THE JOURNAL OF
SEXUAL MEDICINE

ORIGINAL RESEARCH & REVIEWS

EPIDEMIOLOGY & RISK FACTORS

Prevalence and Correlates of Sexual Aversion: A Canadian Community-Based Study

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ABSTRACT

Background: Sexual aversion (SA) is a chronic difficulty impacting sexual, relational and psychological wellbeing. Yet, there is a dearth of studies exploring its prevalence and associated factors.

Aim: To estimate the prevalence of SA and examine its correlates among a community sample of Canadian adults.

Methods: A large web-based sample of the Quebec (Canada) adult population (n = 1,935) completed an online survey on sexual wellbeing. Prevalence rates were estimated for SA and other sexual difficulties. Multivariate logistic regression analyses were used to identify correlates of SA.

Outcomes: Demographics (eg, gender, employment status), self-reported experiences of sexual difficulties (low sexual desire and arousal, vaginal dryness, pain during sexual intercourse, erectile difficulties, premature or delayed ejaculation, and orgasm difficulties), and markers of psychosexual wellbeing (eg, psychological distress, performance anxiety) according to the presence or absence of SA were assessed.

Results: The prevalence of SA was 9.7% (95% CI: 8.5−11.2) in the present sample (6.9% [95% CI: 5.1−8.9] in men, 11.3% [95% CI: 9.4−13.4] in women and 17.1% [95% CI: 9.4−27.4] in nonbinary and/or trans individuals). The multivariate logistic regression model explained 31% of the likelihood of experiencing SA. SA was related to psychological distress (aOR: 1.77, 95% CI: 1.33−2.38), sexual satisfaction (aOR: .59, 95% CI:.49 −0.70), sexual performance anxiety (aOR: 2.08, 95% CI: 1.45−2.98), and discomfort with sex-related information (aOR: 1.02, 95% CI: 1.01−1.04)

Clinical implications: Several psychosexual correlates of SA were documented and could be targeted by practitioners during the assessment and treatment of individuals living with SA.

Strengths and limitations: The study's strengths include its large, gender diverse sample and use of comprehensive diagnostic criteria for SA. Probability-based sampling methods and longitudinal studies should be conducted to address the current study's limitations.

Conclusion: SA research is critical to document its prevalence in different sociodemographic groups, explore additional intrapersonal and interpersonal mechanisms involved in SA etiology, and ensure that the needs of people living with SA are met with tailored interventions. **David Lafortune, Éliane Dussault, Mathieu Philibert, Natacha Godbout. Prevalence and Correlates of Sexual Aversion: A Canadian Community-Based Study. J Sex Med 2022;XX:XXX−XXX.**

Key Words: Sexual Aversion; Prevalence; Sexual Dysfunctions; Psychosexual Wellbeing

INTRODUCTION

Sexual difficulties are relatively common in adulthood.[1-3] Compared to other sexual difficulties or dysfunctions, scientific literature on prevalence and correlates of sexual aversion (SA) is scarce. The fourth, text-revised edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) defined Sexual Aversion Disorder as a persistent or recurrent extreme aversion to, and avoidance of, all or almost all genital sexual contact with a sexual partner (Criterion A), causing marked distress

Received March 1, 2022. Accepted May 23, 2022.

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https://doi.org/10.1016/j.jsxm.2022.05.142

or interpersonal difficulties (Criterion B).[4] In other terms, individuals with SA may experience fear, anxiety, or disgust at the prospect of having sexual contact, and exhibit avoidance behaviors in sexual contexts. Beyond genital contact, types of stimuli and behaviors that could provoke aversion vary greatly[4-6] and can include aspects of partnered or solo sexual activity (eg, penetration, masturbation, sexual intimacy, sexual fluids, body odors) or sexual cues and contexts (eg, nudity, sexual communication, cuddling, sexual fantasies). In severe SA cases, exposure to sexual cues may also cause somatic symptoms of extreme anxiety (eg, heart palpitations, shortness of breath).[5] Sexual Aversion Disorder has been removed as a distinct disorder from the DSM-5,[7] a decision supported by the lack of research on this disorder.[8,9] However, the DSM-5 still offers clinicians the possibility to record SA as "[an]other specified sexual dysfunction."[7]

