statistical without intention to define abnormality or pathology. Another objective of this study was

to include complementary qualitative analyses based on an open response from participants. A third goal of this study was to put emphasis on noncriminal paraphilic themes of submission and domination.

It was hypothesized that although men would report more diverse and more intense SF than women, on average, few SF themes would be statistically unusual in both genders. It was further hypothesized that themes of domination and submission would be reported by both genders, and that submissive SF would be a good predictor of overall fantasy score. If confirmed, these results could have a significant impact in sexual medicine, both at theoretical and clinical levels. For instance, they might call for a revision of the definition of paraphilia, as well as a revisit of the assumed singularity of certain SF themes observed in forensic context.

## Methods

### Participants

Participants were recruited in a mid-major city (population 130,436 in 2011) in the province of Quebec (population 7,979,663 in 2011 [44]) using five different approaches: (i) advertisements in public places (e.g., shopping malls, sport centers, universities) that provided the location of our laboratory, the address of a website hosting an online version of the questionnaire, and code for intelligent phones that brought users to our questionnaire; (ii) interviews with the authors on a radio show aired on an important regional station and in a local daily newspaper as well as three leading provincial magazines specializing in entertainment and style, women’s interests, and men’s interests; (iii) presentations to large groups of individuals in residencies for the elderly (social clubs, sport teams, classrooms); (iv) word of mouth (snowball effect) and a Facebook page used by friends and acquaintances of the authors; and (v) contact with university staff (clerks, administrators, professors, etc.) via institutional mailing lists. A total of 1,516 persons participated in this study. Slightly more women ( $n = 799$ , 52.7%) than men ( $n = 717$ , 47.3%) participated, which is usual in studies of sexual fantasies (e.g., Refs. 9, 10, and 25). The female–male proportion is close to that of Quebec’s general adult population (51.1% and 48.9%, respectively [44]). The mean age of the participants ( $29.6 \pm 10.8$ ; range 18–77 years) and their mean number of years of formal education ( $14.9 \pm 3.6$ ; range 6–30 years) are slightly different from that of the active adult

general population in the province of Quebec (32.5 and 12.5 years respectively [45]). More importantly, an especially high proportion of individuals aged 55 or more did not participate (only 10% of the sample is in this age group), which is typical in studies about sex, especially when done through the Internet [9,10,23]. Consequently, the sample is not representative of the general population. The vast majority of respondents (85.1%) stated that they were heterosexual, 3.6% stated that they were definitively homosexual (significantly more women, 6%, than men, 1.5%), with the rest indicating that they were bisexual (12.6% of women and 9.8% of men, not significantly different).

### Instrument

To determine the nature and intensity of the sexual fantasies of our participants, we used a modified version of the Wilson Sex Fantasy Questionnaire (SFQ [11]). The SFQ is a 40-item instrument that is among the most widely used measures in the field of sexual fantasies [12,46]. The SFQ, however, was constructed more than 30 years ago to measure both fantasies and behaviors, which meant that some items had to be removed or modified. Questions related to past experiences (e.g., “Being embarrassed by failure of sexual experience”), petting (“Having your clothes taken off;” “Taking off the clothes of someone else;” “Kissing passionately”), nonsexual behaviors (“Being sought after by the opposite sex”), and unclear or vague questions (“Being seduced as an innocent;” “Being promiscuous”) were discarded. When missing, questions directly related with specific paraphilia were added (e.g., exhibitionism, frotteurism, fetishism). The Internet was then consulted to determine whether other sexual themes should be added or whether further modifications should be made to the SFQ. The sites [www.Alexa.com](http://www.Alexa.com) and Google Trends ([www.google.ca/trends](http://www.google.ca/trends)) identified the 10 most visited pornographic sites during the last 3 months of 2012. These sites categorized pornographic materials within the following main themes: female models, couples (hard core), amateurs, barely legal, ejaculation, large breasts, small breasts, lesbians, group sex, interracial, transvestism, fetish, male models (gay), MILF, urination, and bestiality (see Ref. 47 for a similar approach). [www.WordTracker.com](http://www.WordTracker.com) confirmed that most of these words were among the top 100 keywords used in 2010, which corresponded roughly with those reported by Ogas and Gaddam [37], although the latter included cheating, transsexuals, anal, and grannies. Thus, questions about ejaculation, large

breasts, small breasts, watching two women having sex, and cheating, not included in the SFQ, were added to the survey. In the final version, 55 closed questions were included in the questionnaire and participants were asked to rate them (intensity of interest) from 0 to 7 (0—not at all; 1—no; 2—very weak; 3—weak; 4—mild; 5—moderate; 6—strong; 7—very strong; Table 2). A final, open question was also added to the questionnaire (“If your favourite sexual fantasy was not included in the questionnaire, please write it down here”). Basic socio-demographic questions (gender, age, and number of years of education) were asked prior to questions involving sexual fantasies. [Correction added on 12 November 2014, after first online publication: Ratings for intensity of interest were corrected from 1–7 to 0–7.]

