

Sexual Violence Perpetration and Victimization: Providing Prevalence Rates for Understudied Populations

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Abstract

Sexual violence research has been subjected to gender and heteronormative biases. It has been customary to focus on men as perpetrators and women as victims and to exclude sexual and gender minorities from protocols, which has led some demographic groups to be underrepresented. This article aimed to (1) provide prevalence rates for sexual violence perpetration and victimization in understudied populations, and (2) compare rates recorded by these understudied populations to a heterosexual men reference group for perpetration and a heterosexual women reference group for sexual victimization. A sample of 1796 individuals (age 16–83) representing diverse gender identities and sexual orientations completed modified, gender-inclusive versions of the *Sexual Experiences Survey—Tactics first Perpetration and Victimization*. Results indicate that (1) heterosexual men, transgender/nonbinary individuals, homosexual women, non-monosexual women, and homosexual men registered perpetration rates over 30%; (2) non-monosexual and heterosexual women recorded the highest rates of sexual victimization; (3) heterosexual men reported statistically higher rates of perpetration and lower rates of victimization than heterosexual women; (4) sexual and gender minorities reported perpetration rates that are statistically equivalent to heterosexual men and victimization rates that are statistically equivalent to heterosexual women; and (5) verbal coercion was the most commonly used strategy by all subgroups. Findings suggest the need for prevention programs to target perpetration by all genders and behaviors outside of the traditional rape script, for victims' resources to be welcoming of men and sexual and gender minorities, and for efforts to be made in research to limit gender and heteronormative biases.

Keywords: sexual violence, perpetration, victimization, prevalence rates, gender and sexual minorities, understudied populations

Introduction

SEXUAL VIOLENCE REFERS to “any sexual act, attempt to obtain a sexual act or unwanted sexual comments, or advances against a person’s sexuality using coercion” (World Health Organization 2011). Sexual violence thus includes, but is not limited to the legal definitions of sexual assault or rape. Since the 1980s, research on sexual violence has been subject to gender and heteronormative biases, such that some populations remain understudied.

It has been customary in sexual violence research to focus on men as perpetrators and women as victims. In many studies, men are only questioned on sexual perpetration behaviors and women on sexual victimization (Trottier et al. 2020). Although they can vary, prevalence rates for

women’s sexual victimization usually range from 20% to 35% (Fisher et al. 2000; Koss et al. 1987; Krebs et al. 2007; Mellins et al. 2017; Wiscombe 2012), whereas the prevalence of sexual perpetration by men usually ranges from 29% to 59% (Anderson and Delahanty 2020; White and Smith 2004, Widman et al. 2013; Wiscombe 2012).

In comparison to men’s perpetration and women’s victimization, sexual violence perpetrated by women and men’s sexual victimization have been understudied (Masho and Alvanzo 2010; Peterson et al. 2011). Rates for women’s perpetration and men’s victimization are scarce and lack consistency (Parent et al. 2018; Peterson et al. 2011). Prevalence rates for women’s perpetration range from 9% to 49% (Krahé et al. 2003; Parent et al. 2018; Russell et al. 2017; Schatzel-Murphy et al. 2009), while studies on men’s

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victimization report rates from 10% to 68% (Anderson and Delahanty 2020; Krahe et al. 2003; Peterson et al. 2011; Struckman-Johnson et al. 2003; Weiss 2010).

Another common practice in sexual violence research is to focus on cis-gender heterosexual participants (Canan et al. 2020). Many studies systematically exclude gender minorities (transgender and nonbinary) and sexual minorities (gay, lesbian, and non-monosexual*), which has led to the underrepresentation of these subgroups in the sexual violence literature (Johnson et al. 2016; Trottier et al. 2019). Prevalence rates for sexual violence among sexual and gender minority groups are rare, and pertain to sexual victimization in the context of polyvictimization (Edwards et al. 2015; Norris and Orchowski 2020; Sterzing et al. 2019) or partner violence (Chen et al. 2020; Langenderfer-Magruder et al. 2016; Martin-Storey 2015). These studies provide evidence of a greater risk for sexual violence in these populations (Atteberry-Ash et al. 2019; Chen et al. 2020; Johnson et al. 2016). Specifically, rates of victimization range from 10% to 81% for gender minorities (Rimes et al. 2019; Sterzing et al. 2019; Ybarra et al. 2015), from 26% to 69% for lesbian and non-monosexual women, and from 16% to 39% for gay and non-monosexual men (Chen et al. 2020; Edwards et al. 2015). To our knowledge, no data are currently available for sexual violence perpetrated by sexual and gender minorities.