Prevalence data suggest that SA is relatively common, even though large scale and rigorous multi-national studies on this topic are scarce[5] and mostly limited to European populations. In an online survey study conducted among a sample of Dutch adults (n = 4,147; 19−69 years of age), about 16% of men and 39% of women reported having experienced symptoms of SA (disgust or fear toward sex) at some point in their lives, and 0.9% of men and 4.1% of women surveyed met the DSM-IV-TR diagnostic criteria for Sexual Aversion Disorder.[10] In another large Dutch sample (n = 7,733; aged 15−71 years), 4.5% of women and 2.4% of men experienced persistent SA in the past year.[11] In a random population-based sample of 1,346 Flemish adults (Belgium), Hendrickx et al.[12] reported that 0.6% of men and 4.1% of women experienced either marked or severe SA during the past 6 months. In another study, 15% of a sample of 728 Moroccan women reported having experienced DSM-IV-TR symptoms of SA always or often in the past 6 months.[13] In a clinical sample of patients consulting in sex therapy (n = 220) in Quebec (Canada), 11.8% of women and 1.0% of men reported consulting for SA.[14] A retrospective analysis of medical records of women who were treated at Leiden Hospital Medical Center's sexology department (Netherlands) between 1996 and 2015 (n = 4,533) shows that 2.8% had been diagnosed with SA.[8] Together, these findings suggest that SA affects a substantial number of people (especially women) in both the general population and in clinical settings, with ratios comparable to that of other common sexual disorders (eg, genito-pelvic pain and/or penetration disorder).[11,12] SA prevalence research in general populations is, however, mostly limited to the European samples. Therefore, there is a need for additional research conducted in more diverse sociocultural contexts to estimate the prevalence of SA symptoms and their association with other sexual difficulties.[5]

Moreover, existing SA prevalence studies have several conceptual and methodological shortcomings. For example, some have used single-item measures to assess SA or used terminology that may not have been easily understood by all participants (eg, employing the term *"aversion"* rather than *"feeling anxious, afraid, or disgusted"*)[12] Other studies have only documented specific manifestations of SA (eg, sexual anxiety; *"Felt anxious during sex"* [1,15]; *"Felt anxious right before sex"* [16,17]), which can overlap with that of other constructs, such as sexual performance anxiety or spectatoring (ie, self-focused attention toward one's own sexual response, associated with reduced perception of genital sensations and negative emotions).[18,19] Thus, research simultaneously assessing all criteria of SA, that is, the experience of sexual anxiety or disgust accompanied by sexual avoidance and significant distress, is needed.

Beyond the estimation of SA prevalence, there have been efforts to identify its developmental, cognitive, relational, and sociocultural correlates. Large-scale studies on sexual difficulties suggest that women are more likely than men to report SA, notably younger women.[11,15] Little research has explored sexual and relational correlates of SA over the past decades. For instance, SA was found to be associated with reduced sexual and relational satisfaction,[20,21] lower sexual self-efficacy,[22] as well as with other sexual difficulties (eg, low sexual desire, vaginismus),[12,20,23,24] and gynecologic conditions and procedures (eg, endometriosis, vulvectomy).[20,25] Developmental and psychological correlates of SA have also been documented, such as a history of child sexual abuse,[26,27] sexual assault in adulthood,[28] negative body image and self-disgust,[29-31] depression,[32] trait anxiety,[26,33] panic disorder,[34-36] and obsessive-compulsive disorder.[36] In their classic etiologic model of SA, Gold and Gold[37] described performance anxiety as a typical predictor, though this association is yet to be empirically tested. It has been further proposed[38] that SA can be maintained by a chain of attentional processes, as theorized in Barlow's model of cognitive distraction,[39,40] notably by focusing on one's performance and shifting one's attention to intrusive thoughts related to a perceived incapacity to self-regulate and to cope with the sexual contexts. Lastly, symptoms of SA have been shown to be significantly associated with poor sexual knowledge (eg, on contraception, sexually transmitted infections, etc.).[41] Given SA's documented relationship with psychosexual distress,[21,32] new research is critical to provide a multi-dimensional understanding of demographic, mental, and sexual health factors associated with this condition. Such findings are necessary to design tailored interventions and programs, and possibly, to reintroduce SA as a distinct disorder in the DSM.[5]

The aim of this study was to examine the prevalence of SA and its psychosexual correlates. Specific aims were threefold: (1) report the prevalence of SA and other sexual difficulties using a large web-based sample of Canadian adults, (2) examine demographic, developmental, attitudinal, and sexual and mental health differences between sexually aversive and non-aversive individuals, and (3) test a logistic regression model to estimate associations between SA and the aforementioned factors.

METHOD

Ethics approval for this study was received from the [*Université du Québec à Montréal*]'s Institutional Ethics Review Board (ethics certification number: 4829_e_2021)

Sample and Procedure

A non-probabilistic sample of 2,154 individuals were recruited from Quebec's (Canada) general population between June and September 2021. Participants were invited on social media (ie, *Facebook* and *Instagram*) to complete an anonymous online survey on sexual health and wellbeing. Targeted advertising strategies were deployed on *Facebook Ads Manager* to increase the representativeness of certain demographic subgroups (eg, men, 18−30-year-old adults). Social media use as a recruitment method has been demonstrated to be effective for reaching hidden populations such as individuals living with mental disorders [42] or members of stigmatized groups (eg, trans people),[43] as online surveying offers anonymity and enhanced privacy to participants compared to telephone or face-to-face interviews conducted by specialized marketing companies.

