



Published in final edited form as:

Psychol Violence. 2021 September ; 11(5): 497–508. doi:10.1037/vio0000374.

The Global Prevalence of Sexual Assault: A Systematic Review of International Research Since 2010

Emily R. Dworkin¹,

University of Washington, United States

Barbara Krahe,

University of Potsdam, Germany

Heidi Zinzow

Clemson University, United States

Abstract

Objective: We present a review of peer-reviewed English-language studies conducted outside the United States and Canada on the prevalence of sexual assault victimization in adolescence and adulthood published since 2010.

Method: A systematic literature search yielded 32 articles reporting on 45 studies from 29 countries. Studies that only provided prevalence estimates for sexual assault in intimate relationships or did not present separate rates for men and women were excluded. All studies were coded by two coders, and a risk of bias score was calculated for each study. Both past-year and prevalence rates covering longer periods were extracted.

Results: The largest number of studies came from Europe ($n=21$), followed by Africa ($n=11$), Asia and Latin America ($n=6$ each). One study came from the Middle East and no studies were found from Oceania. Across the 22 studies that reported past-year prevalence rates, figures ranged from 0% to 59.2% for women, 0.3% to 55.5% for men, and 1.5% to 18.2% for LGBT samples. The average risk of bias score was 5.7 out of 10. Studies varied widely in methodology.

Conclusion: Despite regional variation, most studies indicate that sexual assault is widespread. More sustained, systematic, and coordinated research efforts are needed to gauge the scale of sexual assault in different parts of the world and to develop prevention measures.

Keywords

Sexual assault; rape; international; review; sexual minority

Sexual assault against adolescents and adults is a global public health problem. Sexual assault encompasses a broad spectrum of behaviors and is generally defined as any attempted or completed sexual act, ranging from unwanted sexual touch to rape, that is committed against someone without a person's freely given consent (Basile et al., 2014; World Health Organization, 2017). These include acts that are committed by force,

¹To whom correspondence should be addressed. edworkin@uw.edu.

threat of force, or verbal coercion, as well as acts that are committed against someone who is unable to consent due to age, disability, or impairment (e.g., substance use). Sexual assault is associated with a wide range of mental and physical health outcomes, including posttraumatic stress disorder (PTSD), depression, substance use disorders, somatic complaints, and negative reproductive health outcomes (Dworkin et al., 2017; Weaver, 2009). In light of these consequences, it is important to understand the global prevalence of adolescent and adult sexual assault in order to appropriately allocate resources and develop effective prevention and intervention strategies.

There is evidence of differences in the prevalence of sexual assault in various world regions (World Health Organization, 2013). Applying an ecological perspective, various sociocultural factors that may differ across countries—such as cultural norms supporting violence generally and patriarchal norms—may affect these prevalence rates (Krug et al., 2002). However, most of the research on sexual assault has been conducted in the United States (US) and Canada. This limits the understanding of the public health burden of adolescent and adult sexual assault worldwide. Thus, the purpose of this review was to summarize the global prevalence of sexual assault in adolescence and/or adulthood for men and women outside of the US and Canada. The review includes both general population prevalence data and specific estimates for the lesbian, gay, bisexual, and transgender (LGBT) population, given evidence for the disproportionate burden of sexual assault on LGBT individuals (Canan et al., 2019; Walters et al., 2013).

Prior Research on the Prevalence of Sexual Assault Victimization

Epidemiological Studies.

Data obtained since 2010 from the National Intimate Partner and Sexual Violence Survey—an epidemiological study conducted annually in the US—indicates that 18.0–21.3% of women and 1.0–7.1% of men had a lifetime history of attempted or completed rape, and 1.2–1.6% of women and 0.7% of men had experienced attempted or completed rape in the prior 12 months (Breiding et al., 2014; Black et al., 2011; Smith et al., 2018). In addition, 13.0–43.9% of women and 6.0–23.4% of men had experienced lifetime sexual coercion, and 5.5% of women and 5.1% of men had experienced sexual coercion in the prior 12 months (Breiding et al., 2014; Black et al., 2011; Smith et al., 2018). Fewer epidemiological studies of the prevalence of sexual assault have been conducted internationally. An exception to this is the World Health Organization World Mental Health surveys, which were conducted from 2001 to 2012 in 24 countries (Scott et al., 2018). These surveys assessed lifetime experiences of sexual assault and other traumas as part of assessing posttraumatic stress disorder. Among women in high-income countries, the lifetime prevalence of sexual assault ranged from 1.8% (Spain) to 26.1% (United States) (Scott et al., 2018). Among women in low- or middle-income countries, the lifetime prevalence ranged from 0.6% (South Africa) to 1.5% (Columbia-Medellin).

Literature Reviews.

Several reviews have been conducted that address the prevalence of sexual assault victimization around the world. We next summarize these reviews, with an emphasis on

reviews that include studies of the international prevalence of sexual assault victimization when available. These reviews, in some cases, reflect wide ranges of prevalence estimates, which may be due to methodological differences in primary studies (e.g., sampling strategy, operational definition of sexual assault, measures).

Reviews of Prevalence Among Women.—Several prior reviews have synthesized data on the worldwide prevalence of sexual assault among women. Most recently, a review of worldwide nonpartner sexual assault among women reported data from studies prior to 2011 (Abrahams et al., 2014). This review reported a worldwide estimate of 7.2% lifetime prevalence. Lifetime prevalence was estimated at 3.3–12.2% for Asia, 16.4% for Australasia, 6.9–11.5% for Europe, 5.8–15.3% for Latin America, 4.5%–21.0% for Africa, and 13.0% for North America. In addition to this study’s limitations of focusing only on women and nonpartner violence, the authors noted that most of the reviewed studies used a single broad item to assess sexual assault and only reported lifetime prevalence. An older report by the World Health Organization (WHO) summarized national surveys from regions around the world and reported 5-year sexual assault prevalence estimates among adult women of 0.3–8.0% (Krug et al., 2002). A more recent WHO report described lifetime prevalence among women, with a 30% estimated global prevalence of physical and/or sexual partner violence among ever-partnered women and a 7% estimated global prevalence of nonpartner sexual assault (World Health Organization, 2013). The prevalence of partner violence was highest in African, Eastern Mediterranean and South-East Asia regions and the prevalence of nonpartner sexual assault was highest in Africa and the Americas.

Reviews of Prevalence Among Men.—Fewer reviews have summarized the global prevalence of sexual assault among men. In a review of adult sexual assault among men that included US, Canadian, and international studies, lifetime prevalence estimates ranged from 1% for forcible rape to 30% for any form of coercive sexual contact (Peterson et al., 2011). However, this review highlighted that the only epidemiological studies of sexual assault against men had been conducted in the US.

Reviews of Prevalence Among LGBT Individuals.—Studies indicate that the risk for sexual assault is elevated among LGBT populations in comparison to heterosexual populations. A review of 75 studies from the US indicated that the prevalence of adult sexual assault against people identifying as gay, lesbian, or was 11.3– 53.2% for women and 10.8– 44.7% for men (Rothman, Exner, & Baughman, 2011). A more recent epidemiological study reported rates of adult sexual assault (ranging from non-penetrative behavior to completed rape) to be 63% in lesbian women, 80% in bisexual women, and 44% in heterosexual women (Canan et al., 2019). In a study of undergraduates from 120 institutions, past-year sexual assault was reported by 10% of gay men, 10% of bisexual men, 6% of heterosexual men, 9% of lesbian women, and 17% of bisexual women, 8% of heterosexual women, and 11–33% of transgender persons (Coulter et al., 2017). This evidence indicates that higher rates of sexual assault among sexual minority groups represent an important health disparity (Canan et al., 2019). However, no review to our knowledge has summarized the prevalence of sexual assault against LGBT individuals outside of the US.

Reviews of Prevalence Among College Students.—In a review of US-based studies of sexual assault that occurred among women since starting college, prevalence estimates were 0.5–8% for forcible rape, 2–34% for unwanted sexual contact, 2–14% for incapacitated rape, and 2–32% for sexual coercion (Fedina, Holmes, & Backes, 2018). A second US-based review found that the prevalence of completed sexual assault that occurred among women since starting college ranged from 14.2%–23.1% (Muehlenhard et al., 2017). To our knowledge, there has been no review of the prevalence of sexual assault among college students outside of the US.