The questionnaire was available online through SurveyMonkey Pro, a web service specializing in Internet surveys ([www.surveymonkey.com](http://www.surveymonkey.com)). The Identification Protocol number (connection ID) and the computer number (computer ID) of each respondent were usable only once, so participants could not complete the questionnaire twice (or at least could not use the same connection and computer to do so).

### Statistical Analyses

#### Quantitative Analyses

First, ratings (0–7) from all participants were totaled for all closed questions in the questionnaire (Table 2). These sums reflect the average level of interest or intensity related to each sexual fantasy. The average scores of all fantasies (between 1 and 7) were then computed separately for men and women (the sum of these averages would equal that of the total sample). The magnitude of the differences between genders for these scores was assessed with a series of 1 factor ANOVAs corrected for multiple comparisons (*P* level adjusted at 0.001). Endorsement of sexual fantasies was defined as a response ranging from 3 to 7 inclusively and rates of endorsement were obtained for each gender. These prevalences were used to define statistically rare fantasies (shared by less than 2.3% of the participants or two standard deviations below the mean), unusual fantasies (shared by less than 15.9% of the participants or one standard deviation below the mean), common fantasies (shared by more than 50% of participants, the mean), and typical fantasies (shared by more than 84.1% of participants or one standard deviation above the mean). Chi-squares were computed with these rates to estimate the magnitude of difference between genders, also

**Table 2** Total intensity\*, mean intensity, and presence† of sexual fantasies in men and women (in descending order of intensity; bold:  $P < 0.001$  between genders‡; italics: statistically unusual fantasies§; underlined: statistically abnormal fantasies§; grayed: common fantasies)