Clicking on the study post led participants to the questionnaire hosted on *Qualtrics,* where they were first presented with a short description of the study's objectives and an informed consent form, which they needed to read and sign electronically. After providing consent, participants completed a battery of questionnaires (*Measures section*). Survey responses were stored and encrypted. Pilot testing was carried out to identify possible technical errors. The survey was available in French and in English and took about 30 to 40 minutes to complete. Eligible participants were at least 18 years old, had been residing in Quebec for the past 12 months, and had sufficient knowledge of either French or English to complete the questionnaire. Of the 2,154 participants who consented to participate, 10.2% (n = 219) exited the survey before completing its sexual difficulties section, leaving a final analytical sample of 1,935 individuals. Participants completing at least 70% of the survey were eligible to enter a draw to win 1 of 30 gift-cards (value ranging from $25 to $200 CAD). Figure 1 presents a flow diagram describing the recruitment process.

Measures

Outcome Variable: Sexual Aversion. A measure of sexual aversion, inspired from the DSM-IV-TR's Sexual Aversion Disorder criteria A and B, was used. Participants were required to report whether they experienced, over the past 6 months, symptoms of either extreme (1) anxiety or (2) disgust in sexual contexts [eg, *"Feeling extreme disgust in all or nearly all sexual situations with a partner or during masturbation"*], (3) avoidance of the latter [eg, "*Avoided all or nearly all sexual situations with a partner or masturbation"*], and (4) associated distress for each symptom [eg, *"Indicate the degree of distress caused by this anxiety"*]. For each of these sexual aversion-related symptoms (ie, sexual anxiety, disgust, and avoidance), participants reported the occurrence (0) or absence (0) of such symptoms and associated distress on a 4 point Likert scale ranging from 1 (*no distress*) to 4 (*severe distress*).

Correlates. *Sociodemographic Characteristics.* Sociodemographic data were collected on age, gender (eg, cis man, cis woman, trans, nonbinary, Two-Spirit), sexual orientation (eg, heterosexual, homosexual, bisexual), education, religiosity, employment status, income, and relationship status.

Sexual Difficulties. The presence of sexual difficulties was assessed with the Arizona Sexual Experience Scale (ASEX; α = 0.91),[44] which measures the experience of 5 sexual difficulties throughout the sexual response cycle (ie, sexual desire, arousal, erection and/or lubrication, ability to reach orgasm, and orgasm satisfaction) using a 6-point Likert scale ranging from high (1) to low (6) functioning. Additional questions were included to measure other difficulties related to sexual functioning (ie, pain during sex, premature ejaculation and/or orgasm). To reflect the diagnostic criteria used in the DSM-5, respondents also indicated, for each sexual difficulty, whether it had been present for at least 6 months, and their associated levels of distress, on a 6-point Likert scale ranging from 1 (*no distress*) to 6 (*extreme distress*). Higher ASEX scores reflect lower sexual functioning. The ASEX showed satisfactory internal consistency in the current sample (α = 0.79).

Performance Anxiety. The ten-item performance anxiety subscale of the Sexual Function Scale (SFS; α = 0.85)[45] was used to measure attitudes, cognitions, and behaviors related to performance anxiety during sex. Participants rated each item on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). Higher scores suggest an increased propensity to experience sexual performance anxiety. In the current sample, internal consistency was satisfactory (α = 0.83).

Body Shame. The Experience of Shame Scale's (α = 0.86)[46] 4-item bodily shame subscale was used to assess emotional, cognitive, and behavioral components of participants' body shame. Participants rated how they have felt in the past 6 month on a 4-point scale ranging from 1 (*not at all*) to 4 (*very much*), with higher scores indicating greater body shame. The subscale presented satisfactory internal consistency in the current sample (α = 0.89).

Sexual Victimization. The experience of childhood sexual abuse and of sexual assault in adulthood was assessed using a 2-item measure inspired from the Canadian Criminal Code that has proven valid for assessing experience of sexual victimization (α = 0.90).[47] Following a definition of sexual behavior [*"A sexual act consists of any act, with or without contact, that seems sexual to you, such as caressing, kissing, sexual touching, oral, vaginal or anal sex, verbal sexual advances, or exposure to sexual content"*], participants stated whether they had ever experienced child sexual abuse and if they had ever experienced sexual assault after the age of 18 (eg, *"Have you experienced any sexual act without your consent after the age of 18?"*) using a Yes and/or No format.

Comfort with Sexual Health Information. A 4-item subscale from the Sexual Anxiety Scale − Brief Form (α = 0.86),[48] derived from the Sexual Opinion Survey,[41,49] was used to measure individuals' levels of discomfort when exposed to sexual health-related information (eg, pregnancy, contraception, sexually transmitted infections).