Objectives

Based on the aforementioned information, this article aimed to (1) provide prevalence rates for understudied populations regarding sexual violence perpetration and victimization and (2) compare rates recorded by understudied subgroups to a heterosexual men reference group for perpetration and a heterosexual women reference group for victimization. Specifically, groups were compared on types of sexual violence perpetrated, types of coercive strategies used, and types of sexual victimization experienced.

Methods

Procedure

The data used in this article came from two separate data collections led by the first and second authors.[†] Both research protocols originated from Canadian universities, were of cross-sectional designs, pertained to human sexual behaviors, and used online questionnaires with the same measures to assess sexual violence perpetration and victimization. Both protocols had received ethics approval from their university's institutional review board.

*The expression “non-monosexual” refers to individuals who are attracted to more than one gender in contrast with monosexual orientations (heterosexual and homosexual), who are only attracted to one gender. The authors of this article have chosen to use the expression “non-monosexual” instead of the term “bisexual” as it is inclusive of a wider range of sexual diversity realities (e.g., bisexual, pansexual, and queer).

[†]Participant lists were scanned to ensure that no participant provided answers in both protocols. Only one participant was identified as a duplicate and thus, only their answers to the first protocol were kept in the analyses.

Subsample 1. Data collection took place from September 2017 to December 2018. Individuals were recruited through public places, social media platforms and e-mails to students of different post-secondary education establishments, and members of a research association. They had to be 16 years of age or older to participate. All recruitment methods provided a link to the consent form through Limesurvey. After giving their consent, participants completed the questionnaire. An attention verification question was asked, as well as two pairs of duplicate questions to ensure consistent responding.

Subsample 2. Data collection took place from September 2018 to March 2019. Recruitment was conducted on a university campus through posters, emails sent to department lists, in-person presentations in classrooms, and social media posting. Interested individuals had to contact the research laboratory by email, to receive an anonymous link through Qualtrics Research Suite™ secure platform, which used an IP blocking feature to ensure single participation. Participants had to be between 18 and 45 years of age, and have been sexually active, alone or with a partner, in the last 6 months. Consent was obtained on the first page of the online questionnaire. Three attention verification questions were inserted into the online survey.

Participants

Participants represented a combined convenience sample of 1796 individuals 16–83 years of age. See Table 1 for the complete demographic characteristics.

Measures

Sexual perpetration. A gender-inclusive[‡] version of the *Sexual Experiences Survey—Perpetration, Tactics first* (sexual perpetration [SES-P]; Abbey et al. 2005; Benbouriche 2016) was used to assess experiences of sexual violence perpetration. Participants had to indicate the frequency, since age 14, with which they have used different coercive strategies to entice someone to engage in sexual interactions. For this study, all reported frequencies were combined into two sexual interaction types: (1) fondling, kissing, or rubbing of the breasts, butt, or crotch, or (2) penetration (vaginal or anal penetration with finger or penis) or oral sex. Furthermore, coercive strategies were computed into three dichotomous (yes/no) categories: (1) verbal strategies (using verbal pressure and/or lies or false promises and/or discontent, insults, or guilt), (2) strategies involving intoxication (giving alcohol or drugs or taking advantage of an intoxicated person), or (3) strategies using physical force.

Sexual victimization. A gender-inclusive version of the *Sexual Experiences Survey—Victimization, Tactics first* (sexual victimization [SES-V]; Abbey et al. 2005; Benbouriche 2016) was used to assess experiences of sexual victimization. The item formulation, tactics, and sexual interactions mirrored the perpetration version, this time with

[‡]Example of gender-inclusive formulated item: “Since the age of 14, have you ever overwhelmed someone with continual arguments and pressure ...”