Item	Intensity*	Mean intensity ± S.D.		Presence of fantasy (%)	
		♀	♂	♀	♂
I like to feel romantic emotions during a sexual relationship.	7,897	<b>5.53 ± 1.8</b>	4.85 ± 1.9	92.2	88.3
I have fantasized about taking part in fellatio/cunnilingus.	7,580	4.67 ± 2.5	<b>5.4 ± 2.1</b>	<b>78.5</b>	<b>87.6</b>
I have fantasized about having sex in an unusual place (e.g., in the office; public toilets).	7,279	4.77 ± 2.1	4.84 ± 2.2	<b>81.7</b>	<b>82.3</b>
Atmosphere and location are important in my sexual fantasies.	7,186	<b>5.0 ± 1.9</b>	4.45 ± 2.0	86.4	81.2
I have fantasized about having sexual in a romantic location (e.g., on a deserted beach).	7,115	<b>4.98 ± 2.1</b>	4.37 ± 2.2	84.9	<b>78.4</b>
I have fantasized about having sex with someone that I know who is not my spouse [ . . . ].	6,820	3.87 ± 2.6	<b>5.19 ± 2.2</b>	<b>66.3</b>	<b>83.4</b>
I have fantasized about masturbating my partner.	6,336	3.89 ± 2.5	<b>4.5 ± 2.4</b>	<b>68.1</b>	<b>76.4</b>
I have fantasized about being masturbated by my partner.	6,320	4.1 ± 2.5	4.2 ± 2.5	<b>71.4</b>	71.7
I have fantasized about having sex with two women.	5,570	2.21 ± 2.6	<b>5.31 ± 2.3</b>	36.9	<b>84.5</b>
I have fantasized about watching two women make love.	5,498	2.49 ± 2.7	<b>4.90 ± 2.4</b>	42.4	<b>82.1</b>
I have fantasized about having sex with an unknown person.	5,398	2.82 ± 2.7	<b>4.38 ± 2.5</b>	48.9	<b>72.5</b>
I have fantasized about making love openly in a public place.	5,291	3.26 ± 2.6	<b>3.75 ± 2.5</b>	<b>57.3</b>	66.1
I have fantasized about being dominated sexually.	5,203	<b>3.79 ± 2.7</b>	3.04 ± 2.5	<b>64.6</b>	53.3
I have fantasized about giving cunnilingus.	5,037	2.1 ± 2.6	<b>4.68 ± 2.5</b>	35.7	78.1
I have fantasized about having sex with a star or a well-known person.	4,969	3.04 ± 2.7	<b>3.55 ± 2.6</b>	<b>51.7</b>	<b>61.9</b>
I have fantasized about giving fellatio.	4,500	<b>4.19 ± 2.5</b>	1.61 ± 2.6	<b>72.1</b>	26.8
I have fantasized about dominating someone sexually.	4,498	2.66 ± 2.5	<b>3.3 ± 2.5</b>	46.7	<b>59.6</b>
I have fantasized about being masturbated by an acquaintance.	4,446	2.15 ± 2.5	<b>3.8 ± 2.6</b>	36.8	<b>64.7</b>
I have fantasized about being tied up by someone in order to obtain sexual pleasure.	4,326	<b>3.02 ± 2.7</b>	2.67 ± 2.6	<b>52.1</b>	46.2
I have fantasized about masturbating an acquaintance.	4,320	1.93 ± 2.3	<b>3.88 ± 2.5</b>	33.1	<b>65.9</b>
I have fantasized about being masturbated by an unknown person.	4,255	1.96 ± 2.5	<b>3.8 ± 2.7</b>	33.4	<b>62.5</b>
I have fantasized about having anal sex.	4,122	1.81 ± 2.4	<b>3.74 ± 2.8</b>	32.5	64.2
I have fantasized about having sex with more than three people, all women.	4,060	1.24 ± 2.2	<b>4.28 ± 2.7</b>	24.7	<b>75.3</b>
I have fantasized about masturbating an unknown person.	3,964	1.65 ± 2.3	<b>3.69 ± 2.64</b>	28.0	<b>62.4</b>
I have fantasized about tying someone up in order to obtain sexual pleasure.	3,934	2.38 ± 2.6	2.84 ± 2.7	41.7	48.4
I have fantasized about watching someone undress without him or her knowing.	3,922	1.78 ± 2.3	<b>3.49 ± 2.6</b>	31.8	<b>63.4</b>
I have fantasized about having interracial sex.	3,759	1.59 ± 2.4	<b>3.47 ± 2.6</b>	27.5	<b>61.2</b>
I have fantasized about having sex with a woman with very large breasts.	3,666	1.10 ± 2.1	<b>3.89 ± 2.6</b>	18.6	<b>68.6</b>
I have fantasized about ejaculating on my sexual partner. (For men only)	3,526	N/A	4.82 ± 2.4	N/A	<b>80.4</b>
I have fantasized about having sex with someone much older than me.	3,472	1.92 ± 2.5	<b>2.71 ± 2.6</b>	34.2	<b>48.0</b>
I have fantasized about having sex with more than three people, both men and women.	3,357	1.84 ± 2.5	<b>2.63 ± 2.7</b>	30.9	<b>45.2</b>
I have fantasized about having sex with two men.	3,297	<b>3.27 ± 2.7</b>	0.96 ± 2.1	<b>56.5</b>	15.8
I have fantasized about being photographed or filmed during a sexual relationship.	3,226	1.83 ± 2.4	<b>2.46 ± 2.5</b>	31.9	<b>43.9</b>
I have fantasized that my partner ejaculates on me.	3,145	<b>2.39 ± 2.6</b>	1.73 ± 2.6	<b>41.3</b>	28.7
I have fantasized about having sex with someone much younger (legally). than me	3,104	1.04 ± 2.0	<b>3.17 ± 2.7</b>	18.1	<b>57.0</b>
I have fantasized about petting with a total stranger in a public place (e.g., metro).	2,930	1.13 ± 2.0	<b>2.83 ± 2.7</b>	19.8	<b>48.4</b>
I have fantasized about indulging in sexual swinging with a couple that I do not know.	2,911	1.5 ± 2.2	<b>2.38 ± 2.5</b>	26.9	<b>39.6</b>
I have fantasized about spanking or whipping someone to obtain sexual pleasure.	2,913	1.34 ± 2.6	<b>2.57 ± 2.7</b>	23.8	<b>43.5</b>
I have fantasized about being spanked or whipped to obtain sexual pleasure.	2,881	<b>2.11 ± 2.5</b>	1.67 ± 2.2	36.3	28.5
I have fantasized about having homosexual (or gay) sex.	2,702	<b>2.2 ± 2.7</b>	1.32 ± 2.4	<b>36.9</b>	20.6
I have fantasized about having a sexual relationship with a woman with very small breasts.	2,697	0.67 ± 1.6	<b>3.02 ± 2.5</b>	<b>10.8</b>	<b>52.3</b>
I have fantasized about indulging in sexual swinging with a couple that I know.	2,573	0.99 ± 2.0	<b>2.48 ± 2.7</b>	17.5	<b>42.3</b>
I have fantasized about being forced to have sex.	2,569	1.6 ± 2.4	1.8 ± 2.4	28.9	30.7
I have fantasized about having sex with a fetish or non-sexual object.	2,316	1.51 ± 2.3	1.55 ± 2.2	26.3	27.8
I have fantasized about having sex with a prostitute or a stripper.	2,226	0.76 ± 1.8	<b>2.25 ± 2.6</b>	<b>12.5</b>	<b>39.5</b>
I have fantasized about having sex with more than three people, all men.	1,910	<b>1.7 ± 2.5</b>	0.77 ± 1.9	<b>28.3</b>	13.1
I have fantasized about showing myself naked or partially naked in a public place.	1,854	1.03 ± 1.9	<b>1.44 ± 2.1</b>	16.6	23.2
I have fantasized about watching two men make love.	1,637	1.17 ± 2.1	0.98 ± 2.1	19.3	16.2
I have fantasized about sexually abusing a person who is drunk, asleep, or unconscious.	1,498	0.66 ± 1.6	<b>1.35 ± 2.1</b>	<b>10.8</b>	<b>22.6</b>
I have fantasized about forcing someone to have sex.	1,448	0.63 ± 1.5	<b>1.32 ± 2.1</b>	<b>10.8</b>	<b>22.0</b>
I have fantasized about wearing clothing associated with the opposite sex.	828	0.43 ± 1.3	0.67 ± 1.7	6.9	10.0
I have fantasized about my sexual partner urinating on me.	628	0.21 ± 0.99	<b>0.64 ± 1.7</b>	3.5	<b>10.0</b>
I have fantasized about urinating on my sexual partner.	584	0.2 ± 1.0	<b>0.59 ± 1.6</b>	3.5	8.9
I have fantasized about having sex with an animal.	263	0.18 ± 0.8	0.16 ± 0.8	3.0	2.2
I have fantasized about having sex with a child under the age of 12 years.	128	0.05 ± 0.5	0.12 ± 0.8	<u>0.8</u>	<u>1.8</u>