The Current Study

The purpose of the current study was to update these prior reviews with recent worldwide findings on the prevalence of sexual assault. Due to the large number of studies focusing on US and Canadian samples and the underrepresentation of other world regions in the literature base, we decided to limit the scope of the current review to world regions outside the US and Canada. In contrast to the Abrahams et al. (2014) study, we chose to expand the focus to women and men, as well as to studies that included both partner and nonpartner violence. Because many non-US studies have primarily focused on partner violence and were already described in the review by Abrahams and colleagues (2014), and in light of evidence that partner and nonpartner violence have distinct mental health effects (Temple et al., 2007), we did not include studies in our review if they only examined sexual assault in intimate relationships. We furthermore focused on prevalence estimates for sexual assault that took place after childhood in order to separate these experiences from child sexual abuse. Many prior reviews and studies have solely reported lifetime prevalence rates, making it difficult to obtain accurate estimates of assaults taking place in adolescence and adulthood. It is important to develop a fine-grained understanding of adolescent/adult assaults specifically, which are likely associated with different consequences (Messman-Moore, Long, & Siegfried, 2000) and contextual factors (e.g., greater likelihood of a non-family perpetrator) (Smith et al., 2017) than child sexual abuse, and thus suggest different implications for intervention. In addition, we systematically evaluated each study using an assessment tool to estimate risk of bias.

Methods

Eligibility Criteria

We sought peer-reviewed studies published in English since 2010 that assessed the prevalence of adolescent or adult sexual assault in a country other than the US or Canada. Studies including general population and college student samples were included to reflect the predominant samples in studies from North America, as well as the greatest generalizability to the broader population. Student samples in particular were included given that they are a frequently-studied group found to experience particularly high risk in studies in the US (Fedina et al., 2018), but the extent to which they experience elevated risk globally is unknown. We excluded studies that (1) only reported the prevalence of sexual assault in the context of intimate relationships; (2) only reported the prevalence of sexual assault among a narrow, special population (e.g., sex workers, pregnant women), with the exception

of studies of LGBT individuals; (3) only reported the prevalence of sexual assault among a combined sample of men and women; and (4) only reported the prevalence of childhood or lifetime (i.e., where it was not clear that child sexual abuse was excluded) sexual assault.

Study Identification

We searched PsycInfo and PubMed on August 30th, 2019 for peer-reviewed journal articles published in English since 2010. We used Boolean operators for terms related to sexual assault (“sexual assault” OR “forced sex” OR “sexual coercion” OR “sexual victimization” OR rape OR “violence against women” OR “sexual violence” OR “sexual aggression” OR “sex offenses” OR victimization) and prevalence (prevalence OR scale OR incidence). Because this returned a large number of articles about scale development, we excluded studies with related terms (“psychometrics” OR “test validity” OR “test construction” OR “validity” OR “reliability”) in the title, Medical Subject Heading, or abstract. To exclude studies of children, we excluded studies with the words “childhood,” “child,” or “children” in the title, and in PsycInfo, selected Adolescence (13–17 years) and Adulthood (18 years & older) in the Age Group search option. To exclude qualitative studies, we excluded studies with qualitative in the title, and, in PsycInfo, narrowed the results by methodology to quantitative studies. Finally, to exclude studies conducted in the US, we excluded studies with “US” or “United States” in the title, and in PsycInfo, used the Location search term function to exclude studies conducted in the US or Canada. This yielded 549 results from PsycInfo and 414 results from PubMed, for a total of 869 unique articles reviewed for eligibility. Each article was reviewed by two authors for eligibility. Articles identified as potentially eligible by at least one author were re-reviewed for eligibility in reference to exclusion criteria by the first author in consultation with the second and third authors. Of 177 articles reviewed in more depth, 74 articles were excluded because they focused only on sexual assault in the context of intimate partner violence, 30 articles were excluded because they focused on childhood or lifetime sexual assault (i.e., not adolescent or adult sexual assault), and 26 were excluded because they focused on a special population, 9 were excluded that did not measure prevalence, 5 were excluded because they were duplicates, and 1 was excluded because relevant information could not be extracted. Ultimately, 32 articles were determined to be eligible.

Data Extraction

All three authors coded studies. To increase reliability, all three authors first coded five articles (two of which were ultimately excluded due to insufficient data) independently, using a draft codebook, and then reviewed discrepancies as a group and revised the codebook. Each author then coded 2/3 of the remaining articles such that all articles were double-coded. Discrepancies were tracked and resolved as a group. We coded the following variables:

Prevalence of sexual assault.—We coded any prevalence estimates provided reflecting sexual assault in adolescence, adulthood, and/or the past year separately for women (unselected for sexual orientation), men (unselected for sexual orientation), and LGBT individuals. When studies reported multiple subtypes of sexual assault (i.e., partner and nonpartner), we recorded these subtypes only when a combined prevalence rate was not

provided. We also recorded the number of individuals who provided data on sexual assault (i.e., the denominator of prevalence estimates) and the number of people exposed to sexual assault (i.e., the numerator of prevalence estimates).

Study methodology.—We coded study characteristics including year of publication, year of data collection, country name, and world region. In terms of sample characteristics, we coded minimum, maximum, and mean age of the sample; whether the sample was limited to women; and whether the sample was limited to university students given evidence from the US that risk for sexual assault is especially high on college campuses (Fedina et al., 2018). We also coded characteristics of the instrument used to assess sexual assault, including the instrument name; whether the instrument consisted of one item only; whether the definition of sexual assault was limited to penile-vaginal intercourse and/or nonpartner perpetrators; and whether incapacitated, coerced, non-penetrative, and/or attempted sexual assault were explicitly included in the definition of violence provided to participants or instrument items.

Risk of bias.—We adapted Hoy and colleagues' (2012) 10-item tool for assessing risk of bias in prevalence studies. We coded whether studies' target population closely matched the national adolescent/adult population in terms of relevant variables (e.g., age, sex, occupation) (item 1); whether studies' sampling frame was representative of their identified target population (item 2); whether studies either conducted a census or used random sampling to select participants from the sampling frame (item 3); whether the response rate was $\geq 70\%$ and whether responders and nonresponders were compared, and if so, whether significant differences were identified (item 4); whether studies collected data directly from participants, rather than a proxy (item 5); whether studies used behaviorally-specific questions about sexual acts (e.g., fondling, penile penetration) and/or tactics (e.g., force, coercion) to assess the acceptability of the specificity of case definition (item 6); whether studies presented evidence of the reliability and/or validity of the instrument used to assess sexual assault (item 7); whether studies used the same mode of data collection for all participants (item 8); whether studies reported at least one prevalence estimate reflecting a recall period of an acceptably short length (i.e., within 12 months, as defined by Hoy and colleagues¹; item 9); and whether an appropriate and accurate numerator and denominator were presented that corresponded to the reported prevalence estimates (item 10). Thus, each study received a bias score ranging from 0 to 10.

LGBT sample characteristics.—We recorded the percent of women in the LGBT sample and the study definition of the LGBT group sampled.

Results

Summary of Included Studies

Ultimately, 32 English-language articles from 29 countries reflecting 45 country-specific studies were included (see Table 1 for study characteristics by region). The most represented

¹We acknowledge that there is limited and mixed evidence regarding whether 12-month prevalence estimates of sexual assault are necessarily more accurate than those reflecting longer recall periods (Gibbs et al., 2019), but chose to retain this criterion to maximize similarity to the original tool and reflect the likelihood that shorter recall periods produce less biased recall than longer recall periods.

regions were Europe (21 studies; 11 of which were conducted by the same research group) and Africa (11 studies), and the least represented regions were the Middle East (1 study) and Oceania (i.e., New Zealand and Australia; 0 studies). Most studies assessed sexual assault in both men and women; only 31.1% of studies were limited to women. About a quarter (26.7%) of studies were limited to university students. Eight studies provided prevalence information for LGBT individuals, including five studies that presented prevalence information for LGBT individuals only and three that presented prevalence information for both an overall sample and LGBT individuals specifically. In general, survey questions were administered in the local language. For the few studies that did not state this explicitly, none indicated that a language other than the local language was used.