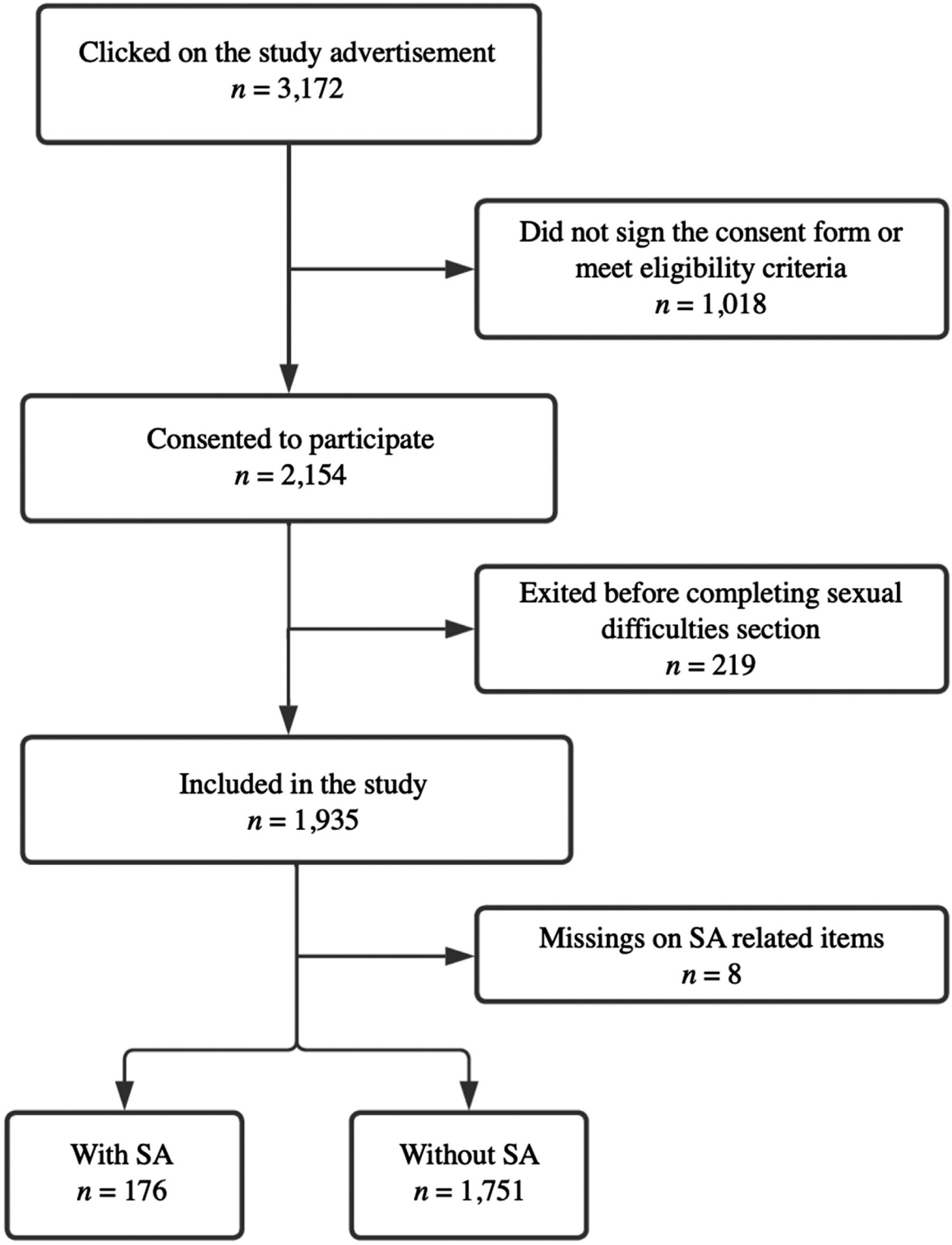

Figure 1. Flow diagram detailing recruitment and eligibility screening process.

Participants rated their degree of anxiety using an 11-point Likert scale ranging from 0 (*no anxiety at all*) to 100 (*extremely anxious*). Higher scores reflect greater discomfort with sexual health-related information. This subscale demonstrated satisfactory internal consistency in the current sample (α = 0.89).

Sexual Satisfaction. Sexual satisfaction was assessed using the Global Measure of Sexual Satisfaction (GMSEX; α = 0.95).[50] Participants rated their sexual relationships on five 7-point bipolar scales ranging from: Bad-Good, Unpleasant-Pleasant, Negative-Positive, Unsatisfying-Satisfying, and Worthless-Valuable.

Lower scores indicate lower sexual satisfaction. The GMSEX presented satisfactory internal consistency in the current study (α = 0.91).

Psychological Distress. Psychological distress was assessed using the 6-item K-6 Distress Scale (α = 0.89).[51] Participants reported how often they had experienced 6 different anxiety- and depression-related emotions or experiences in the past 30 days on a 5-point Likert scale ranging 0 (*None of the time*) to 4 (*All the time*). The scale showed satisfactory internal consistency in the present study (α = 0.87).

