



# Sexual Aggression among Women and Men in an Iranian Sample: Prevalence and Correlates

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## Abstract

This pre-registered study examined the prevalence and correlates of sexual aggression in a sample of 530 Iranians (322 women, 208 men) with a behaviorally specific questionnaire distinguishing between different coercive strategies, victim-perpetrator relationships, and sexual acts. Significantly more women (63.0%) than men (51.0%) experienced at least one incident of sexual aggression victimization since the age of 15 years, and significantly more men (37.0%) than women (13.4%) reported at least one incident of sexual aggression perpetration. In women and men, the experience of child sexual abuse predicted sexual victimization and sexual aggression perpetration after the age of 15 years, both directly and indirectly through higher engagement in risky sexual behavior. Greater endorsement of hostile masculinity among men explained additional variance in the prediction of sexual aggression perpetration. This research is a first step towards documenting and explaining high rates of sexual aggression victimization and perpetration among Iranian women and men, providing important information for sex education as well for the prevention of sexual aggression. However, to achieve these goals, we highlight the need for systematic actions in all educational, social, and legal sectors of Iranian society.

**Keywords** Sexual aggression perpetration · Sexual victimization · Child sexual abuse · Risky sexual behavior · Iran

Nearly one in three women experience sexual aggression in their lifetime (World Health Organization, 2017). Sexual aggression is defined as behavior to make another person engage in sexual acts despite their unwillingness to do so (Krahe et al., 2015). The experience of sexual aggression among adults is a worldwide problem that has numerous physical, psychological, and interpersonal consequences for the victims (Martin et al., 2011). Victims of sexual aggression have an elevated risk of affective disorders, post-traumatic stress disorder symptoms, suicidal ideation and

attempts, substance abuse, and a higher likelihood of engaging in sexual aggression perpetration (Peterson et al., 2011).

In Iran, the recent #MeToo movement originating in the U.S. has had a major impact on society, as hundreds of Iranian women have posted stories on social media about sexual aggression experienced from their family members, friends, or authority figures (Human Rights Watch, 2020). In addition to the many women, men have joined the movement and revealed that they are victims of (child) sexual abuse. In contrast to the extensive research on sexual aggression in Western countries (see reviews by Fedina et al., 2018; Krahe et al., 2014), evidence on the prevalence of sexual aggression victimization and perpetration in Iran is scarce (Kamimura et al., 2016; Nikparvar et al., 2021). The present research addressed this shortcoming and investigated the prevalence of sexual aggression victimization and perpetration among adult women and men in an Iranian sample. It is the first to assess different coercive strategies, victim-perpetrator constellations, and sexual acts from both the victim and the perpetrator perspectives. Moreover, this study examined variables associated with a higher probability of sexual aggression victimization and perpetration established in the literature from Western countries, namely child sexual

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abuse, risky sexual behavior, and, for men, hostile masculinity. A scientific understanding of sexual aggression in Iran is of relevance given the specific cultural and social norms about sexuality that result from the introduction of the Islamic law ‘Sharia’ after the Islamic revolution in 1979 (Motamedi et al., 2016).

## Prevalence of Sexual Aggression

Sexual aggression is gender-asymmetrical: Despite the high variability across studies, the prevalence of sexual aggression victimization is typically higher for women than for men, whereas the prevalence of sexual aggression perpetration is substantially higher for men than for women (Krahé et al., 2014). For example, the U.S. National Intimate Partner and Sexual Violence Survey showed that 12.3% of women, but only 1.4% of men reported having experienced some form of forced completed penetration (i.e., rape), forced attempted penetration, or completed penetration while they were unable to resist due to intoxication in their lifetime (Black et al., 2011). Moreover, evidence from 10 European countries revealed that the lifetime prevalence of female sexual victimization ranged from 19% to 52.2% since the age of consent, and male sexual victimization ranged from 10.1% to 55.8% (Krahé et al., 2015). Rates of female sexual aggression perpetration ranged from 2.6% to 14.8%, whereas male perpetration rates varied from 5.5% to 48.7% (Krahé et al., 2015).

Most research on sexual aggression perpetration has focused on men (e.g., Abrahams et al., 2014), although sexual aggression is also perpetrated by women (see Fisher & Pina, 2013). In a large sample of college students in Germany, 9.4% of women reported sexual aggression perpetration towards men (Krahé et al., 2021). Studies using the same methodology in Turkey and Chile revealed female perpetration rates of 14.2% and 16.5%, respectively (Schuster et al., 2016a, b).

## Sexuality in Iranian Society

A conservative culture about sexuality has dominated Iran throughout its history, which became even stronger after the Islamic revolution in 1979 (Shahidian, 1996). Following this revolution, Iran has become one of the predominant Islamic countries in the Middle East and has implemented its institutional structure based on ‘Sharia’ (Islamic Law; Abiad, 2008). ‘Sharia’ is a religious law that has strongly influenced cultural and social norms, including sexuality (Motamedi et al., 2016). According to the Iranian Penal Code (Article 221; The Islamic Penal Law, 2014), sexual intercourse between an unmarried woman and man (‘Zena’) is considered

sinful and thus punishable. No age of consent for consensual sex is legally recognized (The Islamic Penal Law, 2014), and sex education is only provided in bachelor studies at universities and merely encompasses basic reproductive health curricula (see review by Khalajabadi-Farahani, 2020).

Following trends of urbanization, globalization, and the increase of women’s participation in public spheres, sexual norms and lifestyles of both Iranian men and women have been changing over the last decades (Motamedi et al., 2016). Pre-marital sex and early sexual debut have risen among Iranian youth (Khalajabadi-Farahani, 2016). Surveys among young Iranians revealed that 29% of men and 12% of women engaged in sex before marriage, and 47% of female university students had their first sexual activity before university (Khalajabadi-Farahani, 2016).

The social context of Iran is deeply rooted in patriarchal ideologies, which see the female body as the property and part of honor of the male members of her family (Farahani, 2007). Therefore, any violation of female purity is judged as an unforgivable tarnish of the honor and dignity of the family, whether it results from engaging in consensual sexual activities outside of marriage or sexual aggression (Aghtaie, 2017). The Iranian culture is characterized by a gender-based double standard in sexuality, given that ‘Sharia’ has facilitated and promoted male sexual desire through polygyny and temporary marriage (‘Sighe’; Haeri, 1992). Also, policies and laws, such as compulsory ‘Hijab’ (i.e., head covering) and sex segregation in schools, public transportation, and sport centers, have been implemented to protect men from their inherent susceptibility to arousal by female bodies (Moghadam, 2013). In line with this reasoning, rape is culturally understood upon the assumption that the assaulted victim has aroused the perpetrator(s) by not adhering to the restrictive codes of behavior and appearance (Aghtaie, 2017). To conclude, Iran is recognized as a sexually conservative society with a high disparity of gender-related legal rights and cultural expectations for women’s and men’s sexual behavior.

In Iran, the prevalence of sexual victimization has been examined mainly in the context of domestic violence or intimate partner violence (IPV). Past reports documented rates of female IPV victimization ranging from 13.1% to 73.4% (Aghakhani et al., 2015; Mohammad Beigi et al., 2019; Soleimani et al., 2017). For male IPV victimization, rates of 52.6%, 43.5% and 10.7% respectively have been reported (Kamimura et al., 2016; Mohammad Khani et al., 2009; Nikparvar et al., 2021). The variation in the estimates of reported IPV victimization (both female and male) likely results from the use of different definitions of sexual aggression and different survey methods, which prevent clear conclusions about the extent of sexual aggression and hamper the comparability of prevalence rates in

Iran with research findings from other countries. Finally, knowledge about sexual aggression perpetration by either Iranian women or men is very limited. To date, only two small-scale studies have assessed these rates, and both studies had a narrow focus on violence within intimate relationships (46.7% of women, 43.5% of men; Kamimura et al., 2016; 7.9% of women, 17.6% of men; Nikparvar et al., 2021).