Assessments of sexual assault.—Sexual assault was assessed via interview for all participants in 15 (33.3%) studies, and via self-administered survey in 30 studies. A single-item measure was used in 11 (25.6%) studies.² Thirty (68.2%) studies presented behaviorally-specific descriptions of sex acts to participants, and 32 (71.1%) presented behaviorally-specific descriptions of tactics (e.g., force, coercion) to participants. In terms of the definition of sexual assault used, 5 (11.4%) studies limited their definition to penile-vaginal penetration, 2 (4.5%) explicitly included drug/alcohol-facilitated sexual assault but not other forms of incapacitated violence, 17 (38.6%) explicitly included any incapacitated sexual assault, 27 (61.4%) explicitly included coerced sexual assault, 26 (59.1%) explicitly included non-penetrative sexual assault, 24 (54.5%) explicitly included attempted sexual assault, and 1 (2.2%) only assessed sexual assault committed by nonpartner perpetrators.

Risk of bias.—The average risk of bias across studies was 5.7 out of 10, in which 10 indicates maximum bias. Importantly, these studies could have been unbiased for their study goals; risk of bias instead reflects the degree of bias for the goal of characterizing country-level prevalence of sexual assault (which, in most cases, was not the study goal). Nevertheless, we next describe the risk of bias in assessing prevalence to contextualize study findings and highlight research needs, consistent with best practices for conducting systematic reviews (Petticrew & Roberts, 2008; Sanderson, Tatt, & Higgins, 2007). In 80.0% (n = 36) of studies, the target population did not closely match the national adolescent/adult population in terms of relevant variables. In 71.1% (n = 32) of studies, the sampling frame was not representative of its identified target population. For 55.6% (n = 25) of studies, we found that they did not either conduct a census or use random sampling to select participants from the sampling frame. In 75.6% (n = 34) of studies, the authors did not demonstrate that their prevalence estimates were at minimal risk of nonresponse bias (either via reporting a response rate of $\geq 75\%$ or demonstrating no significant differences between responders and nonresponders). No studies failed to collect data directly from participants, rather than a proxy. Almost half (46.6%; n = 21) of studies did not use an acceptably specific case definition (defined as using behaviorally-specific questions about both sexual acts and coercive tactics). In 88.9% (n = 40) of studies, no evidence of the reliability and/or validity of the instrument used to assess sexual assault was presented, and 2.2% (n = 1)

²The total number of studies reflects those studies for which we were able to code study characteristics. The number of studies is smaller than 45 when some studies were missing information on a given study characteristic.

of studies did not use the same mode of data collection for all participants. In 60.0% (n = 27) of studies, the length of the shortest prevalence period assessed was not appropriate (an appropriate recall period was defined as 12 months or less, consistent with the risk of bias instrument). Finally, 86.7% (n = 39) of studies did not present numerators and/or denominators corresponding to the reported prevalence estimates or presented numerators and/or denominators that did not match the reported prevalence estimates.

Region-Specific Prevalence

Next, we present prevalence findings by region, first separated for women, men, and LGBT individuals, and then separated into past-year prevalence and prevalence for other recall periods (e.g., since age 18). When possible, we present comparisons as a function of nationally representative sampling designs vs. other sampling designs, student vs. nonstudent samples, assessment of sexual assault by interview vs. self-report, and/or study definitions of sexual assault. When such comparisons were not possible due to a small number of studies, we instead present a descriptive summary of each study.

Summary information by region is presented in Table 1. Details of study methodology can be found in Supplemental Table 1. Prevalence rates are presented in Supplemental Table 2 (women), Supplemental Table 3 (men), and Supplemental Table 4 (LGBT individuals).

Africa—Eleven studies reflected countries in Africa, including Botswana (1 study), Burundi (1 study), Cameroon (1 studies), Ethiopia (2 studies), Malawi (1 study), Nigeria (3 studies), South Africa (1 study), and Swaziland (1 study).

Women. Nine studies reported on past-year prevalence among women. The two studies using nationally-representative sampling designs to assess past-year prevalence found rates of 4.7% (Swaziland; Tsai et al., 2011) and 14.1% (Malawi; Fan et al., 2016). In comparison, somewhat higher rates—14.6% (Nigeria; Adejemi et al., 2016) and 24.4% (Ethiopia; Adinew & Hagos, 2017)—were identified in the two studies of past-year prevalence among students, and a wider range of past-year prevalence rates—4.6% (Botswana; Tsai et al., 2011) to 38.3% (Parmar et al., 2012)—in the five studies using non-student and non-nationally-representative samples. In the five studies that assessed sexual assault by interview, past-year prevalence ranged from 4.6% (Botswana; Tsai et al., 2011) to 38.3% (Parmar et al., 2012), as compared to a somewhat narrower range of 5.1% (Nigeria; Decker et al., 2014) to 24.4% (Ethiopia; Adinew & Hagos, 2017) for the four studies using self-report assessments. The study using the most restrictive definition of sexual assault (including only completed, forced, penile/vaginal penetration) found a past-year prevalence rate of 11.3% (Burundi; Elouard et al., 2018), whereas the study using the most inclusive definition of sexual assault (including incapacitated, coerced, non-penetrative, and/or attempted assaults) found a relatively higher past-year prevalence rate of 24.4% (Ethiopia; Adinew & Hagos, 2017).

Three studies reported on prevalence during other periods of time for women. Two separate studies of Ethiopian students at the same university reported rates of sexual assault during college: Adinew and Hagos (2017) used a broad definition of sexual assault and reported a sexual assault prevalence rate of sexual 8.0% since starting university and 2.4% in the

current academic year, and Tora (2013) reported that the prevalence of completed rape was 2.4% during the first year of university and 0.8% in the 2nd year of university and above. Ibanga (2011) reported a prevalence rate of 16.5% since age 16 (Nigeria).

Men.: Two studies reported prevalence rates for men unselected for sexual orientation. Both were conducted in Nigeria. The past-year prevalence of sexual assault was reported to be 9.4% among undergraduate students (Adejimi et al., 2016), and the prevalence of sexual assault since age 16 was reported to be 15.0% among randomly-sampled individuals in the North-Central and South-South regions of Nigeria (Ibanga, 2011).

LGBT individuals.: Adejimi and colleagues (2016) reported that the past-year prevalence of sexual assault was 14.8% among bisexual individuals (51% of whom were women) and 18.2% among “homosexual” individuals (27% of whom were women).

Asia—Seven studies contributed information from four countries in Asia: China (3 studies; 2 Hong Kong and 1 mainland), India (2 studies), Mongolia (1 study), and Turkey (1 study).

Women.: Four studies reported past-year prevalence rates for women unselected for sexual orientation. All of these studies used self-report assessments of sexual assault³, and none used a nationally-representative sampling design. The one study of past-year prevalence among college students found a rate of 59.2% (Turkey; Schuster et al., 2016), whereas the past-year prevalence range was lower—0.0% (Hong Kong; Zhang et al., 2016) to 7.2% (India; Decker et al., 2014)—for non-student samples. Of the studies assessing past-year prevalence, the two studies with the most restrictive definition of sexual assault (including only completed, coerced or forced penile/vaginal penetration) found past-year prevalence rates for non-partner sexual assault of 1.0% (China) and 1.6% (India). In comparison, the study using the most inclusive definition of sexual assault (including incapacitated, coerced, non-penetrative, and/or attempted assaults) found a relatively higher past-year prevalence rate of 59.2% (Turkey; Schuster et al., 2016).

Two studies reported on prevalence during other periods of time for women. In a representative sample of Hong Kong Chinese women, 0.6% reported nonpartner sexual assault since age 18. In a study of students at four universities in Turkey, the prevalence since age 15 was 77.6%.

Men.: Two studies reported prevalence rates for men unselected for sexual orientation. One study reported a past-year prevalence of 0.3% among unmarried young men in Hong Kong (Zhang et al., 2016). In a representative sample of Hong Kong Chinese men, 0.8% reported nonpartner sexual assault since age 18. In a study of students at four universities in Turkey, the past-year prevalence of sexual assault was 55.5%, and the prevalence since age 15 was 65.5%.

³Zhang et al. (2016) used face-to-face interviews unless participants requested to complete measures alone, in which case, self-report measures were used.