Statistical Analysis

Crude prevalence for each sexual difficulty was calculated by dividing the total number of self-reported SA or other sexual difficulties by the total number of respondents. For each prevalence, 95% confidence intervals (CIs) were estimated using exact (Clopper-Pearson) confidence limits for a binomial proportion. Then, associations between SA and all correlates were tested using chi-square and independent sample *t*-tests, and magnitude of effect sizes were reported (Cramer's V: small effect size from 0.10, medium from 0.30, and large from 0.50; η_p^2: small effect size from 0.01, medium from 0.06, and large from 0.14). The outcome variable dichotomized individuals as either presenting or not presenting SA, according to the DSM-IV-TR's diagnostic criteria (ie, the presence of extreme anxiety or disgust with sexual avoidance, accompanied with at least "moderate" distress). Other sexual difficulties were dichotomized accordingly with a threshold of presence of at least "very difficult" and/or "weak" and/or "unsatisfying" for each symptom, accompanied with at least "moderate" distress.[44] Sociodemographic variables were categorical and included in the model without being recoded (ie, gender, sexual orientation, employment status, family annual income, relationship status, and education). Psychosexual variables (ie, psychological distress, sexual satisfaction, performance anxiety, discomfort with sex-related information, and body shame) were also included and treated as continuous variables for analysis. To examine correlates of SA, we conducted a multivariate logistic model including all sociodemographic and psychosexual variables as predictors. First, a model including all predictors was estimated. Results of this model informed the selection of the independent variables of the final model: only variables significantly contributing to the model were included in the final model based on Wald tests. Adjusted odds ratios (aORs), their 95% CIs, and Nagelkerke's R^2 were reported, and $p < .05$ was considered statistically significant. Missing data were omitted from analyses. Statistical analyses were performed using SAS software, version 9.4. [52]

RESULTS

Sample Characteristics

Participants were 18 to 79 years old (M = 40.90, SD = 12.49). Over half identified as cisgender women (53.5%), while 42.2% identified as cisgender men, and 7.3%, as trans or nonbinary. One in 4 participants (25.7%) was aged 50 or over, while 37.1% were aged between 18 and 34 years, and 37.2% between 35 and 49 years. Most participants reported being in a relationship (ie, married, living together, dating; 67.9%), whereas 32.1% were single (ie, with or without casual sexual partners, divorced or widowed). Most of the sample identified as heterosexual (74.9%), though substantial proportions identified as bisexual or pansexual (14.0%), homosexual (5.6%), questioning (2.1%), asexual (1.0%), or other (2.2%). Moreover, most of the sample identified as Caucasian (94.7%) and reported a household annual income of $50,000 or more (63.1%). A majority (80.1%) had completed a postsecondary education (ie, university, college, or vocational degree). Participants were predominantly workers (70.1%), while others were students (10.0%), retirees (6.5%), looking for work (3.9%), on sick leave (3.3%), or in another situation (6.1%).

Table 1 presents crude prevalence statistics. Among participants, 12.8% have experienced 1 sexual difficulty in the past 6 months (including SA), 5.9% reported 2 difficulties, and 4.1% reported 3 or more difficulties. SA was reported by 11.3% cis women, 6.9% cis men, and 17.1% trans and nonbinary individuals, showing a prevalence of 9.7% for SA (95% CI: 8.5−11.2) in the entire sample. Among participants reporting SA, prevalence rates of co-occurring sexual difficulties were calculated. At least one-fifth of these participants also reported living with lack of sexual desire/arousal (39.4%), delayed ejaculation or orgasm

Table 1. Prevalence estimates of sexual aversion and other sexual difficulties by gender

	Cis men		Cis women		Non-binary/Trans	
	% (95% CI)	Valid n*	% (95% CI)	Valid n*	% (95% CI)	Valid n*
Sexual aversion	6.9 (5.1–8.9)	740	11.3 (9.4–13.4)	990	17.1 (9.4–27.4)	76
Lack of sexual desire-arousal	5.0 (3.6–6.7)	804	13.6 (11.7–15.9)	1061	12.3 (6.0–21.5)	81
Erectile or lubrication difficulties	5.0 (3.6–6.7)	801	5.5 (4.2–7.0)	1060	8.6 (3.5–17.0)	81
Premature ejaculation or orgasm	2.2 (1.3–3.5)	802	.2 (0.1–0.8)	1060	0	81
Delayed ejaculation or orgasm	4.1 (2.8–5.7)	802	8.0 (6.4–9.8)	1060	12.3 (6.1–21.5)	81
Sexual pain	1.3 (0.7–2.4)	806	6.9 (5.5–8.6)	1060	9.9 (4.4–18.5)	81

*n varies due to missing values (prefer not to answer).

(24.3%), and sexual pain (21.3%). Among participants reporting SA, 34.7% reported 1 other sexual difficulty in the past 6 months, 15.4% reported 2 other sexual difficulties, and 13.0% reported 3 or more sexual difficulties.