## Correlates of Sexual Victimization and Perpetration

To the best of our knowledge, no study so far has examined correlates of sexual aggression victimization and perpetration among Iranian women and men. In research from Western cultures, child sexual abuse (CSA), risky sexual behavior, and hostile masculinity have been identified as variables linked to an increased probability of sexual aggression victimization and perpetration. CSA may have serious consequences, such as affective disorders, substance abuse, and post-traumatic stress disorder (Hailes et al., 2019), and victims are at higher risk of experiencing sexual re-victimization later in life (Walker et al., 2019). Although earlier work assumed that the association between CSA and re-victimization would only apply to women (Fargo, 2009), more recent research revealed a similar association for male CSA victims (Walker et al., 2019).

One reason why CSA victims are more likely to experience sexual re-victimization is their greater engagement in risky sexual behavior (Krahé & Berger, 2017). Risky sexual behavior includes casual sex, high number of sex partners, consuming alcohol or drugs in sexual situations, and the ambiguous communication of sexual intentions (D'Abreu & Krahé, 2016). Such behavior is more likely among CSA victims, as child sexual abuse distorts the child's sexual cognitions and behaviors (Finkelhor, 1987), manifesting as high number of partners, early sexual debut, unprotected sex, and sexual coercion of others (Abbey et al., 2006; Tharp et al., 2013). CSA was found to be a longitudinal predictor of sexual aggression perpetration among both female and male CSA victims, also mediated by their more frequent engagement in risky sexual behavior (Krahé & Berger, 2017).

In addition, there are gender-specific correlates of male sexual aggression perpetration. Sexually aggressive men differ from non-aggressive men in their attitudes related to sexual aggression, violence acceptance, and gender relations (e.g., Malamuth et al., 2021). Specifically, hostile masculinity in terms of endorsing violence and hostile attitudes towards women was identified as a predictor of sexual aggression perpetration by men against women (see review by Tharp et al., 2013).

## The Present Research

To examine sexual aggression in Iran and connect it to findings from other countries, we employed a validated instrument that uses behaviorally specific questions, representing the gold standard in international research on sexual aggression (Krahé & Vanwesenbeeck, 2016). Specifically, the Sexual Aggression and Victimization Scale (SAV-S; Krahé & Berger, 2013) distinguishes between different (a) victim-perpetrator relationships, (b) coercive strategies, and (c) sexual acts. To understand correlates of sexual victimization and perpetration in Iran, we tested whether CSA, risky sexual behavior, and men's hostile masculinity would be associated with a higher probability of reporting sexual aggression. In addition to using dichotomous scores of CSA, sexual victimization, and sexual aggression perpetration, we took differences in the level of severity of these experiences and behaviors into account. Extrapolating from research in Western cultures and based on the limited knowledge from Iranian surveys, the following hypotheses were examined:

*Hypothesis 1:* The prevalence of sexual aggression victimization is higher among women than among men.

*Hypothesis 2:* The prevalence of sexual aggression perpetration is higher among men than among women.

*Hypothesis 3:* The more serious the experience of CSA, ranging from no CSA to completed penetration, the higher the severity of sexual victimization and sexual aggression perpetration, ranging from no victimization/perpetration to completed rape. CSA is also a positive predictor of risky sexual behavior.

*Hypothesis 4:* The path from CSA to sexual aggression victimization is mediated by a higher tendency to engage in risky sexual behavior.

*Hypothesis 5:* The path from CSA to sexual aggression perpetration is mediated by a higher tendency to engage in risky sexual behavior.

*Hypothesis 6:* Men's endorsement of hostile masculinity is an additional predictor of sexual aggression perpetration over and above CSA and risky sexual behavior.

We preregistered all hypotheses and the analysis plan, and the materials, data files, and syntax that support the findings of this research are available on OSF (<https://osf.io/zvjgs/>).

## Method

### Participants and Design

An a priori power analysis indicated the need for at least 322 participants to have 80% power to detect small to medium effect sizes for the predicted mediations (Fritz & MacKinnon, 2007; see Supplement A in the online supplement for an

explanation of the power analysis). A total of 532 Iranian adults completed the online survey. Data from two men had to be excluded, as one indicated that he did not provide true information and the other did not complete the CSA scale. Thus, the final sample included 530 participants (322 women, 208 men). Their age ranged from 18 to 72 years ( $M=35.01$ ,  $SD=7.70$ ). Most participants (90.6%,  $n=480$ ) identified as heterosexual, 0.8% ( $n=4$ ) as homosexual, 4.3% ( $n=23$ ) as bisexual, 0.9% ( $n=5$ ) as asexual, and 3.4% ( $n=18$ ) did not define their sexual orientation. About half of the participants were married (54.7%,  $n=290$ ), followed by 30.9% ( $n=164$ ) singles, 10% ( $n=53$ ) in a committed relationship, 3.8% ( $n=20$ ) divorced, and 0.6% ( $n=3$ ) widowed. In terms of educational background, most participants (94.7%;  $n=502$ ) had a university degree. In terms of religious affiliation, 57.2% ( $n=303$ ) self-identified as Muslim, 38.9% ( $n=206$ ) identified with no religion, and the remaining participants identified with another religion, such as Zoroastrian or Christian (3.9%;  $n=21$ ).

## Measures

All study materials were presented in Farsi. The questionnaire was translated from English to Farsi by an Iranian native speaker fluent in English and then back translated into English by a native English speaker from Iran fluent in Farsi (see Supplement B in the online supplement for the survey in English and Farsi).

### Sexual Aggression Victimization and Perpetration

The Sexual Aggression and Victimization Scale (SAV-S; Krahe & Berger, 2013) was used to assess the prevalence of sexual aggression victimization and perpetration between women and men. The SAV-S distinguishes between three coercive strategies: (1) threat or use of physical force (e.g., hurting or holding down), (2) exploitation of the victim's inability to resist due to intoxication or other reasons, and (3) the use of verbal pressure (e.g., threatening to spread lies or ending the relationship). For each coercive strategy, three different victim-perpetrator relationships were presented: (1) current or former partner, (2) friend or acquaintance, and (3) stranger.

For each combination of coercive strategies, victim-perpetrator relationships, and sexual acts (i.e., unwanted sexual touch, attempted intercourse, completed intercourse, and other sexual acts), participants indicated whether, since the age of 15 years, they had experienced the unwanted sexual acts (victimization part) or made another person engage in these sexual acts (perpetration part). Unwanted sexual touch was described as including unwanted kissing, touching of genitals, or touching of any part of the body that felt sexually violating.

Responses were made on a 3-point rating scale with the options 0 (*never*), 1 (*once*), and 2 (*more than once*). In total,

the combination of three coercive strategies, three victim-perpetrator relationships, and four sexual acts resulted in 36 items for the victimization part and 36 parallel items for the perpetration part of the survey. Participants received a version of the SAV-S referring to an opposite-sex constellation between victim and perpetrator (i.e., women were asked about victimization by, and perpetration against, a man, and men were asked about victimization by, and perpetration against, a woman).