LGBT individuals.: Two studies reported prevalence for LGBT individuals. Shaw and colleagues (2012) reported a past-year prevalence of sexual assault of 17.5% among men who have sex with men and transgender individuals in 4 districts in southern India. Peitzmeier and colleagues (2015) reported a past-3-year prevalence rate of 16.0% (crude) and 14.7% (weighted) among people assigned male sex at birth who had had anal sex with a man in the past 12 months.

Europe—Twenty-one studies reflected European countries, including Austria (1 study), Belgium (1 study), Cyprus (1 study), Germany (3 studies), Greece (1 study), Lithuania (1 study), Netherlands (3 studies), Norway (1 study), Poland (2 studies), Portugal (1 study), Slovakia (1 study), Spain (2 studies), Sweden (1 study), and the United Kingdom (2 studies). Eleven of these studies were conducted by Krahe and colleagues.

Women.: Four studies reported past-year prevalence rates for women unselected for sexual orientation. Among the studies using nationally-representative designs, the past-year prevalence of sexual assault ranged from 0.6% (Spain; Domenech Del Rio et al., 2017) to 1.7% (Netherlands; de Haas et al., 2012), whereas the highest past-year prevalence rate (1.9%) was identified in the one study of past-year prevalence among students (United Kingdom; Holloway & Bennett, 2018). Two studies of past-year prevalence used interviews to assess sexual assault and found rates of 0.6% (Spain; Domenech Del Rio et al., 2017) and 1.2% (Germany; Allroggen et al., 2016). In comparison, similar but somewhat higher rates were identified in the two studies using self-report measures: 1.7% (Netherlands; de Haas et al., 2012) and 1.9% (Wales; Holloway & Bennett, 2018). In terms of study definitions, the study assessing past-year prevalence with the most restrictive definition (which referenced both completed forced penetration and “sexual assault” generally) found a prevalence rate of 1.2% (Germany; Allrogen et al., 2012). In comparison, the two studies with the most inclusive definitions (explicitly including coerced, non-penetrative, and/or attempted assaults) found that past-year prevalence was 0.6% (Spain; Domenech Del Rio et al., 2017) and 1.7% (Netherlands; de Haas et al., 2012).

Fifteen studies assessed the prevalence of sexual assault since adolescence or adulthood among women. In the three studies using a nationally-representative design, the past-5-year prevalence was 2.5% (Germany; Hellmann et al., 2018), the prevalence since age 13 was 9.8% for completed sexual assault (Britain; Macdowall et al., 2013), and the prevalence since age 18 was 6.2% (Norway; Thoresen et al., 2015). In college samples, the prevalence since the (country-specific) age of majority was higher, ranging from 30.8% (Spain; Krahe et al., 2015) to 45.5% (Greece; Krahe et al., 2015), and the range of prevalence estimates in non-college samples was wider, from 6.2% (Norway; Thoresen et al., 2015) to 52.2% (Netherlands; Krahe et al., 2015). The prevalence since the age of majority was assessed by interview in one study and was found to be 6.2% (Norway; Thoresen et al., 2015), whereas the prevalence as assessed by self-report measures was higher, ranging from 9.8% (Macdowall et al., 2013) to 52.2% (Netherlands; Krahe et al., 2015). The study with the most restrictive definition of sexual assault (including only forced completed penetration) found a prevalence of 6.2% (Norway; Thoresen et al., 2015), whereas the prevalence in studies with the most inclusive definition (including incapacitated, coerced, non-penetrative,

and/or attempted assaults) was higher, ranging from 19.7% (Lithuania; Krahe et al., 2015) to 52.2% (Netherlands; Krahe et al., 2015).

Men: Four studies reported past-year prevalence rates for men unselected for sexual orientation. Among the studies using nationally-representative designs, the past-year prevalence of sexual assault was 0.6% (Germany; Allroggen et al., 2016) and 0.7% (Netherlands; de Haas et al., 2012). In comparison, among the studies not using nationally-representative designs, the past-year prevalence was similar at 0.5% (Sweden; Swahnberg et al., 2012) and, in the only study to assess past-year prevalence in a sample of college students, past-year prevalence was 0.6% (United Kingdom; Holloway & Bennett, 2018). In the study with the most restrictive definition (which referenced both completed forced penetration and “sexual assault” generally), past-year prevalence was 0.6% (Germany; Allroggen et al., 2016), whereas in the study using the most inclusive definition (including coerced, non-penetrative, and/or attempted assaults), past-year prevalence was similar, at 0.7% (Netherlands; de Haas et al., 2012).

Sixteen studies assessed the prevalence of sexual assault since adolescence or adulthood among men; all studies used a self-report measure to assess sexual assault. Among the two studies using nationally-representative designs, the prevalence of completed sexual assault since the age of majority was 0.3% (Norway; Thoresen et al., 2015) and 1.4% (Britain; Maccowall et al., 2013). In comparison, the range of prevalence estimates since the age of majority was relatively higher—from 19.4% (Germany; Krahe & Berger, 2013) to 55.8% (Greece; Krahe et al., 2015)—in four studies of college students, and wider—from 1.5% (Sweden; Swahnberg et al., 2012) to 49.0% (Cyprus; Krahe et al., 2015)—in nine studies using non-student and non-nationally-representative samples). The study with the most restrictive definition of sexual assault (including only forced completed penetration) found that prevalence since the age of majority was 0.3% (Norway; Thoresen et al., 2015), whereas rates were higher—ranging from 10.1% (Belgium; Krahe et al., 2015) to 55.8% (Greece; Krahe et al., 2015)—in the studies using a more inclusive definition of sexual assault (including incapacitated, coerced, non-penetrative, and/or attempted assaults).

LGBT individuals: Three studies reported prevalence rates for LGBT individuals. In a study of university students in Germany, Krahe and Berger (2013) reported prevalence rates since the age of consent (14 years) of 8.7% for women and 26.3% for men with a history of same-sex contact only, and 47.4% for women and 37.0% for men with a history of both same- and opposite-sex contact. In a study of alcohol-related sexual assault among university students in Wales, Holloway and Bennett (2018) reported past-year prevalence rates of 3.0% among individuals identifying as lesbian or gay, 2.0% among individuals identifying as bisexual, and 2.8% among individuals identifying as “other.” Bos and colleagues (2019) studied cisgender individuals in the Netherlands attracted to people of the same sex, and found that the prevalence of sexual assault since age 16 was 10.9% for men and 23.9% for women.

Oceania—No identified studies reported on the prevalence of sexual assault in Oceania.

Latin America—Six studies reported on the prevalence of sexual assault in Brazil (3 studies), Chile (2 studies), and Mexico (1 study).

Women.: Four studies reported prevalence rates for women. The past-year prevalence of sexual assault was assessed by one study as 4.7% (Brazil; da Silva et al., 2010). Three studies reported on the prevalence of sexual assault since age 14, and yielded rates ranging from 29% (Brazil; D’Abreu et al., 2013) to 51.9% (Chile; Schuster et al., 2016b).

Men.: Three studies reported prevalence rates for men unselected for sexual orientation. These studies reported on the prevalence of sexual assault since age 14 and yielded rates ranging from 20.4% (Chile; Lehrer et al., 2013) to 48.0% (Chile; Schuster et al., 2016b).

LGBT individuals.: Three studies reported prevalence rates for LGBT individuals. In a study of cisgender men in Brazil who had sex with a man or transgender person in the past 12 months, 54.1% of those with a lifetime sexual assault history reported past-year sexual assault (Sabidó et al., 2015). Among college students in Brazil, the prevalence of rape since age 14 was 11.8% for bisexual men, 14.3% for bisexual women, 14.3% for “homosexual” men, and 0% for “homosexual” women (D’Abreu et al., 2013). In a study of cisgender men who have sex with men (defined as individuals who reported anal or oral sex with a male partner in the last year) in Tijuana, Mexico, a past-year prevalence rate of 1.5% was identified (Semple et al., 2017).