\*Sum of scores given to each fantasy on the Likert scale (from 0, not at all to 7, completely). N/A = not applicable; S.D. = standard deviation

†Defined as a rating between 3 and 7 on the Likert scale

‡1 factor ANOVAs with correction for multiple comparisons for mean scores of intensity all  $F_s > 14.0$  and Chi-squares with corrections for multiple comparisons for percentages of presence (all Pearson's values  $> 12.0$  after Yate's continuity correction, and all adjusted residuals  $> 3.5$ )

§Statistically unusual: one standard deviation on the normal curve or  $< 16\%$ ; statistically abnormal: two standard deviations on the normal curve or  $< 2.3\%$

[Correction added on 10 November 2014, after first online publication: Data in the Mean intensity and Presence of fantasy columns for items 31 and 32 were reversed.]

corrected for multiple comparisons ( $P$  level adjusted at 0.001). A correlation matrix with effect sizes was then computed to determine the strength of association between items (e.g., submissive and dominative items) and a simple regression was computed to specifically assess the predictive value of the presence of a single sexual fantasy (“I have the fantasy of being dominated sexually”) for the overall fantasy score, as suggested by Shulman and Horne [23] and Strassberg and Lockerd [19].

### Qualitative Analyses

A total of 372 persons (158 women or 19.8% and 214 men or 29.8%) described their favorite SF. Analyses of these written descriptions followed the guidelines of Merriam [48]. The first step, category construction, was conducted by two raters (1 male and 1 female). In this open coding phase, general themes of sexual fantasy contents were independently extracted (each rater individually) from the scripts (type of behaviors and ambiance, age, genders, objects, etc.). Between 35 (rater 1) and 42 (rater 2), sexual themes were found from this initial phase. Then, analytical coding was performed by comparing both listings and deliberations between raters to obtain a single list of fantasy themes that approached saturation (exhaustive, exclusive), without containing exceptions (e.g., themes endorsed by only one person). During this phase, potential ambiguities or redundancies were discussed and resolved (e.g., Should interest for feet be labeled as fetishism or partialism?). In addition, potential distinctions within single categories were considered (e.g., receiver and giver were added as subcategories of oral and anal sex), whereas similar themes of lower occurrence (less than 1%) were merged (e.g., specific clothing, fabrics, costumes, and role playing were considered as “fetishism”).