### Child Sexual Abuse (CSA)

Iran does not legally recognize pre-marital sex, as is the case in many Middle Eastern countries. Based on Iran's state law, the minimum age for marriage is 15 years except when it is lowered under specific circumstances approved by the court (e.g., physical and mental maturity of the individual; The Islamic Penal Law, 2014). Hence, we considered the age of 15 years as the cut-off age for engaging in consensual sexual activities in this study.

Three items measured the experience of sexual contact abuse (Krahe & Berger, 2017). Participants indicated whether they had experienced as a child (i.e., under 15 years old) a situation in which an older person/an adult had: (1) sexually touched them or made them touch him or her, (2) tried to penetrate their body (mouth, vagina, or anus), although it did not happen in the end, and (3) penetrated their body. This measure used a 5-point rating scale ranging from 0 (*never*) to 4 (*almost all the time*). Calculating internal consistency was not meaningful as the three items were additive and independent of each other.

### Risky Sexual Behavior

Nine items assessed risky sexual behavior based on Krahe et al. (2007). One item asked about casual/impersonal sex (i.e., "When you had sex: how often was it with someone you knew hardly or not at all?"), four items referred to alcohol and drug use (e.g., "How often did you/did the other person drink alcohol in situations in which you had sexual intercourse?"), and four items were about the ambiguous communication of sexual intentions (e.g., "How often did you say 'No' when you meant 'Yes' for having sex?"). This measure used a 7-point scale ranging from 1 (*never*) to 7 (*always*). We averaged these items into a scale, with acceptable internal consistency of  $\alpha=.73$ .

### Hostile Masculinity

Male participants indicated their attitudes towards hostile masculinity on 12 items following Vega and Malamuth



(2007). Three items assessed attitude towards violence: “To what extent is it appropriate to use violence (e.g., abusive language, pushing, hitting, kicking, burning) in these situations: (1) When you do not get your way; (2) When someone is doing something you do not like; (3) In any situations. Responses were made on a 7-point scale ranging from 1 (*never*) to 7 (*always*). Nine items assessed hostility towards women (e.g., “I feel that most women would lie to get ahead”). The response scale was a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Responses were averaged across the 12 items, and the resulting scale had a high internal consistency,  $\alpha = .79$ .

## Procedure

All data were collected in an online format. We distributed the link of the survey as broadly as possible via social media (e.g., Telegram, WhatsApp, Instagram, and LinkedIn) as most Iranians are connected on social media via new technologies (United Nations, 2014).

The study was introduced by saying that sex is important and fun but can sometimes involve misunderstandings, and therefore a brief survey would be conducted to find out how often people engaged in sexual contacts that they or their partner did not really want. The first page of the survey informed participants about confidentiality and anonymity. After giving active consent, participants provided demographic information, followed by the CSA items, the SAV-S, the risky sexual behavior items, and for men, the hostile masculinity scale. At the end of the questionnaire, participants were thanked and provided with the opportunity to enter a raffle to win vouchers from an Iranian online store. The study was approved by the Ethics Committee of the first author’s university.

## Data Preparation

For calculating the prevalence rates, responses to each SAV-S item on the three-point scale were dichotomized into 0 (*never*) and 1 (*at least once*) because numbers in the “more than once category” were too small to warrant separate consideration in the analyses. Also recognizing the problem of small numbers as a threat to reliability, tests for significant gender differences were conducted only for comparisons with cell frequencies greater than 20, following a recommendation by Black et al. (2011).

For the analyses linking CSA and risky sexual behavior to sexual aggression victimization and perpetration, participants’ responses to the SAV-S were converted into a non-redundant severity score (see Koss et al., 2008): (1) “No victimization”, if participants answered “*never*” to all victimization items, (2) “sexual contact” for those who reported experiencing unwanted sexual touch, but

not attempted or completed coercion and attempted or completed rape, (3) “attempted coercion” for those who reported attempted penetration through the use of verbal pressure, but not completed coercion, attempted rape or rape, (4) “coercion” for those who reported penetration through verbal pressure, but no attempted rape or rape, (5) “attempted rape” for those who reported attempted penetration through the use or threat of physical force or the exploitation of the inability to resist, but not completed rape, and (6) “rape” for those who reported completed penetration by the use or threat of physical force or exploitation of their incapacitated state. A parallel procedure was applied for scoring the severity of perpetration. In a further step, the categories of attempted and completed coercion were collapsed because of the low numbers in both categories, yielding a final five-level score. This procedure is in line with the approach used in other studies (Johnson et al., 2017).

For the responses to the three CSA items, we first calculated a dichotomous score by coding participants’ answers as 0 (no CSA victim) for those who responded “*never*” to all three items and 1 (CSA victim) for those who responded  $> 0$  to any of the three items. For the path analysis, we then created a four-level ordinal score of CSA (following past research; Abbey et al., 2006) based on participants’ responses to each item: 0 (no CSA), if participants answered “*never*” to all items, 1 (sexual touch) if participants endorsed  $> 0$  to the first item, but 0 to the second and third items, 2 (attempted penetration), if participants answered  $> 0$  to the second item and 0 to the third item, and 3 (completed penetration), if participants responded  $> 0$  to the third item.

## Results

### Descriptive Statistics

A similar proportion of men (54.3%) and women (52.2%) experienced CSA based on the dichotomous score,  $\chi^2(1, N = 530) = .24, p = .628$ . In terms of severity (ordinal score) however, women experienced more severe CSA than men,  $\chi^2(3, N = 530) = 37.88, p < .001$ . Follow-up  $\chi^2$  tests for the different levels of severity based on the adjusted standardized residuals revealed that the proportion of participants who did not experience any form of CSA was not significantly different between women and men. However, significantly more women than men reported sexual touch (41.3% of women, 24.0% of men),  $\chi^2(1, N = 530) = 16.66, p < .001$ , whereas significantly more men than women reported attempted penetration (13.9% of men, 6.2% of women),  $\chi^2(1, N = 530) = 9.00, p < .01$ , and completed penetration (16.3% of men, 4.7% of women),  $\chi^2(1, N = 530) = 20.57, p < .001$ .

Table 1 shows the means and bivariate correlations for all variables separately for women and men. Men scored higher on the ordinal CSA score, risky sexual behavior, and sexual aggression perpetration than did women. All bivariate correlations among the model variables were significant, except for a nonsignificant correlation between CSA and men's endorsement of hostile masculinity. Age was not correlated significantly with the model variables except for a small positive correlation with risky sexual behavior for women ( $r = .14, p = .015$ ) and a small negative correlation ( $r = -.16, p = .020$ ) with hostile masculinity for men. Therefore, age was not included in any further analyses. Fisher's  $z$  test showed that no correlation coefficient differed significantly between women and men.

### Prevalence of Sexual Aggression Victimization and Perpetration

Consistent with Hypothesis 1, significantly more women (63.0%) than men (51.0%) reported having experienced sexual victimization since the age of 15,  $\chi^2(1, N = 530) = 7.59, p = .006$ . However, the gender difference of the mean severity score was not significant (see Table 2). In line with Hypothesis 2, significantly more men (37.0%) than women (13.4%) reported having perpetrated sexual aggression,  $\chi^2(1, N = 530) = 40.41, p < .001$ . The mean of the ordinal severity score of reported perpetration was also significantly higher for men than for women.

To examine differences between men and women in the forms and contexts of victimization and perpetration, we compared the prevalence rates of sexual victimization and perpetration separately by gender, coercive strategy, victim-perpetrator relationship constellations, and sexual acts. These results are presented in the following sections and shown in Tables 2 and 3. To test for significant gender differences, an adjusted significance level of  $.05/n$  tests (for cell sizes  $> 20$ ) was adopted.