Discussion

The aim of this paper was to offer an updated review of English-language studies published since 2010 that examined the prevalence of adolescent and/or adult sexual assault in countries other than the US and Canada. Knowledge about the worldwide scale of sexual aggression is scarce compared to the broad research literature that has built up in North America. A systematic search of the relevant databases yielded a total of 32 articles with 45 studies from 30 countries that met the inclusion criteria for our review (i.e., peer-reviewed studies published in English since 2010 that assessed the prevalence of adolescent or adult sexual assault in a country other than the US or Canada in general population or student samples of different sexual orientations). The majority of studies in this review found that sexual assault was endemic in the country studied. The prevalence of past-year sexual assault against women ranged from 0% (China) to 59.2% (Turkey). The prevalence of past-year sexual assault against men ranged from 0.3% (China) to 55.5% (Turkey). Among LGBT individuals, the prevalence of past-year sexual assault against ranged from 1.5% (Mexico) to 54.1% (among those with a lifetime sexual assault history; Brazil). As expected, prevalence rates based on longer time periods were higher, but due to variations in the periods covered, they cannot be presented in a summary fashion. These differences may reflect variation in study methodology. In addition, sociocultural variables (e.g., presence of patriarchal, heterosexist, or violence-supportive norms) that differ across countries may affect risk for sexual assault (Krug et al., 2002) and explain these differences.

Differences in Prevalence Estimates by Study Methodology

Study methodology varied widely, which likely impacted the magnitude of obtained prevalence estimates. Comparisons for all of these aspects of study methodology are limited by a small number of studies using the same type of methods; indeed, in many regions, we were unable to conduct any comparisons. Nevertheless, some notable differences were observed.

First, some patterns in prevalence rates as a function of sample were noted. In particular, past-year prevalence estimates tended to be higher in college student samples (for past-year prevalence among women in Africa, Asia, and Europe, but not for men in Europe) as compared to nationally-representative samples. Although research in the US has also documented high rates of sexual assault in college samples (Fedina et al., 2018), there is some indication that higher rates of sexual assault observed in college samples may be due to the younger age of these samples rather than college attendance per se (Mumford et al., 2020). Indeed, there is evidence that rates of sexual assault may in fact be higher among college-aged women who do not attend college (Sinozich & Langton, 2014), potentially because college attendance may be a marker of certain protective factors against victimization risk (e.g., economic and housing stability). Yet other studies did not find differences between students and nonstudents in the prevalence of sexual assault (Coker et al., 2016; Mumford et al., 2020). Therefore, additional research is needed to examine a potentially increased risk of sexual assault among young adults globally, and to understand regional risk and protective factors for victimization. In addition, as compared to nationally-representative samples, the range of prevalence estimates tended to be wider in samples that were neither nationally representative nor composed of college students (for past-year prevalence among women in Africa; for prevalence since adolescence/adulthood among both women and men in Europe), suggesting less precision in reflecting the true country-level prevalence of sexual assault in these studies.

Second, study definitions of sexual assault appeared to affect observed prevalence estimates. In most cases where we were able to make comparisons, prevalence was higher when using explicitly inclusive definitions of sexual assault—including, for example, coerced, attempted, and/or non-penetrative assaults—and lower when studies used more restrictive definitions. This suggests that researchers should be thoughtful in how they define sexual assault, and assessing and reporting the prevalence of specific types of assaults (e.g., coerced vs. force) would be helpful to increase the comparability of global studies on this topic.

Less clear patterns emerged as a function of whether sexual assault was assessed by interview or self-report. Whereas the range of past-year prevalence estimates among women in Africa was wider for interview studies versus self-report studies, higher rates of sexual assault (both past-year and in adolescence/adulthood) were identified in self-report studies as compared to interview studies among women in Europe. This is perhaps unsurprising, given that research has found no differences in rates of disclosure of sensitive information (including sexual assault) as a function of interview versus self-report methods (Rosenbaum et al., 2006). However, there may be cross-cultural differences in comfort with disclosure in interview versus self-report measures, and more research on this topic is needed to clarify this issue.

Studies that assess the prevalence of sexual assault in multiple countries using similar methods can help to identify true differences in prevalence across countries. However, just three studies in our review included data from more than one country (Decker et al., 2014, two African and two Asian countries; Krahe et al., 2015, 10 countries in the European Union; Tsai et al., 2011, 2 African countries). These studies show clear differences in prevalence rates that cannot be attributed to differences in methodology. For example, in the Decker et al. study, past-year prevalence rates of nonpartner sexual assault of women varied from 2% in China to 18% in South Africa. In the Krahe et al. (2015) study, prevalence rates of sexual assault victimization since the age of consent varied between 20% in Lithuania and 52% in the Netherlands. A qualitative follow-up study did not reveal differences between the countries in the way the items were interpreted (Krahe et al., 2016). However, even when the same design and instruments are used, comparability of prevalence rates between countries may be affected by cultural differences, such as differences in willingness to disclose experiences of violence, or in familiarity with the response format (Krahe, Bieneck, & Möller, 2005). Indeed, it is likely that the prevalence rates identified in this review are biased by underreporting (Cook et al., 2011).

Strengths and Limitations of the Reviewed Literature

The studies included in this review highlight existing research priorities and gaps. We were able to obtain prevalence data obtained for most world regions, even though only English-language studies were included. However, the total number of estimates was small and distributed unevenly across world regions, with Europe ($n=21$) and Africa ($n=11$) making up two-thirds of the studies. Although many of studies from Europe were conducted by a single research team and reflected relatively small samples comprised mostly of students, this still represents an uneven distribution., which was also found in the comprehensive review of prevalence studies of nonpartner sexual assault by Abrahams et al. (2014). In addition, we found no studies from Oceania and only one study from the Middle East from which we could garner prevalence data. Although it is possible that research on this topic was published in languages other than English, it is also possible that this reveals a lack of research on this topic in certain world regions. This could be due to multiple factors, such as less structural support for academic research outside of the US and Canada, relatively less attention to the issue of sexual assault prevalence in some countries, or country-specific difficulties in conducting prevalence research (e.g., ongoing conflict, infrastructure challenges).

More studies examined sexual assault rates for women compared to men, which mirrors the state of the evidence in North America (e.g., Fedina et al., 2018; Peterson, et al., 2011). However, it was surprising to note that less than a third of studies were limited to women, which perhaps reflects an increase in global attention to the problem of sexual assault against men. The underrepresentation of studies including LGBT participants ($n=19$) (e.g., men who have sex with men) also parallels the North American knowledge base (Rothman et al., 2011). Moreover, it is worth noting that 12 of the 19 LGBT studies came from Europe, reflecting a lack of attention to sexual assault in these groups in many countries outside the Western world.

Assessment of the risk of bias of studies identified a notable strength of this body of literature: the methods used in the current set of studies to assess sexual assault were relatively high-quality. In 32 studies, behaviorally-specific questions presenting different coercive strategies were used to elicit reports of sexual assault, and 30 studies used behaviorally-specific questions about the sexual acts in which victims were made to engage. The use of behaviorally-specific questions is considered superior to the use of broad, single-item questions (Cook et al., 2011), which were used in 11 studies. Using behaviorally-specific questions is particularly relevant for cross-cultural analyses of the prevalence of sexual assault because cultural differences in the social construction of sexual assault are not detected using broad labels, such as rape. The predominance of the gold standard of using behaviorally-specific questions in the current body of studies is in contrast to the review by Abrahams et al. (2014), who found most of their studies to use broad questions about sexual assault, not specifying coercive strategies and sexual acts. One possible reason for this difference is that our review was restricted to studies published in peer-reviewed journals, whereas over 90 percent of the estimates in the Abrahams et al. review came from grey literature reports that are typically not subjected to the same degree of rigorous quality control. However, it is also possible that this reflects more recent researcher adoption of advancements in the measurement of sexual assault.

In addition to the small overall number of studies, the knowledge about sexual assault generated by the body of evidence covered in our review is limited by several aspects of the studies. The average risk of bias score was 5.7 on a scale from 0 to 10, where 10 indicates maximum bias, indicating that the obtained prevalence rates need to be interpreted with caution with regard to their generalizability to the population as a whole. Specific areas of limitation were identified in this regard. First, fewer than half of the studies ($n = 19$) were based on random samples from the target population, one was based on a census, and the remainder were based on convenience samples. Second, sample sizes varied widely, ranging from 22 to over 10,000 across the total set of studies, which creates large differences in terms of statistical power and measurement error. These aspects highlight the challenge of ensuring equivalence in the study of sexual assault across cultures, which needs to be defined at the level of conceptual definitions, operationalizations, sample selection, data collection process, and analyses (Padilla, Benitez, & Vijver, 2019). It is important to note that these methodological issues are by no means specific to the literature covered by this review but also apply to studies of the prevalence of sexual assault more generally, including the evidence from North America (Cook et al., 2011). It is also important to note that the primary goal of these studies was not necessarily to assess the prevalence of sexual assault, so these limitations pertain to the goal of understanding the global prevalence of sexual assault rather than reflecting the quality of the primary studies per se.