TABLE 1. DEMOGRAPHIC CHARACTERISTICS FOR THE TOTAL SAMPLE AND SUBSAMPLES

Variables	Subsample 1 (n = 1001)	Subsample 2 (n = 795)	Total sample (n = 1796)
Age, mean (SD)	23.68 (8.29)	24.60 (5.62)	24.09 (7.11)
Gender, n (%)			
Men	234 (23.7)	364 (45.8)	601 (33.5)
Women	755 (64.4)	418 (52.6)	1173 (65.3)
Transgender/ nonbinary	9 (0.9)	13 (1.6)	22 (1.2)
Sexual orientation, n (%)			
Heterosexual	871 (87.8)	697 (89.2)	1568 (88.4)
Non-monosexual	77 (7.3)	28 (3.5)	105 (5.9)
Homosexual	44 (4.4)	56 (7.2)	100 (5.6)
Ethnicity, n (%)			
Caucasian	919 (91.8)	683 (85.9)	1602 (89.2)
African-American	16 (1.6)	25 (3.1)	41 (2.3)
Indigenous/ First Nations	19 (1.9)	3 (0.4)	22 (1.2)
Asian	19 (1.9)	27 (3.4)	46 (2.6)
Arabic	2 (0.2)	24 (3.0)	26 (1.4)
Latin-American	14 (1.4)	17 (2.1)	31 (1.7)
Other	12 (1.2)	16 (2.0)	28 (1.6)
Occupation, n (%)			
Employed/self- employed	172 (17.2)	166 (20.9)	338 (18.8)
Student	814 (81.3)	627 (78.9)	1441 (80.2)
Other	12 (1.2)	2 (0.3)	14 (0.8)
Relationship status, n (%)			
Single	360 (36.0)	226 (28.4)	586 (32.6)
In a relationship	255 (25.5)	298 (37.5)	553 (30.8)
Common law/married	373 (37.3)	271 (34.1)	649 (36.1)

SD, standard deviation.

participants having to report being forced, since the age of 14, into sexual interactions.[§] To ensure consistency with the perpetration results, all reported frequencies were combined into the same two sexual interaction types: (1) fondling, kissing, or rubbing of the breasts, butt, or crotch or (2) penetration or oral sex.

Gender and sexual orientation. Gender and sexual orientation were measured by single-item questions. Gender involved the following response options: woman, man or other. Sexual orientation involved response options based on the Kinsey Scale: exclusively or predominantly heterosexual, bisexual, exclusively or predominantly homosexual, asexual, other. Participants responding “other” to either question had to provide an answer that best represented their gender or sexual orientation.

Results

Prevalence

Tables 2 and 3, respectively, provide prevalence rates for perpetration and victimization according to gender and sexual orientation.

[§]For victimization, Sample 1 only collected information on the types of forced sexual interactions without regard to the coercive strategies used to force that interaction.

Perpetration. When perpetration types were pooled together, a significant portion of the total sample had used coercion to force someone into sexual interactions (28.8%, $n=518$). The highest perpetration rates were recorded by heterosexual men (37.9%, $n=197$) followed by transgender/nonbinary individuals (36.7%, $n=8$). Three other subgroups recorded perpetration prevalence rates >30%: homosexual women (35.1%, $n=13$), non-monosexual women (32.2%, $n=28$), and homosexual men (31.7%, $n=20$).

When perpetration was further investigated according to types of sexual interaction, results for the total sample revealed that coercion was used equivalently ($\chi^2=0.190$, $p<0.663$) to force someone into fondling (21.4%, $n=384$) and penetration or oral sex (22.0%, $n=395$). Transgender/nonbinary individuals recorded the highest perpetration rates for nonconsenting fondling (36.4%, $n=8$), followed by homosexual women (32.4%, $n=12$), while heterosexual men (30.0%, $n=156$) and homosexual men (28.6%, $n=13$) recorded greater perpetration rates for penetration or oral sex.