In the end, a list of 31 themes emerged for coding: Exclusive involvement of spouse or intimate partner; Location is described (specify exotic/unusual private place or public place, specify open or closed place); Ambiance is described; Intimacy is described (e.g., caresses with spouse or lover); Infidelity is specifically described; Involves an acquaintance; Involves a stranger; Involves an authority figure or a celebrity; Involves a sexual object; Oral sex (non-homosexual; specify giver or receiver); Anal sex (non-homosexual; specify giver or receiver); Homosexual activities; Partner's swapping; Focused on own submissive behavior; Focused on own domination behavior; Involves more than three persons (group sex; specify if the participant is active or passive);

Involves a teenager (13–17 years old); Involves a children (12 years old or less); Involves a transsexual (shemale); Involves a significantly older person (more than 15 year difference); Voyeurism (specify: alone spying an unaware stranger or watching spouse having sex with another woman or watching spouse having sex with another man); Fetishism (includes foot fetish, nonsexual objects, and specific clothing); Triolism (specify with spouse or with two strangers); Transvestism; Exhibitionism; Partialism (focused on a specific body part, excludes feet); Bestiality; Involves female ejaculation (squirting); Incarnating a women to be penetrated; Involves urine; Involves weightlessness (zero gravity); Miscellaneous rare themes (single occurrence). Inter-rater agreement was assessed overall (%) and for each theme (kappa).

### Ethics

This study was approved by the ethical committee of the University of Quebec at Trois-Rivieres.

### Results

#### Quantitative Analyses

As shown in Table 2, two sexual fantasies were found to be statistically rare (endorsed by 2.3% or less of participants): having sex with a child under the age of 12 (0.8% of women and 1.8 of men, not significantly different) and having sex with an animal (3% of women and 2.2% of men, not significantly different). Among the other 53 sexual fantasies, 9 were statistically unusual (endorsed by 15.9% or less of participants): 7 for women (urinating on partner, 3.5%; being urinated on, 3.5%; wearing clothes of the opposite gender, 6.9%; forcing someone to have sex, 10.8%; abusing a person who is drunk, asleep, or unconscious, 10.8%; having sex with a prostitute, 12.5%; and having sex with a women who has very small breasts, 10.8%) and 4 for men (urinating on partner, 8.9%; being urinated on, 10.0%; having sex with two other men, 15.8%; having sex with more than three other men, 13.1%).

At the other end of the spectrum, only five sexual fantasies were statistically typical (endorsed by more than 84.1% of participants): feeling romantic emotions during a sexual relationship, fantasies in which atmosphere and location are important, and fantasies involving a romantic location (both genders, no significant difference); receiving oral sex and having sexual intercourse with two women (typical for men). Among the



remaining sexual fantasies ( $N = 39$ ), 23 were common in men and 11 were common in women (see Table 2).

The proportion of women acknowledging submissive fantasies is not negligible. Being sexually dominated (64.6%), being tied up for sexual pleasure (52.1%), being spanked or whipped (36.3%), and being forced to have sex (28.9%) were all reported by significant proportions of women. Interestingly, the same sexual fantasies were also reported by significant proportions of men (53.3%, 46.2%, 28.5%, and 30.7%, respectively). As suspected by Khar (2008), the fantasy of being dominated is significantly correlated (effect sizes of at least 0.30) not only with other submissive fantasies (being spanked or whipped,  $r = 0.58$ ; being tied up,  $r = 0.60$ ; and being forced to have sex,  $r = 0.40$ ) but also with fantasies of domination ( $r = 0.50$ ), spanking ( $r = 0.36$ ), and tying up someone else ( $r = 0.39$ ). Furthermore, the mere presence of the fantasy about being dominated sexually was a significant predictor of the total score of sexual fantasies ( $B = 0.398$ ). Thus, the regression model predicts sexual fantasy score significantly well. In fact, the simple presence of the fantasy of being sexually dominated explained 16% of the variance ( $R^2$ ) for the total fantasy score. This was true both for women and men.

As for overall ratings of all SF, they were significantly higher, on average, for men ( $153.7 \pm 56$ ) than for women ( $114.9 \pm 57$ ;  $F [1, 1,500] = 178.10$ ,  $P < 0.0001$ ), as expected. Also expected was the fact that significant differences emerged between genders for specific fantasies. For instance (see Table 2), among the six most popular SF (those with 6,500 total points or more), feeling romantic and pleasurable emotions during a sexual relationship (first rank), fantasies in which atmosphere and location are important (fourth rank), and fantasies involving a romantic location (fifth rank) obtained significantly higher scores from women than from men. On the contrary, receiving oral sex (second rank) and having sex with someone other than the respondent's current partner (sixth rank) were rated significantly higher for men than for women (bold figures, Table 2). A gender difference in responses regarding anal sex is also evident: it is fantasized by approximately two-thirds of men (64.2%) compared with only one-third of women (32.5%). Interest for this fantasy was also significantly less intense for women (mean rate  $1.81 \pm 2.4$ ) than for men (mean rate  $3.74 \pm 2.8$ ,  $P < 0.001$ ). Besides, more than half (56.5%) of women reported have fantasized having sex with two men, and 28.9% of them

reported having fantasized having sex with more than three men (Table 2).