Limitations of the Current Review

Although the present set of studies adds important information about the scale of sexual assault worldwide, several limitations have to be noted about our review. First, only studies published in English were accessible to us. It is possible that relevant articles on this topic were published in languages other than English and were missed by our search strategy, although the lack of research on this topic from certain English-speaking countries (e.g.,

Australia) was notable. Second, the review was limited to studies published in peer-reviewed journals. Given that such studies accounted for less than 10% of the estimates included in the review by Abrahams et al. (2014), this means that many more prevalence estimates are likely to be available in other outlets, which are not considered in our study. However, the limitation to studies subjected to peer review was deemed appropriate to achieve a similar standard of quality control across the studies, acknowledging that these standards may still vary to some extent between journals. Third, we did not consider studies that focused exclusively on sexual assault by intimate partners. In countries outside North America and Western Europe, intimate partner violence against women has received far more research attention than sexual assault by strangers. Because this literature has been covered comprehensively by Abrahams et al. (2014), we decided to adopt a broader perspective that also included nonpartner sexual assault. Finally, because we focused on studies that were primarily concerned with identifying the prevalence of sexual assault, we may have missed studies that did not specify “incidence,” “prevalence,” or “scale” among the keywords but reported lifetime or one-year prevalence rates as part of other research questions.

Research Implications

Based on the results of this review, the first priority for a global research agenda on the comparative prevalence of sexual assault across countries should be to assess prevalence in multiple countries using standardized data collection protocols. Realizing this goal is likely beyond the scope of a single study and may require large-scale funding by international agencies for comparative studies in a sufficiently large sample of countries from different regions. Given the uneven geographic distribution of available English-language studies, special attention should be given to regions (e.g., Middle East, Oceania) where few or no previous studies have been conducted. Once a reliable data base has been established, the second task for a cross-cultural research agenda on the prevalence of sexual assault consists of identifying factors that may differentiate countries in terms of their relative scale of sexual assault. A limited body of comparative studies have examined associations between country-level variables, such as gender inequality, overall levels of crime, or religious affiliations, and prevalence rates of sexual aggression (e.g., Coon, 2013; Hines, 2007; Krahe et al., 2015). A special topic is the problem and significance of sexual assault in regions of conflict, in which sexual assault is more difficult to assess but also more likely to occur (Krug et al., 2002). Third, it will be important to gain an understanding of sexual assault in specific subcultures within countries. Some of the studies in our review examined sexual assault in selected subgroups of the population, such as samples from disadvantaged or high-risk neighborhoods (e.g., Decker et al., 2014; Tsai et al., 2011). This perspective needs to be extended to identify conditions that precipitate sexual assault within regions. The use of qualitative research methods and an intimate knowledge of the respective culture are essential to address this task. Finally, future systematic reviews should include studies published in a range of languages other than English to address the English-language bias of the current review. Fostering international collaboration between researchers on this topic could help to facilitate such reviews.

Policy Implications

The gaps identified in this review also have implications for the development of policies and prevention measures. One task is to promote the acknowledgement of sexual assault experiences by sexual minorities, especially in countries in which they are discriminated against at the levels of law and societal discourse. Another task is to offer better protection to victims regardless of sex and sexual orientation by appropriate legislation and victim-support provisions. Finally, combining evidence from prevalence studies with knowledge about variables that predict an increased vulnerability to sexual assault is needed to design theory-based programs for the prevention of sexual assault. In the age of globalization and large-scale migration, such efforts need to consider the cultural context in which sexual assault occurs and must be stopped.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

Author note: Manuscript preparation for this article was supported by National Institute of Alcohol Abuse and Alcoholism (NIAAA) Grant R00AA026317 (PI: Dworkin). The views expressed in this article are those of the authors and do not necessarily reflect the positions or policies of the University of Washington or the NIAAA.

References

* = Studies included in the review

- Abrahams N, Devries K, Watts C, Pallitto C, Petzold M, Shamu S, & García-Moreno C (2014). Worldwide prevalence of non-partner sexual violence: a systematic review. *The Lancet*, 383(9929), 1648–1654. doi: 10.1016/S0140-6736(13)62243-6
- *Adejimi AA, Sabageh OA, & Adedokun OP (2016). Experiences and disclosures of sexual assault among Nigerian undergraduates in a tertiary institution. *Violence and Gender*, 3, 208–215. doi: 10.1089/vio.2015.0035
- *Adinew YM, & Hagos MA (2017). Sexual violence against female university students in Ethiopia. *BMC International Health and Human Rights*, 17:19, 1–7. [PubMed: 28052765]
- *Allroggen M, Rassenhofer M, Witt A, Plener PL, Brähler E, & Fegert JM (2016). The prevalence of sexual violence: Results from a population-based sample. *Deutsches Ärzteblatt International*, 113, 107–113. doi: 10.3238/arztebl.2016.0107 [PubMed: 26940778]
- Basile KC, Chen J, Black MC, & Saltzman LE (2007). Prevalence and characteristics of sexual violence victimization among US adults, 2001–2003. *Violence and Victims*, 22, 437–448. doi: 10.1891/088667007781553955 [PubMed: 17691551]
- Basile KC, Smith SG, Breiding M, Black MC, & Mahendra RR (2014). Sexual violence surveillance: Uniform definitions and recommended data elements. Version 2.0. Retrieved from: https://www.cdc.gov/violenceprevention/pdf/sv_surveillance_definitions1-2009-a.pdf.
- Black MC, Basile KC, Breiding MJ, Smith SG, Walters ML, Merrick MT, ... Stevens MR (2011). National Intimate Partner and Sexual Violence Survey (NISVS): 2010 summary report. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Breiding MJ, Smith SG, Basile KC, Walters ML, Chen J, & Merrick MT (2014). Prevalence and characteristics of sexual violence, stalking, and intimate partner violence victimization - National Intimate Partner and Sexual Violence Survey, United States, 2011. *MMWR Surveillance Summaries*, 63(1), 1–18.