Approximately one in four participants (27.1%, $n=487$) reported having used verbal coercive strategies to force someone into sexual interactions. Proportionally, transgender/nonbinary individuals (36.4%, $n=8$) were the most likely to report verbal coercive strategies, followed by heterosexual men (35.4%, $n=184$). Coercive strategies involving intoxication (6.8%, $n=123$) or physical force (1.2%, $n=22$) were less common.

Victimization. When victimization types were pooled together, a significant portion of our total sample (42.6%, $n=765$) reported having been coerced into sexual interactions. Non-monosexual women recorded the highest rates of sexual victimization (57.5%, $n=50$), followed by heterosexual women (49.5%, $n=519$).

When victimization was further investigated according to types of nonconsenting sexual interaction, a significantly greater portion of the total sample ($\chi^2=34.664$, $p<0.001$) was coerced into fondling (35.7%, $n=641$) compared to penetration or oral sex (26.6%, $n=477$). Non-monosexual women (48.3%, $n=42$) and heterosexual women (43.2%, $n=453$) reported the highest rates of nonconsenting fondling, whereas homosexual men reported the highest victimization rates for penetration or oral sex (39.7%, $n=25$), followed by transgender/nonbinary individuals (36.4%, $n=8$).

Group comparisons

Following best practice (McHugh 2013), between-group statistical comparisons were performed using the Chi-square test of independence (χ^2). To achieve greater statistical power, non-monosexual and homosexual men were merged into a “combined men sexual minority group.” The same procedure was used with women participants to produce a “combined women sexual minority group.” Prevalence rates for these groups are available in Tables 2 and 3. Comparisons were made between five groups (heterosexual men and women, sexual minority men and women, and transgender/nonbinary individuals) using the heterosexual men subgroup as the reference category for perpetration and the heterosexual women subgroup as the reference category

TABLE 2. PREVALENCE FOR PERPETRATION ACCORDING TO GENDER IDENTITY AND SEXUAL ORIENTATION

	Total sample (n = 1796)	Heterosexual men (n = 520)	Non-monosexual men (n = 18)	Homosexual men (n = 63)	Combined men sexual minorities (n = 81)	Heterosexual women (n = 1049)	Non-monosexual women (n = 87)	Homosexual women (n = 37)	Combined women sexual minorities (n = 124)	Transgender/nonbinary (n = 22)
Perpetration type										
Any perpetration	28.8% (n = 518)	37.9% (n = 197)	27.8% (n = 5)	31.7% (n = 20)	30.9% (n = 25)	23.5% (n = 247)	32.2% (n = 28)	35.1% (n = 13)	33.1% (n = 41)	36.4% (n = 8)
Touching/fondling	21.4% (n = 384)	30.0% (n = 156)	22.2% (n = 4)	20.6% (n = 13)	21.0% (n = 17)	16.6% (n = 174)	19.5% (n = 17)	32.4% (n = 12)	23.4% (n = 29)	36.4% (n = 8)
Penetration/oral sex	22.0% (n = 395)	30.0% (n = 156)	22.2% (n = 4)	28.6% (n = 18)	27.3% (n = 22)	17.2% (n = 181)	23.0% (n = 20)	27.0% (n = 10)	24.2% (n = 30)	27.3% (n = 6)
Perpetration strategies										
Verbal	27.1% (n = 487)	35.4% (n = 184)	27.8% (n = 5)	30.2% (n = 19)	29.6% (n = 24)	22.7% (n = 238)	24.1% (n = 21)	32.4% (n = 12)	26.6% (n = 33)	36.4% (n = 8)
Intoxication	6.8% (n = 123)	11.3% (n = 59)	5.6% (n = 1)	9.5% (n = 6)	8.6% (n = 7)	4.0% (n = 42)	8.0% (n = 7)	8.1% (n = 3)	8.1% (n = 10)	22.7% (n = 5)
Physical force	1.2% (n = 22)	1.7% (n = 9)	6.7% (n = 1)	0.0% (n = 0)	1.2% (n = 1)	1.0% (n = 10)	2.6% (n = 2)	0.0% (n = 0)	1.6% (n = 2)	0.0% (n = 0)