### Prevalence by Coercive Strategy

**Victimization** The most frequently reported coercive strategy was victimization through the use or threat of physical force (47.8% of women and 37.0% of men), followed by verbal pressure (38.2% of women and 29.3% of men) and exploitation of the inability to resist (25.8% of women and 17.3% of men; see Table 2). Only the gender difference for the use or threat of physical force was significant, with more women than men experiencing it,  $\chi^2(1, N = 530) = 6.00, p = .014$ .

**Perpetration** The most frequently reported strategy by male and female perpetrators was the use of verbal pressure (9.0% of women and 23.1% of men), followed by the use or threat of physical force (6.2% of women and 19.7% of men), and the exploitation of the other person's incapacitated state (4.3% of women and 13.0% of men; see Table 3). The gender difference was significant only for the use of verbal pressure, with more men than women reporting to have used this strategy,  $\chi^2(1, N = 530) = 20.15, p < .001$ .

### Prevalence by Victim-Perpetrator Relationship

**Victimization** Perpetrators known to the victim accounted for most of the sexual victimization incidents (see Table 2). The most prevalent perpetrator was a current or former partner (reported by 40.4% of women and 35.1% of men), followed by a friend or acquaintance (35.7% of women and 30.3% of men), and, with the lowest frequency, a stranger (25.2% of women and 14.9% of men). Adopting a significance level of  $.05/3 = .017$ , the gender difference was significant only for victimization by a stranger, reported more often by women than by men,  $\chi^2(1, N = 530) = 7.97, p = .005$ .

**Perpetration** Rates of perpetration were also higher against persons known to the perpetrator, such as a former or current partner and a friend or acquaintance (see Table 3). For

**Table 1** Means and Bivariate Correlations

Variables (Range)	<i>M</i> ( <i>SD</i> ) Women	<i>M</i> ( <i>SD</i> ) Men	1	2	3	4	5	6
1. Child sexual abuse (0–3)	0.68 <sup>a</sup> (0.79)	1.01 <sup>b</sup> (1.12)	–	.24 <sup>***</sup>	.12 <sup>*</sup>	.19 <sup>**</sup>	N/A	–.06
2. Sexual victimization (1–5)	2.57 (1.61)	2.44 (1.67)	.32 <sup>***</sup>	–	.34 <sup>***</sup>	.37 <sup>***</sup>	N/A	.11
3. Sexual aggression perpetration (1–5)	1.32 <sup>a</sup> (0.94)	1.83 <sup>b</sup> (1.33)	.28 <sup>***</sup>	.35 <sup>***</sup>	–	.24 <sup>***</sup>	N/A	.02
4. Risky Sexual Behavior (1–7)	1.62 <sup>a</sup> (0.52)	1.73 <sup>b</sup> (0.55)	.27 <sup>***</sup>	.32 <sup>***</sup>	.34 <sup>***</sup>	–	N/A	.14 <sup>*</sup>
5. Hostile Masculinity (1–7)	N/A	2.61 (0.76)	.12	.19 <sup>**</sup>	.19 <sup>**</sup>	.14 <sup>*</sup>	–	N/A
6. Age	33.99 <sup>a</sup> (7.71)	36.60 <sup>b</sup> (7.44)	–.02	–.02	.05	–.04	–.16 <sup>*</sup>	–

Correlation coefficients for women ( $n_f = 322$ ) are shown above the diagonal, coefficients for men below the diagonal ( $n_m = 208$ ). N/A: only male participants completed the hostile masculinity scale

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

<sup>a,b</sup>Means differ significantly between women and men

**Table 2** Sexual Aggression Victimization in Percent (Frequency) since Age 15 in the Break-Down of Coercive Strategies, Victim-Perpetrator Relationship, and Sexual Acts,  $N=530$  ( $n_f=322$ ,  $n_m=208$ )

% ( <i>n</i> )		Coercive Strategy							
		Use/Threat of Physical Force		Exploitation of Inability to Resist		Verbal Pressure		Total Relationship (At Least One $\geq 1$ per Row)	
		Women	Men	Women	Men	Women	Men	Women	Men
Victim-Perpetrator Relationship	Sexual Acts								
(Ex)Partner	Sexual touch	26.7 (86)	21.1 (44)	12.4 (40)	11.5 (24)	22.7 (73)	19.7 (41)	35.1 (113)	34.1 (71)
	Attempted intercourse	21.7 (70)	15.9 (33)	9.9 (32)	7.2 (15)	17.1 (55)	15.9 (33)	28.9 (93)	26.4 (55)
	Completed intercourse	19.9 (64)	14.9 (31)	9.0 (29)	6.3 (13)	15.5 (50)	13.0 (27)	25.5 (82)	23.1 (48)
	Other sexual acts	19.9 (64)	14.4 (30)	8.1 (26)	6.7 (14)	15.5 (50)	13.5 (28)	26.1 (84)	22.1 (46)
Total (Ex)Partner		30.7 (99)	23.6 (49)	13.4 (43)	12.0 (25)	25.8 (83)	20.2 (42)	40.4 (130)	35.1 (73)
Friend/Acquaintance	Sexual touch	21.4 (69)	19.7 (41)	15.5 (50)	12.5 (26)	14.6 (47)	17.3 (36)	31.7 (102)	28.8 (60)
	Attempted intercourse	9.0 (29)	14.4 (30)	8.1 (26)	9.1 (19)	7.1 (23)	11.5 (24)	14.9 (48)	20.2 (42)
	Completed intercourse	6.5 (21)	10.1 (21)	5.6 (18)	7.2 (15)	5.9 (19)	8.2 (17)	12.1 (39)	14.9 (31)
	Other sexual acts	9.9 (32)	13.5 (28)	7.1 (23)	6.7 (14)	7.1 (23)	10.6 (22)	16.1 (52)	18.8 (39)
Total Friend/Acquaintance		24.8 (80)	21.2 (44)	16.8 (54)	12.5 (26)	16.5 (53)	17.8 (37)	35.7 (115)	30.3 (63)
Stranger	Sexual touch	18.3 (59)	11.5(24)	8.1(26)	3.4 (7)	7.8 (25)	3.8 (8)	23.6** (76)	13.5** (28)
	Attempted intercourse	3.7 (12)	6.7 (14)	3.1 (10)	1.4 (3)	2.2 (7)	1.0 (2)	5.9 (19)	7.7 (16)
	Completed intercourse	2.2 (7)	6.3 (13)	1.9 (6)	1.4 (3)	1.6 (5)	1.0 (2)	3.1 (10)	7.2 (15)
	Other sexual acts	4.3 (14)	6.2 (13)	2.8 (9)	1.9 (4)	2.8 (9)	2.4 (5)	5.6 (18)	8.2 (17)
Total Stranger		19.9*(64)	12.5*(26)	8.4 (27)	3.8 (8)	8.4 (27)	4.3 (9)	25.2** (81)	14.9** (31)
Total Coercive Strategy (At Least One $\geq 1$ per Row)		47.8* (154)	37.0*(77)	25.8(83)	17.3(36)	38.2(123)	29.3(61)	63.0** (203)	51.0** (106)

Gender differences: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Multiple responses were possible. For items with frequencies of  $\leq 20$ , no comparisons were made

men, perpetration rates were highest against a friend (27.9%), followed by a (former) partner (21.2%), and lowest against a stranger (11.5%). Women reported most frequently perpetrating sexual aggression against a current or former partner (11.2%), then against a friend (2.5%), and least frequently against a stranger (.6%). Adopting a significance level of  $.05/3 = .017$ , the gender difference was only significant for sexual aggression against a (former) partner, with higher frequencies for men than for women,  $\chi^2(1, N=530) = 9.11$ ,  $p = .003$ .