Interestingly, the percentages of women and men fantasizing about homosexual activities significantly exceeded the percentages of declared bisexuality or homosexuality. More than a third of women acknowledged fantasies about giving cunnilingus (35.7%), having sex with another woman (36.9%), and making love with (36.9%) or watching (42.4%) two other women having sex, although only 19% considered themselves either bisexuals (12.6%) or homosexuals (6%). Similarly, approximately a quarter of men fantasized about giving fellatio (26.8%) and a fifth fantasized about having sex with another man (20.6%), although 89.5% classified themselves as heterosexuals.

### Qualitative Analyses

First, inter-rater agreement was excellent overall (92%) and for each theme (kappas between 0.74 and 1.0). Second, although individual sexual fantasies were more detailed than the closed questions, the majority were variations on themes already included in the questionnaire (Table 3). New themes had a low occurrence (e.g., incarnating a women being penetrated, sex with a pregnant woman, sex with a virgin, bestiality, fisting, unbirthing, sex with twins, sex with virtual characters), with the notable exceptions among men of shemales, non-homosexual receiving anal sex, and watching spouse having sex with others. Overall, men reported more themes (28 excluding single occurrences) than women (19). Interestingly, approximately half of women with descriptions of submissive fantasies specified that they would not want the fantasy to materialize in real life. This result confirms the important distinction between sexual fantasies and sexual wishes, which is usually stronger among women than among men [10,26].

### Discussion

The main goal of this study was to survey a relatively large sample of individuals recruited from the general population about the nature and intensity of their SF using a broad and unbiased questionnaire to determine which fantasies are statistically rare, unusual, common, and typical. Of 55 fantasy themes, only 2 were rare and 9 were unusual. It is clear that one should be careful before labeling a SF as the majority of the 55 on the questionnaire were not found to be either rare or unusual.

**Table 3** Themes extracted from qualitative analyses of favorite SF reported by women (a) and men (b)(a) Themes reported by women ( $N = 158$ ) in descending order of prevalence (percentage among responses)\*

1. The location is specified: 27.2%
  - (A) Exotic or unusual private place (e.g., deserted beach, swimming pool, forest): 21.4%
  - (B) Public place (e.g., office, restrooms, bar, aircraft, etc.): 5.8%
2. Spouse or current lover is exclusively involved: 20.1%
3. Focus on own submissive behavior: 18.8%
4. Specifically involves a stranger: 14.3%
5. The type of ambience is specified: 11.7%
6. Exhibitionism<sup>‡</sup>: 8.9%
7. Involves homosexual activities: 8.2%
8. Group sex: 7.8%
  - Active role (with ♂ and ♀): 3.9%
  - Passive role (surrounded by ♂): 3.9%
9. Specifically refers to an authority figure or a celebrity: 7.1%
10. Involves a sexual object: 6.5%
11. Voyeurism: 3.9%
12. Focus on own domination behavior: 3.9%
13. Triolism (with 2♂, 1♀-1♂ or 2♀): 3.2%
14. Involves non-homosexual oral sex (receiver): 2.6%
15. Specifically involves infidelity: 2.5%
16. Partner's swapping: 1.9%
17. Report absence of fantasy: 1.9%
18. Involves an acquaintance: 1.3%
19. Anal sex (receiver): 1.3%

(b) Themes reported by men ( $N = 214$ ) in descending order of prevalence (% among responses)\*