TABLE 3. PREVALENCE FOR VICTIMIZATION ACCORDING TO GENDER IDENTITY AND SEXUAL ORIENTATION

	Total sample (n = 1796)	Heterosexual men (n = 520)	Non-monosexual men (n = 18)	Homosexual men (n = 63)	Combined men sexual minorities (n = 81)	Heterosexual women (n = 1049)	Non-monosexual women (n = 87)	Homosexual women (n = 37)	Combined women sexual minorities (n = 124)	Transgender/nonbinary (n = 22)
Victimization type										
Any victimization	42.6% (n = 765)	27.1% (n = 141)	16.7% (n = 3)	44.4% (n = 28)	38.3% (n = 31)	49.5% (n = 519)	57.5% (n = 50)	40.5% (n = 15)	52.4% (n = 65)	40.9% (n = 9)
Touching/fondling	35.7% (n = 641)	19.8% (n = 103)	5.6% (n = 1)	34.9% (n = 22)	28.4% (n = 23)	43.2% (n = 453)	48.3% (n = 42)	35.1% (n = 13)	44.4% (n = 55)	31.8% (n = 7)
Penetration/oral sex	26.6% (n = 477)	15.4% (n = 80)	11.1% (n = 2)	39.7% (n = 25)	33.3% (n = 27)	31.0% (n = 325)	33.3% (n = 29)	21.6% (n = 8)	29.8% (n = 37)	36.4% (n = 8)

TABLE 4. BINARY LOGISTIC REGRESSION FOR POOLED-TOGETHER PERPETRATION AND VICTIMIZATION ACCORDING TO SOCIODEMOGRAPHIC CHARACTERISTICS

Predictors	Perpetration			Victimization		
	B	SE	OR	B	SE	OR
Age	0.007	0.009	1.007	0.024	0.009	1.024**
Relationship status ^a	-0.070	0.116	0.932	-0.133	0.108	0.876
Ethnicity ^b	-0.023	0.173	0.977	0.339	0.160	1.404*
Occupation ^c	0.298	0.166	1.347	0.010	0.158	1.010
Gender and sexual orientation						
Heterosexual men ^d	—	—	—	-1.012	0.119	0.364***
Non-monosexual men	-0.300	0.259	0.741	-0.540	0.241	0.583*
Transgender/nonbinary	-0.295	0.498	0.745	-0.148	0.455	0.862
Non-monosexual women	-0.178	0.217	0.837	0.103	0.195	1.109
Heterosexual women ^e	-0.671	0.118	0.511***	—	—	—
Constant	-0.711			-0.530		

^aReference category: single.

^bReference category: Caucasian.

^cReference category: student.

^dReference category for perpetration rates.

^eReference category for victimization rates.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

OR, odds ratio; SE, standard error.

for victimization. The statistical significance level was adjusted to 0.01 (0.05/5) to account for multiple between-group comparisons.

Perpetration. Chi-square analyses revealed significant between-group differences for pooled-together sexual violence [$\chi^2(4, N=1796)=37.459, p < 0.001$], nonconsenting fondling [$\chi^2(4, N=1796)=41.215, p < 0.001$], and penetration or oral sex [$\chi^2(4, N=1796)=35.749, p < 0.001$]. Subgroup comparisons revealed that heterosexual men were significantly more likely than heterosexual women to force someone into both fondling ($\chi^2=37.551, p < 0.001, 95\%$ confidence interval, CI [8.937–17.996]) and penetration or oral sex ($\chi^2=35.749, p < 0.001, 95\%$ CI [8.321–17.412]). Rates recorded by men and women sexual minorities and by transgender/nonbinary individuals were statistically equivalent to the heterosexual men reference group for both types of perpetration.