- *Bos H, de Haas S, & Kuyper L (2019). Lesbian, gay, and bisexual adults: Childhood gender nonconformity, childhood trauma, and sexual victimization. *Journal of Interpersonal Violence*, 34, 496–515. doi: 10.1177/0886260516641285 [PubMed: 27036153]
- Canan SN, Jozkowski KN, Wiersma-Mosley JD, Bradley M, & Blunt-Vinti H (2019). Differences in lesbian, bisexual, and heterosexual women's experiences of sexual assault and rape in a national U.S. sample. *Journal of Interpersonal Violence*. Advance online publication. doi: 10.1177/0886260519863725
- *Chan KL (2011). Association between childhood sexual abuse and adult sexual victimization in a representative sample in Hong Kong Chinese. *Child Abuse & Neglect*, 35, 220–229. doi: 10.1016/j.chiabu.2010.11.005 [PubMed: 21481928]
- Chon DS (2013). Test of impacts of gender equality and economic development on sexual violence. *Journal of Family Violence*, 28, 603–610.
- Coker AL, Follingstad DR, Bush HM, & Fisher BS (2016). Are interpersonal violence rates higher among young women in college compared with those never attending college? *Journal of Interpersonal Violence*, 31, 1413–1429. [PubMed: 25604971]
- Cook SL, Gidycz CA, Koss MP, & Murphy M (2011). Emerging issues in the measurement of rape victimization. *Violence Against Women*, 17, 201–218. [PubMed: 21307030]
- Cook SL, Wilson RA, & Thomas EB (2018). A history of gender-based violence. In Travis CB, White JW, Rutherford A, Williams WS, Cook SL, & Wyche KF (Eds.), *APA handbook of the psychology of women* (Vol. 2, pp. 153–173). Washington, DC: American Psychological Association.
- Coulter RW, Mair C, Miller E, Blossnich JR, Matthews DD, & McCauley HL (2017). Prevalence of past-year sexual assault victimization among undergraduate students: Exploring differences by and intersections of gender identity, sexual identity, and race/ethnicity. *Prevention Science*, 18, 726–736. doi: 10.1007/s11121-017-0762-8 [PubMed: 28210919]
- *D'Abreu LCF, Krahe B, & Bazon MR (2013). Sexual aggression among Brazilian college students: Prevalence of victimization and perpetration in men and women. *Journal of Sex Research*, 50, 795–807. doi: 10.1080/00224499.2012.702799 [PubMed: 23050847]
- *da Silva MA, Falbo Neto GH, Figueiroa JN, & Cabral Filho JE (2010). Violence against women: prevalence and associated factors in patients attending a public healthcare service in the Northeast of Brazil. *Cadernos de Saude Publica*, 26, 264–272. [PubMed: 20396842]
- *de Haas S, van Berlo W, Bakker F, & Vanwesenbeeck I (2012). Prevalence and characteristics of sexual violence in the Netherlands, the risk of revictimization and pregnancy: results from a national population survey. *Violence and Victims*, 27, 592–608. [PubMed: 22978077]
- *Decker MR, Peitzmeier S, Olumide A, Acharya R, Ojengbede O, Covarrubias L, ... Brahmabhatt H (2014). Prevalence and health impact of intimate partner violence and non-partner sexual violence among female adolescents aged 15–19 years in vulnerable urban environments: A multi-country study. *Journal of Adolescent Health*, 55, S58–S67.
- *Domenech Del Rio I, & Sirvent Garcia Del Valle E (2017). Non-partner sexual violence against women in Spain: lifetime prevalence, perpetrators and consequences on mental health. *Journal of Public Health*, 39, 738–744. doi: 10.1093/pubmed/fdw111 [PubMed: 27738127]
- Dworkin ER, Menon SV, Bystrynski J, & Allen NE (2017). Sexual assault victimization and psychopathology: A review and meta-analysis. *Clinical Psychology Review*, 56, 65–81. doi: 10.1016/j.cpr.2017.06.002 [PubMed: 28689071]
- *Elouard Y, Weiss C, Martin-Hilber A, & Merten S (2018). Sexual violence as a risk factor for family planning-related outcomes among young Burundian women. *International Journal of Public Health*, 63, 13–22. doi: 10.1007/s00038-017-0988-z [PubMed: 28612099]
- *Fan AZ, Kress H, Gupta S, Wadonda-Kabondo N, Shawa M, & Mercy J (2016). Do self-reported data reflect the real burden of lifetime exposure to sexual violence among females aged 13–24 years in Malawi? *Child Abuse & Neglect*, 58, 72–79. [PubMed: 27352089]
- Fedina L, Holmes JL, & Backes BL (2018). Campus sexual assault: A systematic review of prevalence research from 2000 to 2015. *Trauma, Violence & Abuse*, 19, 76–93.
- Gibbs A, Pretorius L, & Jewkes R (2019). Test-retest stability of self-reported violence against women measures: Results from the Stepping Stones and Creating Futures pilot. *Global Health Action*, 12(1), 1671663 [PubMed: 31581900]

- *Hellmann DF, Kinninger MW, & Kliem S (2018). Sexual violence against women in Germany: Prevalence and risk Markers. *International Journal of Environmental Research and Public Health*, 15, 1613–1631. doi: 10.3390/ijerph15081613
- Hines DA (2007). Predictors of sexual coercion against women and men: A multilevel, multinational study of university students. *Archives of Sexual Behavior*, 36, 403–422. [PubMed: 1733324]
- *Holloway K, & Bennett T (2018). Alcohol-related rape among university students. *Victims & Offenders*, 13, 471–486. doi: 10.1080/15564886.2017.1377655
- Hoy D, Brooks P, Woolf A, Blyth F, March L, Bain C, ... & Buchbinder R (2012). Assessing risk of bias in prevalence studies: modification of an existing tool and evidence of interrater agreement. *Journal of Clinical Epidemiology*, 65, 934–939. [PubMed: 22742910]
- *Ibanga A (2011). Sexual victimization, partner aggression and alcohol consumption. *African Journal of Drug and Alcohol Studies*, 10, 17–28.
- Kilpatrick DG, Resnick HS, Ruggiero KJ, Conoscenti LM, & McCauley J (2007). Drug-facilitated, incapacitated, and forcible rape: A national study. Charleston, SC: National Criminal Justice Reference Service. Retrieved from: <https://www.ncjrs.gov/pdffiles1/nij/grants/219181.pdf>.
- *Krahé B, & Berger A (2013). Men and women as perpetrators and victims of sexual aggression in heterosexual and same-sex encounters: A study of first-year college students in Germany. *Aggressive Behavior*, 39, 391–404. doi: 10.1002/ab.21482 [PubMed: 23629691]
- *Krahé B, Berger A, Vanwesenbeeck I, Bianchi G, Chliaoutakis J, Fernández-Fuertes AA, ... Zygađło A (2015). Prevalence and correlates of young people's sexual aggression perpetration and victimisation in 10 European countries: A multi-level analysis. *Culture, Health & Sexuality*, 17, 682–699. doi: 10.1080/13691058.2014.989265
- Krahé B, Bieneck S, & Möller I (2005). Understanding gender and intimate partner violence from an international perspective. *Sex Roles*, 52, 807–827.
- Krahé B, de Haas S, Vanwesenbeeck I, ... Tomaszewska P et al. (2016). Interpreting survey questions about sexual aggression in cross-cultural research: A qualitative study with young adults from nine European countries. *Sexuality & Culture*, 20, 1–23.
- Krug EG, Dahlberg LL, Mercy JA, Zwi AB, & Lozano R (2002). *World report on violence and health*. Geneva, Switzerland: World Health Organization. Retrieved from: https://www.who.int/violence_injury_prevention/violence/world_report/en.
- *Lehrer JA, Lehrer EL, & Koss MP (2013). Sexual and dating violence among adolescents and young adults in Chile: A review of findings from a survey of university students. *Culture, Health & Sexuality*, 15, 1–14. doi: 10.1080/13691058.2012.737934
- *Macdowall W, Gibson LJ, Tanton C, Mercer CH, Lewis R, Clifton S, ... Wellings K (2013). Lifetime prevalence, associated factors, and circumstances of non-volitional sex in women and men in Britain: Findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *The Lancet*, 382(9907), 1845–1855.
- Messman-Moore TL, Long PJ, & Siegfried NJ (2000). The revictimization of child sexual abuse survivors: An examination of the adjustment of college women with child sexual abuse, adult sexual assault, and adult physical abuse. *Child Maltreatment*, 5, 18–27. [PubMed: 11232059]
- Mumford EA, Potter S, Taylor BG, & Stapleton J (2020). Sexual harassment and sexual assault in early adulthood: National estimates for college and non-college students. *Public Health Reports*, 135(5), 555–559. [PubMed: 32762635]
- Padilla J-L, Benitez I, & Vijver FJR (2019). Addressing equivalence and bias in cross-cultural survey research within a mixed methods framework. In Johnson TP, Pennell B-E, Stoop AL, & Dorer B (Eds.), *Advances in comparative survey methods: Multinational, multiregional, and multicultural contexts (3MC)* (pp. 45–64). Hoboken, NJ: John Wiley & Sons.
- *Parmar P, Agrawal P, Greenough PG, Goyal R, & Kayden S (2012). Sexual violence among host and refugee population in Djohong District, Eastern Cameroon. *Global Public Health: An International Journal for Research, Policy and Practice*, 7, 974–994.
- *Peitzmeier SM, Yasin F, Stephenson R, Wirtz AL, Delegchoimbol A, Dorjgotov M, & Baral S (2015). Sexual violence against men who have sex with men and transgender women in Mongolia: A mixed-methods study of scope and consequences. *PLoS ONE*, 10.