### Prevalence by Unwanted Sexual Acts

**Victimization** Across all relationship constellations and coercive strategies, the highest frequencies for women and men were found for unwanted sexual touch (reported by 57.1% of women and 48.6% of men), followed by forced attempted intercourse (36.6% of women, 38.5% of men), other unwanted sexual acts such as oral sex (34.5% of women, 31.7% of men), and forced completed intercourse (30.7% of women, 30.3% of men). Looking at the specific sexual acts and relationship constellations across all coercive strategies, more women than men reported unwanted sexual touch by a stranger,  $\chi^2(1, N=530) = 8.24$ ,  $p = .004$ .

**Perpetration** Across all relationship constellations and coercive strategies, women and men most often made another person engage in unwanted sexual touch (12.1% of women, 35.6% of men), followed by forced attempted intercourse (7.1% of women, 20.2% of men), other unwanted sexual acts (6.8% of women, 19.7% of men), and forced completed intercourse (5.9% of women, 19.7% of men). More men than women perpetrated unwanted sexual touch,  $\chi^2(1, N=530) = 41.48$ ,  $p < .001$ , forced attempted intercourse,  $\chi^2(1, N=530) = 20.00$ ,  $p < .001$ , and other unwanted sexual acts,  $\chi^2(1, N=530) = 20.01$ ,  $p < .001$ . Looking at the specific sexual acts and relationship constellations across all coercive strategies, more men than women reported having made a current or former partner engage in unwanted sexual touch,  $\chi^2(1, N=530) = 9.30$ ,  $p = .002$ .

### Severity of Sexual Victimization and Perpetration

Table 4 presents the five-level ordinal severity scores for men and women. Across both gender groups, the highest percentage of victimization was found for the category of completed rape (reported by 24.2% of women and 23.1% of men), whereas the least prevalent victimization category was attempted rape (6.8% of women and 7.7% of men). The

**Table 3** Sexual Aggression Perpetration in Percent (Frequency) since Age 15 in the Break-Down of Coercive Strategies, Victim-Perpetrator Relationship, and Sexual Acts,  $N=530$  ( $n_f=322$ ,  $n_m=208$ )

% (n)		Coercive Strategy							
		Use/Threat of Physical Force		Exploitation of Inability to Resist		Verbal Pressure		Total Relationship (At Least One $\geq 1$ per Row)	
Victim-Perpetrator Relationship	Sexual Acts	Women	Men	Women	Men	Women	Men	Women	Men
(Ex)Partner	Sexual touch	4.7 (15)	9.7 (20)	3.4 (11)	4.8 (10)	7.1(23)	13.5(28)	9.9** (32)	19.2** (40)
	Attempted intercourse	3.4 (11)	8.2 (17)	2.8 (9)	3.8 (8)	3.4 (11)	10.6 (22)	6.2 (20)	14.4 (30)
	Completed intercourse	3.4 (11)	6.7 (14)	1.9 (6)	4.3 (9)	3.1 (10)	10.1 (21)	5.0 (16)	13.9 (29)
	Other sexual acts	4.3 (14)	5.8 (12)	2.2 (7)	3.4 (7)	3.4 (11)	10.6 (22)	6.2 (20)	13.5 (28)
Total (Ex)Partner		5.3 (17)	11.1 (23)	3.7 (12)	4.8 (10)	8.1(26)	14.4(30)	11.2** (36)	21.2** (44)
Friend/Acquaintance	Sexual touch	1.2 (4)	14.4 (30)	0.6 (2)	9.6 (20)	0.9 (3)	13.5 (28)	2.5 (8)	26.9 (56)
	Attempted intercourse	0.6 (2)	6.7 (14)	0.6 (2)	3.8 (8)	0.3 (1)	7.7 (16)	1.2 (4)	13.0 (27)
	Completed intercourse	0.3 (1)	5.3 (11)	0.3 (1)	4.3 (9)	0.3 (1)	5.8 (12)	0.9 (3)	10.6 (22)
	Other sexual acts	0.6 (2)	5.8 (12)	0.3 (1)	4.3 (9)	0.3 (1)	8.7 (18)	0.9 (3)	13.0 (27)
Total Friend/Acquaintance		1.2 (4)	15.9 (33)	0.6 (2)	10.1 (21)	0.9 (3)	14.4 (30)	2.5 (8)	27.9 (58)
Stranger	Sexual touch	0.0 (0)	6.3 (13)	0.3 (1)	4.8 (10)	0.3 (1)	3.4 (7)	0.6 (2)	10.6 (22)
	Attempted intercourse	0.0 (0)	3.4 (7)	0.0 (0)	2.9 (6)	0.0 (0)	1.9 (4)	0.0 (0)	5.8 (12)
	Completed intercourse	0.0 (0)	3.8 (8)	0.0 (0)	2.4 (5)	0.0 (0)	1.9 (4)	0.0 (0)	6.3 (13)
	Other sexual acts	0.0 (0)	1.9 (4)	0.0 (0)	1.9 (4)	0.3 (1)	2.4 (5)	0.3 (1)	4.8 (10)
Total Stranger		0.0 (0)	6.7 (14)	0.3 (1)	5.8 (12)	0.3 (1)	3.8 (8)	0.6 (2)	11.5 (24)
Total Coercive Strategy (At Least One $\geq 1$ per Row)		6.2 (20)	19.7 (41)	4.3 (14)	13.0 (27)	9.0*** (29)	23.1*** (48)	13.4*** (43)	37.0*** (77)

Gender differences: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Multiple responses were possible. For items with frequencies of  $\leq 20$ , no comparisons were made

distribution of participants across the five levels varied significantly by gender,  $\chi^2(4, N=530)=14.80, p=.005$ . Follow-up comparisons of the different levels based on the adjusted standardized residuals showed that more women than men experienced unwanted sexual contact,  $\chi^2(1, N=530)=12.54, p < .001$ . More men than women reported no experience of victimization,  $\chi^2(1, N=530)=7.59, p=.006$ .

Regarding perpetration, both women and men reported most frequently perpetrating unwanted sexual contact (5.6%, 15.4%). The smallest number of women as well as men was found for attempted or completed coercion (1.9% of women, 9.1% of men) and attempted rape (1.9% of women, 1.0% of

men). The overall distribution of severity scores differed significantly between men and women,  $\chi^2(4, N=530)=45.74, p < .001$ . Due to small cell sizes, only the non-perpetrator category could be tested for gender differences as a post-hoc follow-up. As predicted, more women than men reported no perpetration,  $\chi^2(1, N=530)=39.12, p < .001$ .

### Correlates of Sexual Aggression Victimization and Perpetration

Based on the pre-registered analysis plan, we ran multi-group path analyses for the total sample (Mplus 8.6, Muthén

**Table 4** Sexual Aggression Victimization and Perpetration in Percent (Frequency) since Age of 15 based on Koss et al. (2008) Proposed Scoring System,  $N=530$  ( $n_f=322$ ,  $n_m=208$ )

% (n)	Sexual Aggression Victimization		Sexual Aggression Perpetration	
	Women	Men	Women	Men
No victimization/perpetration	37.0** (119)	49.0** (102)	86.3*** (278)	63.0*** (131)
Sexual contact	24.5*** (79)	12.0*** (25)	5.6 (18)	15.4 (32)
Attempted or completed coercion	7.5 (24)	8.2 (17)	1.9 (6)	9.1 (19)
Attempted rape	6.8 (22)	7.7 (16)	1.9 (6)	1.0 (2)
Rape	24.2 (78)	23.1 (48)	4.3 (14)	11.5 (24)

Gender differences: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . For items with frequencies of  $\leq 20$ , no comparisons were made



& Muthén, 2012). We later amended the plan to use the graded severity (ordinal scoring) of CSA, victimization experiences and perpetration behavior yielded by our measures (exploratory data analysis). Sexual aggression victimization and perpetration were specified as ordered categorical outcome variables, and the default weighted least square mean and variance estimator (wlsmv) was used to test the direct and indirect paths through the calculation of confidence intervals based on 10,000 bootstraps.