1. Voyeurism: 15.0%
  - (a) Strict sense; alone, spying an unaware stranger: 3.3%
  - (b) Extended sense; watching spouse having sex with another woman: 3.3%
  - (c) Extended sense; watching spouse having sex with another man (candaulism): 8.4%
2. Fetishism<sup>§</sup>: 14.0%
3. Triolism (with 2♀ or 1♀-1♂): 12.6%
  - (a) With spouse (ménage à trois): 5.6%
  - (b) With strangers or acquaintances: 7.0%
4. Oral sex (non-homosexual): 11.7%
  - (a) Receiver (fellatio): 10.8%
  - (b) Giver (cunnilingus): 3.3%
5. Anal sex (non-homosexual): 11.7%
  - (a) Receiver (♀ with strap-on or shemales)<sup>¶</sup>: 6.1%
  - (b) Giver (with ♀): 5.6%
6. Location is specified: 11.3%
  - (a) Exotic or unusual private place (e.g., deserted beach, swimming pool, forest): 7.5%
  - (b) Public place (e.g., office, restaurant, bar, aircraft)\*\*: 3.8%
7. Homosexual activities: 8.9%
8. Involves an acquaintance: 8.5%
9. Group sex (♂-♀ or only ♀) active: 8.1%
  - Active role: 7.5%
  - Passive role: 0.6%
10. Spouse or current lover is exclusively involved: 7.9%
11. Focused on own submissive behavior: 5.2%
12. Focused on a specific body part (partialism)<sup>††</sup>: 4.7%
13. Focused on own domination behavior: 4.2%
14. Involves an authority figure or a celebrity: 4.2%
15. Specifically involves a shemale: 4.2%
16. Involves a teenager (♀ or ♂ aged 13–17 years old): 3.3%
17. Involves intimacy<sup>‡‡</sup>: 3.3%
18. Transvestism: 2.8%
19. Involves someone significantly older (more than 15 years): 2.8%
20. Ambience is described<sup>§§</sup>: 2.8%
21. Incarnating a woman to be penetrated: 2.3%
22. Involves female ejaculation (squirting): 2.3%
23. Exhibitionism<sup>¶¶</sup>: 1.9%
24. Specifically related to a stranger: 1.9%
25. Involves urine: 1.4%
26. Specifically related with weightlessness (zero gravity): 1.4%
27. Infidelity is specifically described: 0.9%
28. Miscellaneous rare themes\*\*\*

♀, Females; ♂, Males

\*Multiple themes could be extracted from a single response; hence total percentage exceeds 100. Percentages represent the rate of participants endorsing each item

<sup>†</sup>All fantasies in public places actually involved semiprivate locations (e.g., closed office, closed restrooms); no fantasy took place in an open public location (e.g., streets, park, playground, etc.). They also all involved a partner, i.e., no individual sexual activities were depicted in public places<sup>‡</sup>All exhibitionistic fantasies involved sexual activity with a partner before an audience or solo activity in front of partner. No fantasies involved exhibitionism in a strict sense, i.e., solitary behavior in public places in front of an unaware, unknown target. The majority of exhibitionist fantasies (76%) involved spouse or lover<sup>§</sup>Includes specific clothing or fabrics, nonsexual objects, and feet<sup>¶</sup>Fantasies of anal sex with another man were classified as homosexual behaviors<sup>\*\*</sup>All fantasies in public places involved a partner (no individual sexual activities) and none involved an open public place<sup>††</sup>Exclude feet, categorized as fetishism<sup>‡‡</sup>Included caresses from or to spouse, to be intimate with lover, hearing or seeing wife having an orgasm; having different positions with spouse, being nude with spouse, being initiated by an acquaintance, imagining having sex with wife after losing weight<sup>§§</sup>All ambience descriptions were related with positive feelings (i.e., no ambience inducing fear or other negative feelings)<sup>¶¶</sup>No fantasies involved exhibitionism in a strict sense, i.e., solitary behavior in public places before single unaware, unknown target; they all referred to sexual activities with a partner before an audience<sup>\*\*\*</sup>Themes with single occurrence: Fisting, unbirthing, unknown pregnant woman, bestiality, twins, virtual character, virgin, double penetration, food, and between breasts

A secondary goal of this study was to further determine the nature and prevalence of sexual fantasy themes by asking participants to freely describe their favorite sexual fantasy. It was found that, in general, freely reported themes corresponded to those of the questionnaire. These results confirm compilations of Internet search keywords suggesting that approximately 30 themes are sufficient to describe the SF of the vast majority of persons [37]. As expected, men reported more themes (28) than women (19). An intriguing result in the present investigation is the significant presence among men of themes related with shemales, receiving anal sex (non-homosexual), and watching spouse having sex with others. Discussing the possible origins of these counter-intuitive themes is beyond the scope of this study, but others have proposed their views [37].

A third goal of this study was to specifically investigate whether SF of domination and submission are unusual in a sample of participants recruited outside college. Among women, it was found that SF of being dominated, being spanked or whipped, being tied up, and being forced to have sex were reported by 30%–60%, confirming several studies conducted largely with college students (reviewed in Refs. 1 and 42). Interestingly, it was also found that significant proportions of men reported these fantasies, in accord with studies involving college students [43]. Still, the fantasy of being dominated was significantly greater for women than for men, on average, whereas the fantasy of dominating was statistically stronger for men than for women, on average.