Bivariate Analyses

Table 2 presents statistically significant differences between individuals with and without SA on sociodemographic characteristics, sexual difficulties, and psychosexual variables. Effect sizes ranged from small to moderate (Cramer's V = .08−.32; η_p^2 = .03−.10). Several factors were significantly associated with reporting SA, including gender (ie, identifying as a woman or nonbinary and/or trans), sexual orientation (ie, individuals identifying as asexual, questioning their orientation, or identifying as "other"), employment status (ie, being on sick leave or "other"), income (ie, less than $20,000 per year), relationship status (ie, not in a relationship or "other") and education level (ie, elementary level). Also, individuals experiencing SA were more likely to report impaired sexual functioning (ie, regarding desire and/or arousal, lubrification and/or erection, orgasm and/or ejaculation, or pain during intercourse) compared to people without SA. Proportions of child sexual abuse and adult sexual assault were higher in participants reporting SA. Higher performance anxiety, greater body shame, lower comfort with sex-related information, lower sexual satisfaction, and increased psychological distress were also found to be associated with SA. Individuals with and without SA did not differ significantly on age, virginity status, religiosity, and ethnicity.

Multivariate Associations

Table 3 presents the multivariate logistic regression results of factors associated with SA, with aORs and 95% CIs. The model accounted for 31.4% of the likelihood of reporting SA. Analyses yielded 5 factors associated with a higher likelihood of reporting SA. Individuals reporting higher psychological distress, lower sexual satisfaction, and higher discomfort with sex-related information were more likely to report SA. Additionally, those who experienced performance anxiety were 2.1 times more likely to report SA. Regarding sexual orientation, participants identifying as asexual or who reported questioning their sexual orientation were more likely to report SA.

DISCUSSION

This community-based research reveals that a substantial proportion of adults face distressing SA symptoms (9.7%) and provides SA data on individuals who self-identify as other than cisgender. The present sample's SA prevalence estimates are slightly higher than those of European samples.[11,12] However, accurate comparisons remain difficult, notably due to study differences in SA screening criteria. Specifically, this study used a symptoms-specific definition of SA (eg, anxiety, disgust, and avoidance towards sexuality), while previous studies had asked participants to report their experience of "sexual aversion" without defining the term[12] or only screened for subsets of SA symptoms (eg, sexual anxiety).[1,15] Contextual factors such as culture, education, employment status, and the COVID-19 pandemic may also explain differences in prevalence across samples. Firstly, the fact that SA prevalence in our sample falls between those observed in Belgian, Dutch, and Moroccan samples might partly be explained by sample composition and sociocultural differences. For instance, Kadri and colleagues[13] noted that 29% of their female Moroccan participants received no education, and that 78% were unemployed. By contrast, most of our sample reported having at least postsecondary education and being employed. Secondly, the pandemic during which the present study took place may have increased sexual distress and exacerbated potentially lower previous rates of SA. Studies show a significant decrease in sexual functioning (particularly among women), notably in levels of desire, arousal, lubrication, and satisfaction, and increased sexual distress during the COVID-19 pandemic.[53,54] Other research has found increases in levels of anxiety following the onset of the COVID-19 pandemic,[55] which might lower individuals' comfort with sexuality and intimacy. Variations in SA prevalence estimates across studies suggest a need for future cross-national studies using a common definition for SA to allow for data synthesis comparability.

Bivariate analyses revealed that sociodemographic, mental, and sexual health characteristics are more represented in people with AS compared to those without. That a greater proportion of women reported SA compared to men replicates prior findings in both population-based and clinical studies among cisgender samples.[11,14,15] However, our study produced new information by highlighting that sexually and gender diverse participants were more likely to report SA, which may be attributable to the fact that the factors we found to be associated with SA (eg, childhood sexual abuse, sexual assault, body shame) tend to be more prevalent in women and sexually and gender diverse people. Indeed, women, non-heterosexual and non-cis individuals tend to report more experiences of sexual victimization,[56−58] psychological distress,[59,60] and socioeconomic hardship,[61] as well as poorer body image[62,63] than cis, heterosexual men. Furthermore, the prevalence of sexual difficulties in present subsample of individuals with SA (ie, decreased desire and arousal, delayed ejaculation or orgasm, and higher sexual pain) replicates that of prior research.[12,23] This finding suggests that SA might potentially play an etiological role in the development of sexual difficulties such as low sexual desire or sexual pain,[5] or alternatively, that SA might be the outcome of a pre-existing sexual difficulty. In this respect, comorbidity between SA and impaired desire and/or arousal supports de Jong et al.'s model,[64] which posits that feeling subjectively sexually aroused decreases sexual disgust and associated avoidance. Experimental data shows that sexual arousal and exposure to sexual cues both tend to attenuate subjective disgust towards stimuli and elements involved in sexual

Table 2. Bivariate significant differences between participants with and without Sa on sociodemographic, sexual functioning and psychosexual characteristics