When investigating coercive strategies, significant between-group differences were found for the use of verbal coercive strategies [$\chi^2(4, N=1796)=30.111, p < 0.001$] and for using intoxication [$\chi^2(4, N=1796)=40.388, p < 0.001$]. Subgroup comparisons showed that only heterosexual women recorded significantly lower rates than the heterosexual men reference group for both verbal strategies ($\chi^2=28.492, p < 0.001, 95\%$ CI [7.921–17.557]) and intoxication ($\chi^2=30.821, p < 0.001, 95\%$ CI [4.503–10.480]). Rates recorded by men and women sexual minorities and by transgender/nonbinary individuals were statistically equivalent to the heterosexual men reference group for both types of strategies. Rates for the use of physical force as a coercive strategy were very low and could not be compared due to Chi-square assumption violation.

Victimization. Results indicated significant between-group differences for pooled-together victimization [$\chi^2(4, N=1796)=76.809, p < 0.001$], nonconsenting fondling

[$\chi^2(4, N=1796)=88.893, p < 0.001$], and penetration or oral sex [$\chi^2(4, N=1796)=47.483, p < 0.001$]. Subgroup comparisons showed significant differences between the heterosexual women reference group and heterosexual men for both nonconsenting fondling ($\chi^2=83.143, p < 0.001, 95\%$ CI [18.703–27.797]) and penetration or oral sex ($\chi^2=44.134, p < 0.001, 95\%$ CI [11.278–19.639]). For both victimization types, men and women sexual minorities and transgender/nonbinary individuals recorded victimization rates statistically equivalent to the heterosexual women reference group.

Finally, binary logistic regression analyses were performed to ensure the observed differences in perpetration and victimization rates could not be better explained by sociodemographic variables other than gender and sexual orientation. Results show that the main findings regarding perpetration and victimization rates held after controlling for differences in sociodemographic variables (Table 4).

Discussion

This article aimed to provide and compare prevalence rates for understudied populations in the sexual violence literature.

Perpetration

When looking at pooled-together sexual violence perpetration, heterosexual men recorded the highest prevalence rates of all groups at $\sim 38\%$, a rate consistent with the existing literature (Anderson et al. 2019; White and Smith 2004; Widman et al. 2013; Wiscombe 2012). The only group that showed statistically different rates of sexual violence perpetration than heterosexual men were heterosexual women, with 23.5%. This rate is similar to those reported by Struckman-Johnson et al. (2003), and fall between the 9% (e.g., Krahe et al. 2003) and 49% range (e.g., Parent et al. 2018) reported in other studies. Consistent

across all subgroups, verbal strategies were the most commonly used strategy to force someone into sexual interactions compared to intoxication and physical force. These results, obtained with a heterogeneous sample in terms of gender and sexual orientation, constitute an extension of findings emerging from studies on heterosexual men identifying verbal strategies as the most common (Abbey et al. 2014; Widman et al. 2013; Wiscombe 2012). Although heterosexual men remain the primary group to use coercive strategies to obtain sexual interactions, results indicate that heterosexual women, as well as sexual and gender minorities, are also perpetrators of sexual coercion.

It is noteworthy that men and women sexual minority, as well as transgender/nonbinary individuals, recorded pooled-together rates of sexual coercion that were statistically similar to the heterosexual men reference group. The statistical similarity held when perpetration was further analyzed by type of sexual interaction and by strategies used. It is important to remember that although combined for statistical purposes, sexual minorities of different sexual orientation as well as gender minorities are far from homogeneous and monolithic groups. These results nonetheless provide a first estimate of the base rates for sexual violence perpetrated by gender and sexual minorities, highlighting the need to consider coercive sexual behaviors outside of a heteronormative frame of reference.

Taken together, these results emphasize the relevance for future research to continue to focus on sexual coercion perpetrated by men on women, but to also aim to study sexual violence outside of the heterosexual dynamics and traditional sex roles. While we must acknowledge that sexual violence occurs within a context and interpersonal dynamics that go well beyond the behavioral elements measured by the SES-P these results reflect the fact that sexual violence encompasses a wide range of behaviors that do not fall into the traditional rape script (which typically includes the use of physical force by a man to force a woman to have sex) or meet the legal definitions of sexual assault or rape. More insidious strategies such as showing insistence, lying, or inducing guilt or fear to coerce someone into nonconsenting sexual interactions of any nature are far more common than the use of physical force and also represent sexual violence.