Qualitative analyses of the open response also confirmed that certain themes of favorite sexual fantasies are currently (and incorrectly) considered unusual (Table 3). For instance, voyeurism (men), fetishism (men), and submission (women) were each included in the *favorite* sexual fantasy of more than 10% of respondents (Table 3). These results concord with the survey of Ahler and colleagues [30], and impressions from narrative reports [9,10,26].

Another interesting finding was that reports of submission fantasies were significantly associated with reports of domination fantasies, indicating that these fantasy themes are not separate or in opposition [26]. Furthermore, higher intensity of sexual fantasies was significantly predicted by the presence of the fantasy of being sexually dominated. This was true for both women and men. This result is in accord with suggestions by

Strassberg and Lockerd [19] and Shulman and Horne [23] that women with sexual submission fantasies are more erotophilic. It also supports the hypothesis made 25 years ago by Pelletier and Herold [49] (see also Ref. 50) that forced-SFs are just one of many manifestations of sexual openness and, therefore, the presence of submissive sexual fantasies does not necessarily indicate a special or unusual sexual interest. As stressed by Khar [26] and Brenot [10], women with submissive sexual fantasies may, in fact, be more satisfied sexually than women without such fantasies (see also the pioneer study of Hariton and Singer [31]). The present study suggests that the same holds true for men and for women outside college populations [23]. Given that the presence of sexual fantasies of submission and domination were highly correlated, these so-called unusual fantasies alone are not good indicators of psychopathology; in fact, the contrary may well be true. Future studies of SF should include a measure of sexual satisfaction to ascertain this possibility.

This study indicates that there are very few statistically unusual sexual fantasies. Definitions of paraphilia should better define terms such as atypical and unusual and concentrate more on pathological aspects such as rigidity and necessity of certain sexual fantasies. Future definitions of disorders of sexual interest should also focus more on the subjective complaint associated with any sexual fantasy than focusing on its content.

Overall, the results of this study should be interpreted with caution, however. First, volunteers in sex studies have more experience and they are more open toward sexuality than persons who refuse to participate in such studies [51,52]. Thus, certain SF rates might be inflated by volunteer bias. Moreover, this study is based on an Internet survey. Although Internet surveys make it possible to reach more people, we were not able to confirm demographic variables such as age and sex of respondents. The age variable was not used in our analysis, but it is possible that some responses reportedly by women were actually provided by men and vice versa. However, rates of dishonest replies for 20- to 30-minute-long questionnaires filled in online are low, and other Internet surveys have successfully overcome this potential problem by recruiting a large number of participants, as was done here. Still, this sample was not representative of the general population and more surveys conducted by professionals on representative samples of identified participants are needed [26], with statistical

analyses. In addition, the questionnaire was modified from the original version [12,46]. Although questions about SF are rather straightforward, psychometric properties of this version of the questionnaire were not available. Finally, the open question asked participants to write down their favorite sexual fantasy *if it was not already included in the questionnaire*. In retrospect, this phrasing dissuaded many participants to reply, so future qualitative investigations should ask for any sexual fantasy.

Overall, many sexual fantasies are typical or common. Clinicians and researchers should not rely solely on the theme of a sexual fantasy to determine if it is either pathological or unusual. Whereas many people with conventional SF might find them upsetting or painful (e.g., an openly homosexual man who has heterosexual fantasies), people with fantasies that are considered unusual, such as sadomasochistic fantasies, may be as sexually satisfied, if not more, than individuals who do not have such fantasies.

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**Corresponding Author:** Christian C. Joyal, PhD, Department of Psychology, Université du Québec à Trois-Rivières, 3351, boul. des Forges, C.P. 500, Trois-Rivières G9A 5H7, Québec, Canada. Tél: 819-376-5011-3559; Fax: 819-376-5195; E-mail: christian.joyal@uqtr.ca

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### Statement of Authorship

#### Category 1

##### (a) Conception and Design

Christian C. Joyal; Amélie Cossette

##### (b) Acquisition of Data

Amélie Cossette; Vanessa Lapierre

##### (c) Analysis and Interpretation of Data

Christian C. Joyal; Amélie Cossette; Vanessa Lapierre

#### Category 2

##### (a) Drafting the Article

Christian C. Joyal

##### (b) Revising It for Intellectual Content

Christian C. Joyal

#### Category 3

##### (a) Final Approval of the Completed Article

Christian C. Joyal; Amélie Cossette; Vanessa Lapierre

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