Categorical and dichotomous variables	Sexual aversion		*P value* (Cramer's V)
	No % (n)	Yes % (n)	
Sociodemographics			
Gender			
Cis woman	53.9 (878)	63.6 (112)	
Cis men	42.3 (689)	29.0 (51)	.001(.09)
Trans / Non-binary	3.9 (63)	7.4 (13)	
Sexual orientation			
Heterosexual	75.7 (1234)	69.3 (122)	
Homosexual	5.5 (89)	4.5 (8)	< .001 (.13)
Bi/pansexual	14.2 (232)	11.4 (20)	
Asexual	.9 (15)	2.8 (5)	
Questioning/Other (eg, bicurious, queer)	3.7 (60)	11.9 (21)	
Employment status			
Employed or self-employed	71.6 (1165)	54.3 (95)	
Unemployed	4.1 (67)	3.4 (6)	
Student	10.0 (163)	13.1 (23)	< .001 (.15)
Retired	6.0 (97)	8.6 (15)	
Sick leave	2.6 (42)	9.7 (17)	
Other (eg, volunteering)	5.7 (92)	10.9 (19)	
Family annual income (CAD)			
< $20,000	5.8 (94)	13.1 (23)	
$20,000-$49,999	17.4 (284)	17.0 (30)	
$50,000-$79,999	24.5 (399)	19.3 (34)	.005 (.10)
$80,000-$99,999	13.3 (216)	13.1 (23)	
> $100,000	21.7 (353)	17.6 (31)	
Missing data	17.4 (284)	19.9 (35)	
Relationship status			
Not in a relationship	32.7 (532)	47.2 (83)	
In a relationship	65.2 (1060)	47.7 (84)	< .001 (.12)
Other	2.0 (33)	5.1 (9)	
Education degree			
Elementary	1.3 (22)	4.0 (7)	
Secondary	16.6 (270)	21.6 (38)	
Professional or college	40.0 (652)	37.5 (66)	.03 (.08)
Undergraduate	31.2 (508)	28.4 (50)	
Graduate	10.9 (178)	8.5 (15)	
Sexual difficulties			
Desire and arousal	7.3 (118)	39.4 (67)	< .001(.31)
Lubrication	2.5 (40)	12.4 (21)	< .001 (.16)
Erection	1.9 (31)	5.9 (10)	.001 (.08)
Premature ejaculation or orgasm	0.9 (15)	3.6 (6)	.003 (.07)
Delayed ejaculation or orgasm	5.2 (84)	24.3 (21)	< .001 (.22)
Sexual pain	3.5 (57)	21.3 (36)	< .001(.23)
Sexual victimization			
Childhood sexual abuse	37.7 (505)	53.3 (72)	.001 (.09)
Adulthood sexual assault	29.5 (393)	43.7 (59)	.001 (.09)

(continued)

Table 2. Continued

Continuous variables	Sexual aversion		*P value* (η_p^2)
	No *M* (*SD*)	Yes *M* (*SD*)	
Performance anxiety	1.86 (.53)	2.50 (.70)	< .001 (.10)
Body shame	1.70 (.29)	1.45 (.34)	< .001 (.05)
Discomfort with sex-related information	8.87 (13.67)	17.60 (21.54)	< .001 (.03)
Sexual satisfaction	4.99 (1.28)	3.52 (1.41)	< .001 (.10)
Psychological distress	1.20 (.75)	1.92 (.84)	< .001 (.07)

Non-significant variables: age, virginity status, religiosity, ethnicity.

encounters (eg, saliva, sweat, semen) which tend to be strongly perceived as disgust triggers, at least in non-sexual contexts.[65–67] In other terms, sexual arousal can temporarily lift sexual disgust and apprehension long enough for individuals to approach and enjoy such elements and stimuli.[64] These findings also suggest that individuals reporting lower sexual interest and/or arousal might be more prone to develop, maintain or experience SA symptoms (eg, sexual disgust and avoidance).[5] Future work should examine the longitudinal associations between SA-related symptoms and other sexual difficulties, as well as their directionality and potential intermediary mechanisms.

Although causal associations cannot be determined with cross-sectional data, the present regression model revealed specific markers of sexual and emotional wellbeing to be correlated with SA. Individuals reporting increased performance anxiety, psychological distress, lower sexual satisfaction, as well as discomfort with sex-related information had higher odds of reporting SA. This study is unique in providing empirical data on the link between performance anxiety and SA, which is in line with clinical observations and the theoretical literature on SA.[37] The relationship between SA and performance anxiety might be bidirectional and complex. For instance, while performance concerns can contribute to one's tendency to avoid romantic and sexual interactions, it is also plausible that repeated avoidance of sex leads to uncertainties about one's physical attractiveness and confidence towards one's sexual skills, performance, and worth as a sexual partner. Moreover, results highlight a link between SA and discomfort with sex-related information, which may be understood in light of erotophobia research findings (ie, the tendency to respond to sexual stimuli with negative affect, such as discomfort, worry, and anxiety).[41] For example, heightened erotophobia was found to be associated with less sex-related information received from parents, strict religious and moral upbringing,[49] as well as with poor sexological knowledge (eg, anatomy, contraception, pregnancy, sexually transmitted infections).[41] According to Fisher and colleagues,[49] the links between discomfort with sex-related information and erotophobia could be explained by developmental factors, such as the internalization of social norms and conditioning, whereby sexuality and unpleasant emotions (eg, guilt, fear or shame) are repeatedly associated from an early age. In some cases, it could be hypothesized that erotophobic dispositions, acquired through learning and past experiences, could translate into distressing emotions (eg, anxiety) and sexual avoidance (ie, characteristic of SA). Regression analyses also showed that lower sexual satisfaction and psychological distress increase the propensity of reporting SA. These results might reflect the high comorbidity previously observed between SA and sexual dissatisfaction,[21] depression, and anxiety.[32,34] Lastly, individuals reporting being asexual were at higher odds of reporting SA. This finding might be explained by the fact that asexual people have been found to report attitudes towards sexuality ranging from indifference to aversion,[68,69] even though their experience does not reflect the clinical description of SA (ie, one's asexual identity vs sexual impairment related to significant distress in SA). Again, future longitudinal studies are warranted to clarify the temporal relationship between SA, developmental factors (eg, sex education, victimization) and psychosexual distress (eg, sexual dissatisfaction, relational or psychological distress).