- Peterson ZD, Voller EK, Polusny MA, & Murdoch M (2011). Prevalence and consequences of adult sexual assault of men: Review of empirical findings and state of the literature. *Clinical Psychology Review*, 31, 1–24. doi: 10.1016/j.cpr.2010.08.006 [PubMed: 21130933]
- Petticrew M, & Roberts H (2008). *Systematic reviews in the social sciences: A practical guide*. John Wiley & Sons.
- Rosenbaum A, Rabenhorst MM, Reddy MK, Fleming MT, & Howells NL (2006). A comparison of methods for collecting self-report data on sensitive topics. *Violence and Victims*, 21(4), 461–471. [PubMed: 16897913]
- Rothman EF, Exner D, & Baughman AL (2011). The prevalence of sexual assault against people who identify as gay, lesbian, or bisexual in the United States: A systematic review. *Trauma, Violence & Abuse*, 12, 55–66. doi: 10.1177/1524838010390707
- *Sabidó M, Kerr LRFS, Mota RS, Benzaken AS, Pinho A. de A., Guimaraes MDC, ... Kendall C (2015). Sexual violence against men who have sex with men in Brazil: A respondent-driven sampling survey. *AIDS and Behavior*, 19, 1630–1641. [PubMed: 25666270]
- Sanderson S, Tatt ID, & Higgins J (2007). Tools for assessing quality and susceptibility to bias in observational studies in epidemiology: a systematic review and annotated bibliography. *International Journal of Epidemiology*, 36, 666–676. doi: [PubMed: 17470488]
- *Schuster I, Krahe B, & Toplu-Demirta E (2016a). Prevalence of sexual aggression victimization and perpetration in a sample of female and male college students in Turkey. *Journal of Sex Research*, 53, 1139–1152. doi: 10.1080/00224499.2016.1207057 [PubMed: 27485372]
- *Schuster I, Krahe B, Baeza PI, & Muñoz-Reyes JA (2016b). Sexual aggression victimization and perpetration among male and female college students in Chile. *Frontiers in Psychology*, 7, 1354. doi: 10.3389/fpsyg.2016.01354 [PubMed: 27708593]
- Scott KM, Koenen KC, King A, Petukhova MV, Alonso J, Bromet EJ, ... & Karam EG (2018). Post-traumatic stress disorder associated with sexual assault among women in the WHO World Mental Health Surveys. *Psychological Medicine*, 48(1), 155–167. [PubMed: 28625214]
- *Semple SJ, Stockman JK, Goodman-Meza D, Pitpitan EV, Strathdee SA, Chavarin CV, ... Patterson TL (2017). Correlates of sexual violence among men who have sex with men in Tijuana, Mexico. *Archives of Sexual Behavior*, 46, 1011–1023. [PubMed: 27178173]
- *Shaw SY, Lorway RR, Deering KN, Avery L, Mohan HL, Bhattacharjee P, ... Blanchard JF (2012). Factors associated with sexual violence against men who have sex with men and transgendered individuals in Karnataka, India. *PloS One*, 7(3), e31705. [PubMed: 22448214]
- Sinozich S, Langton L (2014). *Rape and sexual assault victimization among college-age females, 1995–2013*. Washington, DC: US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.
- Smith SG, Basile KC, Gilbert LK, Merrick MT, Patel N, Walling M, & Jain A (2017). National intimate partner and sexual violence survey (NISVS): 2010–2012 State report. Retrieved from: https://www.nsvrc.org/sites/default/files/2017-05/nsvrc_publications_talking-points-nisvs_state_report_0.pdf.
- Smith SG, Zhang X, Basile KC, Merrick MT, Wang J, Kresnow M, Chen J (2018). *The National Intimate Partner and Sexual Violence Survey (NISVS): 2015 Data Brief – Updated Release*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Retrieved from: <https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf>
- *Swahnberg K, Davidsson-Simmons J, Hearn J, & Wijma B (2012). Men's experiences of emotional, physical, and sexual abuse and abuse in health care: A cross-sectional study of a Swedish random male population sample. *Scandinavian Journal of Public Health*, 40, 191–202. doi: 10.1177/1403494811425711 [PubMed: 22031483]
- Temple JR, Weston R, Rodriguez BF, & Marshall LL (2007). Differing effects of partner and nonpartner sexual assault on women's mental health. *Violence Against Women*, 13(3), 285–297. [PubMed: 17322272]
- *Thoresen S, Myhre M, Wentzel-Larsen T, Aakvaag HF, & Hjemdal OK (2015). Violence against children, later victimisation, and mental health: A cross-sectional study of the general Norwegian population. *European Journal of Psychotraumatology*, 6, 26259. doi: 10.1177/1403494811425711 [PubMed: 25591729]

- Tjaden P, & Thoennes N (2006). Extent, nature, and consequences of rape victimization: Findings from the National Violence Against Women Survey. Washington, D. C.
- *Tomaszewska P, & Krahe B (2018). Sexual aggression victimization and perpetration among female and male university students in Poland. *Journal of Interpersonal Violence*, 33, 571–594. doi: 10.1177/0886260515609583 [PubMed: 26467932]
- *Tora A (2013). Assessment of sexual violence against female students in Wolaita Sodo University, Southern Ethiopia. *Journal of Interpersonal Violence*, 28, 2351–2367. [PubMed: 23400881]
- *Tsai AC, Leiter K, Heisler M, Iacopino V, Wolfe W, Shannon K, ... & Weiser SD (2011). Prevalence and correlates of forced sex perpetration and victimization in Botswana and Swaziland. *American Journal of Public Health*, 101, 1068–1074. [PubMed: 21493950]
- Walters ML, Chen J, & Breiding MJ (2013). The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Findings on victimization by sexual orientation. Retrieved from https://www.cdc.gov/violenceprevention/pdf/nisvs_sofindings.pdf.
- Weaver TL (2009). Impact of rape on female sexuality: Review of selected literature. *Clinical Obstetrics and Gynecology*, 52, 702–711. doi: 10.1097/GRF.0b013e3181bf4bfb [PubMed: 20393422]
- World Health Organization (2013). Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. Geneva: World Health Organization. Retrieved from: <https://www.who.int/reproductivehealth/publications/violence/9789241564625/en/>
- World Health Organization (2017). Violence against women. Geneva: World Health Organization. Retrieved from: <https://www.who.int/news-room/fact-sheets/detail/violence-against-women>.
- *Zhang H, Wong WCW, Ip P, Lai GWF, Lam TH, Lam KF, ... Yip PSF (2016). A study of violence among Hong Kong young adults and associated substance use, risky sexual behaviors, and pregnancy. *Violence and Victims*, 31, 985–996. [PubMed: 27523605]

Table 1

Study Characteristics by Region

Region	Number of studies	N range	Total N	Total N for studies of students	Average risk of bias (0 to 10, 10 is most bias)	Number of studies with nationally-representative designs	Number of studies of students	Past-year prevalence (min %, max %)	Prevalence since adolescence/adulthood (min %, max %)
ALL	45	22-10,171			5.7	8	12	0.0-59.2	0-77.6
Women	38	30-10,171	45,622	10,017	5.5	8	12	0.0-59.2	0.6-77.6
Men	25	51-7196	24,204	6257	6.0	4	10	0.3-55.5	0.3-65.5
LGBT	9	22-3745	8417	1275	6.3	0	4	1.5-54.1	0-37.0
Africa	11	22-1114			4.5	2	3	4.6-18.2	15.0-16.5
Women	11	60-956	5371	1734	4.5	2	3	4.6-38.3	16.5
Men	2	640-1114	1754	640	3.0	0	1	9.4	15.0
LGBT	1	22-88	110	110	4.0	0	1	14.8-18.2	--
Asia	7	30-886			6.0	0	1	0.0-59.2	0.6-77.6
Women	5	30-886	1590	886	5.8	0	1	0.0-59.2	0.6-77.6
Men	3	490-594	1084	490	5.0	0	1	0.3-55.5	0.8-65.5
LGBT	2	307-543	850	0	6.5	0	0	17.5	--
Europe	21	51-10,171			6.0	6	5	0.5-3.0	0.3-55.8
Women	18	176-10,171	36,262	5617	5.9	6	5	0.6-1.9	6.2-52.2
Men	17	51-7196	20,321	4082	6.2	4	5	0.5-0.7	0.3-55.8
LGBT	3	683-2352	3454	1102	6.3	0	2	2.0-3.0	8.7-37.0
Latin America	6	24-3745			6.3	0	3	1.5-54.1*	0-51.9
Women	4	411-885	2399	1780	6.3	0	3	4.7	29.0-51.9
Men	3	250-466	1045	1045	6.3	0	3	--	20.4-48.0
LGBT	3	24-3745	4003	63	6.7	0	1	1.5-54.1*	0-14.3

Note: No studies were found for Oceania.

* 54.1% of those with a lifetime SA history were assaulted in the past year.