Victimization

When looking at pooled-together victimization, heterosexual women from our sample reported higher rates than what is commonly reported. Both data sets were collected during or immediately after the #MeToo Movement, which might have contributed to greater acknowledgment and disclosure. Although heterosexual men reported significantly lower rates of victimization than other subgroups, one in four reports being subjected to nonconsenting sexual interactions, suggesting that heterosexual men victimization is an issue that requires more attention from both researchers and practitioners.

Sexual victimization rates recorded by sexual and gender minorities were all statistically equivalent to the heterosexual women reference group. Most sexual and gender minority groups were particularly vulnerable to sexual victimization, with rates ranging from 40% to ~60%. These results are consistent with the existing literature (Chen et al.

2020; Edwards et al. 2015; Sterzing et al. 2019). When considering nonconsenting penetration or oral sex, homosexual men, transgender/nonbinary individuals, and non-monosexual women all reported higher rates of victimization than heterosexual women. Non-monosexual women reported greater rates of victimization than heterosexual women in all victimization categories, which corroborates previous findings concerning non-monosexual women being the most vulnerable group for sexual victimization (Canan et al. 2019; Chen et al. 2020). Although the SES-V and other measures of sexual victimization have been found to produce false positives (Littleton et al. 2019), these rates testify to an important issue surrounding sexual victimization for sexual and gender minorities, which contrasts with the underrepresentation of these populations in sexual violence research and the limited psychosocial services offered to them.

Implications

Going forward, efforts should be made to limit gender and heteronormative biases in sexual violence research. First, future research should aim to adapt protocols to promote inclusivity. The creation and validation of questionnaires that are specifically designed for sexual and gender minorities might be necessary to fully grasp the singularities of their experiences as perpetrators and victims of sexual coercion. At the very least, future research should aim to use and validate questionnaires adapted to be gender inclusive and all participants should be questioned on perpetration and victimization experiences regardless of their gender. Also, sexual and gender minorities should be included in studies using convenience samples. In addition to providing important data on understudied populations, such a practice would increase the generalizability of findings. Second, future research should aim to test if and how current theoretical models of sexual violence perpetration apply to female perpetrators and sexual and gender minorities. Third, results highlight the need to facilitate access to more resources for victims of sexual violence and to adjust sexual violence awareness initiatives and prevention programs to be more inclusive. Victims' resources need to be welcoming of men and sexual and gender minorities, while prevention programs need to target perpetration by all genders and behaviors outside of traditional heteronormative scripts, as well as challenge the traditional rape script to raise awareness to wider ranges of sexually coercive behaviors. Antigender bias training and diversity training programs on gender identity and sexual orientation should be highly encouraged for practitioners as well as policymakers, especially those working on issues such as violence and sexuality.

Limitations

This study has some limitations. First, both perpetration and victimization were assessed using the SES. Although the SES is the gold standard for sexual violence assessment, prevalence rates are found to be lower when using SES-based questionnaires with men compared to other measures (Anderson and Delahanty 2020; Anderson et al. 2019), while women tend to overreport perpetration on the SES (Buday and Peterson 2015). The fact that the SES was modified to be gender inclusive may have impacted the way participants endorsed the items. Previous research have shown that wording changes in the SES items have influenced response

rates (Rueff and Gross 2017). Like any other self-report questionnaire, the SES is also subject to social desirability biases. These limitations regarding the SES might, in part, explain the low rates recorded for the use of physical force. Second, the use of a convenience sample that was inclusive led to relatively small numbers of participants in some minority groups, which needs to be kept in mind when interpreting the results. Future research should aim to oversample sexual and gender minorities and measure gender and sexual orientation according to best practice (Bauer et al. 2019). Finally, by combining two independent samples, we might have introduced unforeseen biases into our results. While both samples used equivalent methods to assess the variables of interest, small differences in recruitment strategies, in the order of questionnaires or internet platforms, could have affected participants' responses without any way to measure it.

Conclusions

In sum, this research provided and compared prevalence rates for understudied populations in the sexual violence literature. Results advocate for better gender inclusiveness in research, victims' resources, and prevention programs.

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