Strengths, Limitations, and Further Studies

Our study's strengths include its large sample size and the inclusion of diverse genders and sexual orientations, as well as the use of a comprehensive measure of SA, based on diagnostic criteria (vs self-report of "sexual aversion" without a clear definition provided to participants), allowing for a more accurate representation of SA in a community-based sample. Results should, however, also be considered in light of the study's limitations. First, its cross-sectional design prevents conclusions from being drawn regarding the causality and direction of the observed relationships between SA, other sexual difficulties, and examined psychosexual variables. As SA is complex and multi-dimensional, longitudinal studies are needed to examine whether and how several factors (eg, psychological distress, discomfort towards sex-related information, victimization) predict, mediate, moderate,

Table 3. Multivariate logistic regression model estimating association with sexual aversion

Categorical variables	Odds ratios of reporting SA	
	aOR	95% CI
Psychological distress	1.77***	1.33-2.38
Performance anxiety	2.08***	1.45-2.98
Discomfort with sex-related information	1.02**	1.01-1.04
Sexual satisfaction	.59***	.49-.70
Sexual orientation		
Homosexual	.76	.24-1.98
Bi/pansexual	.80	.39-1.57
Asexual	5.25*	1.20-21.12
Questioning	4.13***	1.89-8.73

aOR = adjusted odds ratio; CI = 95% confidence interval.
Nagelkerke's R^2 = .31
Non-significant variables: gender, professional status, family annual income, relationship status, sexual assault in adulthood, childhood sexual abuse, body shame.
*$p < .05$.
**$p < .01$.
***$p < .001$.

or are latent factors in the relationships between sociodemographic characteristics (eg, gender, sexual orientation) and SA. Second, prevalence rates were all estimated using self-reported data from an online self-selected convenience sample, rather than through official diagnostic records. Thus, the results may be prone to biases such as shared method variance, social desirability, and recall biases. Moreover, the sample was not representative of the Quebec population (eg, highly educated, slightly predominantly women, and middle-aged adults). Further studies relying on national probability-based samples are needed to estimate SA symptomatology within the general population. In addition, the sample was recruited during the COVID-19 pandemic, the latter of which impacted many people's intimate relationships and distress levels,[53] thus affecting the findings' generalizability and emphasizing the need to examine how the pandemic has potentially exacerbated the experience of SA in the general population. Further, while the proportion of explained variance was substantial in the model, it remains necessary to explore other personal (eg, attachment insecurities, negative cognitive schemas, late virginity) and relational factors (eg, coercion, partner's low sexual functioning or poor sexual skills, low dyadic adjustment) that may be associated with SA. Finally, in-depth interviews with individuals experiencing high SA levels (and eventually, with their partners) would allow for a more comprehensive understanding of potential predictors, underlying mechanisms, and trajectories related to SA.

CONCLUSION

By identifying diverse psychological, sexual health, and sociodemographic correlates of SA, the present study highlights its complex and multidimensional nature. SA presents high levels of overlap with co-occurring sexual dysfunctions, and further study is needed to determine if it represents a distinct disorder or a manifestation or consequence of other sexual dysfunctions. Future longitudinal population-based research is also needed to estimate the prevalence of SA in large and diverse samples and confirm its etiological factors and relations with other sexual difficulties using rigorous, probability-based sampling methods. Also, this study's findings strengthen the relevance of developing specific assessment protocol and interventions for SA by targeting plausible mechanisms and factors involved in SA etiology (eg, performance anxiety, poor sexual knowledge, psychological distress, sexual victimization), as no controlled studies have yet evaluated the efficacy of psychological or pharmacological treatments for this condition ([8,70]).

ACKNOWLEDGMENTS

The authors would like to thank the Université du Québec à Montréal for financially supporting this research project and the Fonds de Recherche du Québec — Société et Culture for supporting the research activities of Éliane Dussault. The authors also wish to thank Léa Séguin for her assistance in the translation process.

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Conflict of Interest: The authors report no conflicts of interest.

Funding: None.

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