First, we tested a multi-group model by gender in which all paths were constrained to be equal for women and men. This model showed a good fit with the data,  $\chi^2(5) = 1.94$ ,  $p = .858$ ; CFI = 1.00, RMSEA = .000, 90% CI [.000, .046], SRMR = .014. Next, we estimated an unconstrained model in which the paths were allowed to vary between women and men. This model was fully saturated, so it did not yield meaningful fit indices. Because a comparison of the constrained and the unconstrained models using  $\chi^2$  difference testing is not available with the wlsmv estimator, we followed the recommendation in Mplus to test significant gender differences in the unconstrained model via the DIFFTEST function. None of the paths differed significantly between men and women, indicating that the proposed paths did not vary by gender. On that basis, and to account for gender differences in the mean levels of CSA, risky behavior, and sexual aggression perpetration, we tested a single-group model with gender included as a covariate on all paths. This model, presented in Fig. 1, was also fully saturated; hence no model fit indices were available.

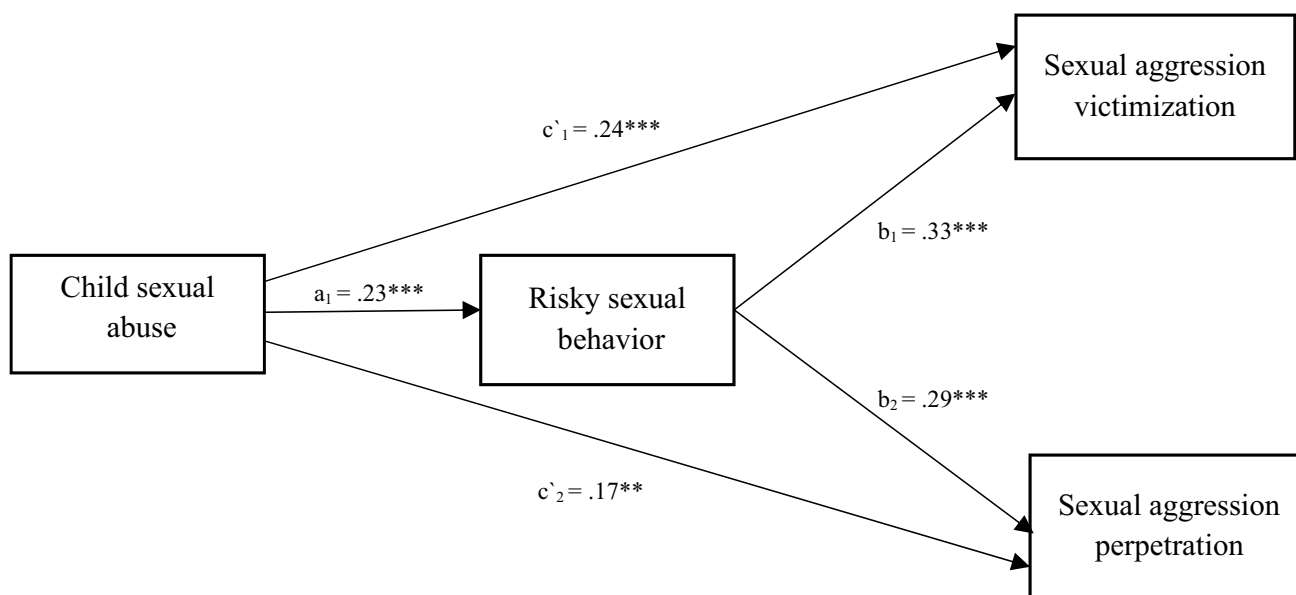
In line with the predictions of Hypothesis 3, severity of CSA was significantly associated with sexual victimization,  $c_1' = .24$ ,  $p < .001$ , and sexual aggression perpetration,  $c_2' = .17$ ,  $p = .001$ . More severe CSA was associated with significantly more risky sexual behavior,  $a_1 = .23$ ,  $p < .001$ , which, in turn, was related to higher sexual aggression victimization,  $b_1 = .33$ ,  $p < .001$ , and perpetration,  $b_2 = .29$ ,  $p < .001$ .

Consistent with Hypothesis 4, the indirect effect of CSA on sexual victimization via risky sexual behavior was significant,  $a_1b_1 = .074$ , 99% CI [.034, .123]. Supporting Hypothesis 5, the indirect effect of CSA on sexual aggression perpetration via risky sexual behavior was also significant,  $a_1b_2 = .065$ , 99% CI [.026, .116].

Consistent with Hypothesis 6, adding hostile masculinity to the path model for men's sexual aggression perpetration and controlling for its correlation with CSA and risky sexual behavior yielded a significant path coefficient for this variable,  $\beta = .16$ ,  $p = .046$ , over and above the other two predictors in the model, CSA and risky sexual behavior.

## Discussion

This study provided the first comprehensive data about sexual aggression in heterosexual victim-perpetrator constellations in Iran, considering women and men as both victims and perpetrators. The study used behaviorally specific questions that covered different types of coercive strategies, victim-perpetrator constellation, and sexual acts. Scientific



**Fig. 1** Standardized regression coefficients for the association of child sexual abuse with sexual aggression victimization and perpetration in the total sample, mediated by risky sexual behavior (Hypotheses 3, 4,

and 5,  $n = 530$ ). All paths controlled for gender.  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$

knowledge about sexual aggression in Iran is of particular interest given that the introduction of ‘Sharia’ (i.e., Islamic law) after the Islamic revolution in 1979 dominates state law, social norms and specifically sexuality. Our findings reveal high prevalence rates of sexual victimization and perpetration since the age of 15 years and of the experience of child sexual abuse among both male and female participants. Moreover, explaining the high rates of sexual victimization and perpetration, results showed that women and men who experienced child sexual abuse were more likely to engage in risky sexual behavior, which was related to a higher probability of sexual aggression victimization and perpetration later in life. Moreover, the more men endorsed hostile masculinity, the higher their odds were of perpetrating sexual aggression against women.

More women (63.0%) than men (51.0%) reported experiences of sexual victimization. The overall rate for women is higher than those found in past studies conducted in Iran (Danesh et al., 2016; 56.1%; Vakili et al., 2010; 30.9%) except for one study by Aghakhani et al. (2015) in which 73.4% of married women reported being victimized by at least one type of sexual aggression by their husbands. A possible reason for the higher prevalence rate among women in our study may be the more detailed and behaviorally specific assessment of sexual victimization, which facilitates a better detection of experiencing sexual aggression. Also, the higher prevalence could be due to the more diverse sample of female participants in the present study, which – unlike the literature based on college student samples – included women of different age, marital status, and religious affiliation. Finally, the present study was not limited to sexual aggression in intimate relationships, but covered a wider range of victim-perpetrator constellations. The present rate of women’s victimization by a current or former partner of 40.4% compares with the total rate including non-partners of 63%. Regarding male victimization, the present victimization rate by a current or former partner of 35.1% was similar to the rates reported in past work (Kamimura et al., 2016; Mohammadkhani et al., 2009), but substantially higher than the reported rates in the study by Nikparvar et al., (2021; 10.7%). Considering the severity of sexual victimization, women most often experienced unwanted sexual contact, whereas men reported being raped as the most frequent form. Surprisingly, the rates of rape victimization did not differ between men and women.

The high overall rates of male victimization together with the nonsignificant gender difference on the severity score of sexual victimization cannot be explained conclusively within the scope of our study. A point of departure for further theorizing may be found in the role of gender equality. Previous research has yielded inconclusive results regarding the association of country-level indices of gender equality with male and female sexual victimization. The study by Hines (2007)

involving 19 countries found that male victimization rates were positively correlated with gender equality in a country. Given that Iran ranks low on gender equality indexes (e.g., rank 150 out of 156 countries in the Global Gender Gap Report; World Economic Forum, 2021), this finding would suggest relatively low rates of male victimization and a larger gap between female and male victimization rates, which is contrary to what we found. However, Hines (2007) did not find higher female victimization rates in countries with lower gender equality, as was the case in our study. Another study involving 10 countries found higher male victimization rates in countries with lower gender quality, which could be attributed partly to lower sexual assertiveness of men relative to women in the respective countries (Krahé et al., 2015). Further studies from Iran and comparative analyses with data from countries similar or different to Iran in terms of gender equality are needed to replicate the rates of male sexual victimization in this country and offer a theoretical explanation for gender similarities in the rates of sexual victimization.

Regarding sexual aggression perpetration, rates were higher for men (37.0%) than for women (13.4%), which is in line with consistent findings from Western cultures (e.g., Krahé et al., 2015). Compared to the two available Iranian studies on sexual aggression perpetration in intimate relationships that included both women and men, the present rates of female and male perpetration (11.2%, 21.2%) against a current and former partner are similar to the rates of Nikparvar et al. (2021), but our results are significantly lower than the reported rates of Kamimura et al. (2016). Notably, the findings from the latter study are based on a very small sample, so the generalizability of these findings is unclear.

Regarding the severity of sexual aggression perpetration, both men and women most often made others engage in unwanted sexual contact. A possible explanation for the high rates of female perpetration can be viewing men as hostile. A multinational study showed that in countries where women endorse higher gender hostility towards men, they are more likely to perpetrate sexual aggression against men (Hines, 2007). However, given the lack of information about women’s hostility against men in the present study and the scarcity of data about female perpetration in Islamic countries, this explanation goes beyond the present data and suggests an avenue for future research.

Sexual aggression occurred most often among persons known to each other, such as (former) partners and friends or acquaintances, and less often among strangers. This finding aligns with prior findings from other cultures (e.g., Krahé et al., 2015) as well as research from Iran (Kamimura et al., 2016; Nikparvar et al., 2021). The frequency of stranger assault was higher for women than for men. Parallel to this finding, men most frequently reported sexual aggression perpetration against a female friend or acquaintance.

When being victimized, the coercive strategy most often used against men as well as women was the threat or use of physical force, followed by verbal pressure, and the exploitation of the other person's inability to resist. However, when committing sexual aggression, both women and men most frequently reported using verbal pressure, followed by use or threat of physical force, and the exploitation of the victim's incapacitated state. In other words, participants differ in their reports of the coercive strategy used when engaging in, as opposed to being victimized by, sexual aggression. One explanation could be that participants may be more reluctant to report engaging, rather than experiencing, severe forms of sexual aggression due to the antisocial nature of this behavior.

Explaining the high rates of female sexual victimization and male perpetration in our data, a closer look at the gender discriminatory law based on 'Sharia' is needed. The Iranian state law harshly punishes convicted (male) perpetrators of rape, and the death sentence is possible (The Islamic Penal Law, 2014). However, in practice, rape convictions are rare due to the status of rape in the legal regulations. For example, it is very likely that judges treat rape committed by men as a subsection of consensual sex ('Zena') because there should be no reason for a woman to be in the residence of a male stranger, which means that the female victim can incur punishment due to the assumption that she engaged in sex out of marriage (Article 221; The Islamic Penal Law, 2014). It is noteworthy to mention that currently some judges may be lenient on women ('Hokm ba Orf'), however this is not a uniform practice. Moreover, as the law grants husbands the right to have sex with their wife on demand (The Islamic Civil Law, 2006), marital rape is exempted from rape law. Therefore, the legal system reduces female protection against sexual aggression, which in turn may provide immunity for male perpetrators and increase the rates of female sexual victimization. It is likely that the figures we found for sexual aggression by a current and former partner include a substantial proportion of assaults within marriage that would not be recognized as such based on legal definitions.

Beyond the legal treatment of sexual violence, several cultural factors may have contributed to the high prevalence of sexual aggression victimization and perpetration in our sample. First, the state prohibits any social and institutionalized discourse about sexuality, which means that sex education curricula lack information about intimacy, consent, and respect for the right to sexual self-determination. Accordingly, knowledge about sexuality is limited, which may undermine individuals' mutual respect for each other's self-determination in sexual relationships (Motamedi et al., 2016). Second, despite the liberal sexual attitudes and behaviors shared particularly among urban youth in recent years, dubbed as the "sexual revolution in Iran" (Mahdavi, 2009), the patriarchal norms and traditional gender roles

prescribed by the state and society remain strong, which manifests in double standards for male and female sexuality. While women are expected to preserve their virginity until marriage and uphold the family honor (Farahani, 2007), 'Sharia' has promoted temporary marriage ('Sighe'), which allows men to have intimate relations with women (Haeri, 1992). In such context, women who have engaged in extra-marital sex or even dating can be considered "easy-to-have" or "whores", whereas no such stigma is attached to men (Farahani, 2007). This portrayal of women compromises the respect for women's consent and can provide a justification for men's sexually aggressive behavior.

To gain insight into potential factors associated with a greater probability of reporting sexual aggression victimization and perpetration, we examined the role of child sexual abuse (CSA) and risky sexual behavior for women and men. In addition, hostile masculinity was examined as a predictor of men's sexual aggression perpetration. Results showed that more than half of both male (54.3%) and female (52.2%) participants reported having experienced at least one form of sexual contact by an older person/adult before they reached the age of 15 years. These rates are substantially higher than those found in previous studies in Western cultures. For example, a longitudinal study with German college students found that 8.5% of men and 11.4% of women reported experiences of CSA before they were 14 years old (Krahé & Berger, 2017). Moreover, whereas the overall prevalence did not vary by gender in our study, significantly more men than women reported severe forms of CSA in the form of attempted or completed penetration. The finding of men's higher experience of severe CSA contrasts with evidence from Western cultures, where women are more likely to experience CSA than men (Barth et al., 2013). Since there is no public discourse on CSA in Iran (Shapouri, 2007), we used behaviorally specific questions to capture CSA incidents rather than broad items (such as "have you ever experienced child sexual abuse?"), which require knowledge of what CSA actually means. Thus, our items likely made it easier for participants to establish whether they experienced a form of sexual behavior from others that meets the defining criteria of CSA. A further explanation of the high prevalence of CSA may lie in the specific cultural and legal context in Iran. As child sexual abuse is a taboo topic in Iranian society, there are no underlying social and legal structures to prevent and treat CSA. This renders children more vulnerable to sexual aggression (Shapouri, 2007). "The Protection of Children and Juveniles Law" was passed only recently, and its enforcement is unknown (The Islamic Parliament Research Center, 2020). Given the paucity of statistics about CSA in Iran, future research that tests potential explanations is needed to clarify the observed difference of the more severe forms of CSA among women

and men. Future studies aiming to understand CSA are of great importance, not only to prevent CSA but also to prevent re-victimization in later life.

The present finding that CSA is a key predictor of sexual re-victimization aligns with prior research from Western cultures (e.g., Krahé & Berger, 2017). CSA victims more likely engaged in risky sexual behavior, such as casual sex, alcohol or drug consumption in sexual situations, and ambiguous communication about sexual intentions. These behaviors, in turn, are related to a greater likelihood of sexual aggression victimization and perpetration. Our results are consistent with ample evidence demonstrating the significance of CSA and risky sexual behavior as risk factors of later sexual victimization (see review by Tharp et al., 2013). One explanation for engaging in risky sexual behavior is that CSA victims apply sex-related coping strategies to dampen the distress from the prior traumatic experience (Miron & Orcutt, 2014). Therefore, interventions aimed at reducing children's experience of CSA can be a promising avenue to reduce adult sexual aggression victimization and perpetration.

Along the same lines, our results support the prediction that men's endorsement of hostile masculinity is related to their odds of reporting sexual aggression perpetration against women. The Iranian state and society promote male dominance over women, especially when women do not observe traditional gender roles that are prescribed by the state or blemish the familial and societal honor (Aghtaie, 2017). Consequently, male violence and hostility toward women manifest in various forms, such as in physical, psychological, or sexual aggression, and occur in both the public and private spheres (Amnesty International, 2015). Hence, future research in cultures with high endorsement of honor and patriarchal ideologies is needed to uncover and address the contribution of these factors to sexual aggression.

### Limitations and Future Research Directions

Although the current study makes significant contributions to the scientific understanding of sexual aggression in a major Middle Eastern country, limitations must be noted. First, as the present research used a convenience sample, the generalizability of its findings is unclear. Future studies with representative samples would be desirable, yet difficult to obtain given research limitations in Iran. However, it is doubtful that truly representative prevalence data can be obtained even if representative samples are invited to participate, as the problem of selective dropout in this highly sensitive topic area will likely lead a nonrepresentative group of participants contributing data for the analysis. This is a problem faced by prevalence studies on sexual aggression in general, but it is even more serious in countries with very restrictive rules about sexual conduct, such as Iran.

Second, the current sample mainly consisted of highly educated participants with at least a Bachelor's degree. Although this reflects the high rate of enrollment in tertiary education in Iran, which is twice as high as the global average (above 70% in 2015; World Education News Reviews, 2017), the rate in the present sample is still higher than the national average. Second, as CSA was measured retrospectively, the memories of CSA victims might have been affected by the traumatic effects of this adverse childhood experience and by subsequent re-victimization experiences (Krahé & Berger, 2017). However, obtaining retrospective CSA reports is a standard approach in the study of sexual aggression, and empirical evidence suggests that they can provide valid findings (Hardt & Rutter, 2004). Third, future research should investigate the prevalence of CSA in different types of victim-perpetrator constellations, such as family members versus strangers, for a more comprehensive understanding.

Third, research assessing additional victim-perpetrator constellations in post-CSA sexual aggression, such as victims' or perpetrators' family members and relatives, would be valuable in order to examine whether cultural factors, such as family honor or stigma, need to be addressed when designing interventions targeting sexual aggression in Islamic societies (Haboush & Alyan, 2013). Finally, the current study was limited to sexual aggression in heterosexual victim-perpetrator constellations, excluding male victimization by men and female victimization by women. Future studies should adopt an inclusive approach going beyond gender-binary analyses of victimization and perpetration rates.

Despite these limitations, the current research is a promising starting point for future work that examines factors associated with sexual aggression in Islamic countries. In Iran, past research showed that honor culture and religious fundamentalist norms ('Sharia') that have been implemented in most of sectors of society are associated with high victimization of women (Aghtaie, 2017). 'Sharia' plays a pivotal role in defining social norms about sexuality that are likely to shape individuals' sexual scripts. Sexual scripts are cognitive schemas that prescribe "what counts as sex, how to recognize sexual situations, and what to do during sexual encounters" (Frith, 2009, p. 100) and consequently influence the sequence of actions and behaviors in sexual settings (Metts & Spitzberg, 1996). Thus, future research investigating the role of religious fundamentalism and sexual scripts for sexual aggression in Iran would be interesting. Although we did not investigate the relationship between the strength of Muslim affiliation and observing 'Sharia' and the odds of victimization and perpetration, future studies are needed to uncover and address this question. Also, given a lack of sex education, further studies examining the effects of pornography consumption, consensual sexual scripts, and attitudes towards sexual coercion would be valuable to elucidate the socio-cultural context of sexual aggression in Iran and other Islamic countries.



## Practice Implications

The current findings serve to raise awareness that the prevalence of sexual aggression both in childhood and adulthood among women and men in Iran is very high, which contradicts official claims by the state that the rate of such incidents is low and negligible (Radio Farda, 2020). In addition, this study is the first in Iran that informs about sexual aggression through providing data about how (use of different coercive strategies) and with or by whom (victim-perpetrator relationship) sexual aggression occurs. Beyond the “real rape stereotype” of a stranger attack through physical force, perpetrators may be acquaintances, friends and current or former partners, who use coercive strategies such as “exploiting the victim’s incapacitated state due to alcohol or drug consumption” and/or “using verbal pressure” as well. Therefore, the current research can inform prevention programs specifically in a society that does not criminalize marital rape.

Moreover, given that sexual aggression likely harms victims’ well-being, our data have the potential to generate evidence-based information to educate, prevent, and design intervention programs about sexual aggression, specifically tailored to the Middle Eastern culture. Yet, interventions require systematic actions. The first step can be initiating open discourses about sexuality and sexual violence in society, while including evidence-based sex education in the school curriculum that emphasizes sexual autonomy and consent, highlighting female sexual agency. Moreover, since fair and non-discriminatory laws protect citizens against crimes, special attention to the rape law in Iran for a gender-fair handling of rape cases as well as criminalizing sexual aggression against men and marital rape are strongly suggested based on the current findings.

Regarding child sexual abuse, our evidence may have important implications for all parties involved, such as parents, teachers, psychologists, health care professionals, and policy makers, highlighting how experiences of child sexual abuse increase the probability of re-victimization and perpetration later in life. Furthermore, as engaging in risky sexual behaviours was significantly predicted by CSA and, in turn, significantly predicted sexual aggression victimization and perpetration, interventions aiming to increase individuals’ awareness of risky behaviours and vulnerable situations must be a priority.

## Conclusion

This research expands the scarce knowledge on sexual aggression in Iran, which so far was limited mainly to women’s sexual victimization by their husbands. Results showed that sexual victimization has a high prevalence among women and men, and perpetration rates are also substantial. Providing knowledge on correlates of sexual aggression in

Iran, this study showed that women and men who experienced child sexual abuse were more likely to engage in risky sexual behavior, which in turn predicted a higher probability of sexual aggression victimization and perpetration. The present study calls for more empirical research as the basis for developing sex education curricula that encompass consensual sex and sexual aggression in Iran.

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**Data Availability** The materials and data that support the findings of this research are openly available in OSF (<https://osf.io/zvjgs/>).

## Compliance with Ethical Standards

**Conflicts of Interest** The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Ethics Approval** The manuscript adheres to ethical guidelines specified in the APA Code of Conduct and the present study was approved by the Ethics Commission of the University of Bern.

**Consent to Participate** All participants in the study gave their informed consent prior to their inclusion in the study, and anonymity was assured.

**Consent for Publication** In the present research, participants are not identifiable. Data was only analyzed at the group level. Their anonymity is therefore protected.

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