nature human behaviour

Article

https://doi.org/10.1038/s41562-026-02436-1

# A systematic review of the global and regional estimates of the prevalence of sexual violence against children

Received: 7 August 2025

Accepted: 27 February 2026

Published online: 02 April 2026

Check for updates

A list of authors and their affiliations appears at the end of the paper

Sexual violence against children (SVAC) is a critical global public health issue. Nonetheless, the availability of robust and comparable global and regional prevalence estimates remains limited. To address this gap, we aimed to provide current and refined estimates of SVAC to enhance understanding of its magnitude worldwide. We conducted comprehensive literature searches in the six official United Nations languages across 10 English-language databases, 23 non-English databases and more than 20 grey literature sources for records published between 1 January 2010 and 1 August 2024. Eligible studies included children under the age of 18 or adults retrospectively reporting SVAC. Studies were double-screened and extracted by two authors independently, with risk of bias assessed. A Bayesian hierarchical model was used to estimate lifetime and past-year prevalence, accounting for methodological and definitional variations across studies. This study was registered with PROSPERO (CRD42024495116). Of 64,393 records found and screened, 1,412 studies across 147 countries were included in this systematic review and meta-analysis, encompassing responses from 4,070,693 females and 2,910,973 males. Globally, 20.1% (95% uncertainty interval (UI), 19.8–20.4) of women and 16.8% (95% UI, 16.5–17.1) of men aged 18 years and older reported experiencing at least one form of SVAC (including both contact and non-contact forms) prior to age 18. Within this broader category, 12.4% (95% UI, 12.2–12.6) of women and 10.0% (95% UI, 9.8–10.2) of men experienced contact childhood sexual violence. In 2024 alone, an estimated 72.6 million girls and 60.9 million boys experienced at least one form of sexual violence, including 43.3 million girls and 34.8 million boys subjected to rape or sexual assault. In most regions, the estimated prevalence is somewhat higher for girls than for boys, although the global difference is smaller than reported in previous meta-analyses. Our findings highlight the alarming global burden of SVAC and the urgent need for evidence-based, multi-sectoral prevention strategies and intervention programmes to safeguard children worldwide. More well-designed research using a standardized approach to data collection is also needed, especially in regions under-represented by the current data.

e-mail: daniela@togetherforgirls.org; Debi.Fry@ed.ac.uk

Sexual violence against children (SVAC) is a critical global public health and development issue, with devastating consequences for millions of children worldwide[1]. According to the United Nations Children's Fund (UNICEF) International Classification of Violence Against Children (ICVAC), SVAC includes deliberate, unwanted sexual acts against a child that result in or have a high likelihood of resulting in injury, pain or psychological suffering[2]. SVAC includes both completed and attempted acts and those perpetrated for exploitative purposes, as well as experiences perpetrated by adults and unwanted and coercive acts by peers and other children[3]. The UNICEF ICVAC includes both contact and non-contact forms of SVAC. The consequences of SVAC extend far beyond the immediate harm, encompassing a heightened risk of severe mental, physical and behavioural health disorders throughout the life-course[4–9]. SVAC is strongly associated with increased risk of sexually transmitted infections (including HIV), chronic health conditions, mental health disorders, suicide, self-harm, substance use disorders, poor employment outcomes, reduced earnings in adulthood and subsequent violence experiences[4–8]. Experiencing SVAC is also associated with heightened risk of perpetrating violence, engaging in criminal behaviour and enduring a diminished quality of life[7–9].

These profound adverse outcomes underline the urgency of global efforts to prevent SVAC and mitigate its effects. Achieving Target 16.2 of the United Nations (UN) 2030 Sustainable Development Goals (SDGs), which aims to eliminate all forms of violence against children, is essential for safeguarding children and enabling them to reach their full social and economic potential[8,10]. Under this target, Indicator 16.2.3 focuses specifically on tracking the proportion of young women and men aged 18 to 29 years who experienced sexual violence before the age of 18 (ref. 10).

Efforts to quantify the global prevalence of SVAC, however, are constrained by considerable data limitations[11,12]. While notable progress has been made through multi-country nationally representative surveys such as the Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS) and Violence Against Children and Youth Surveys (VACS), many countries still lack such comprehensive data collection. In some contexts, national or subnational surveys using non-standardized instruments provide critical insights but often vary in their definitions, methods and measures of SVAC[13–15]. Discrepancies in factors such as the age groups assessed, the time frames considered (for example, lifetime before 18, lifetime before 15, past year or past three months), frequency thresholds (for example, at least once, at least twice or at least five times) and whether the violence is perpetrated by intimate partners, caregivers or others make comparability across studies challenging[13–15].

Although the number of studies that measure SVAC prevalence has grown substantially in the past two decades, few studies have systematically reviewed and synthesized this body of literature to produce global prevalence estimates. For example, Stoltenborgh and colleagues conducted a meta-analysis of 217 publications in 2011 and estimated a global SVAC prevalence of 11.8% (ref. 16). However, this analysis relied on literature published between 1982 and 2008, limiting its relevance to current trends and the expanded availability of population data from more recent studies[11,17]. A more recent meta-analysis, which searched databases through April 2021, estimated a pooled prevalence of sexual violence against female children at 24% (ref. 18). However, this study included only 28 cross-sectional studies, was limited to females and did not account for methodological or definitional variations[18]. Another recent systematic review and meta-analysis, incorporating 165 studies from 80 countries, estimated global prevalence for specific types of child sexual abuse (CSA) among individuals aged ≤19 years[19]. While this analysis represents progress in estimating global and regional CSA prevalence, it did not adjust for methodological or definitional differences. The reported global prevalence is essentially a simple weighted average of all estimates, without harmonization of key factors. For example, prevalence estimates based on whether violence was perpetrated by family members or peers were combined with violence perpetrated by anyone, without adjustment for comparability. Furthermore, the study did not incorporate nested random effects for super-regions, subregions and countries, nor did they generate country-level prevalence estimates and then derive regional and global estimates by weighting those country-level estimates by population[19]. Consequently, countries with a high volume of studies, such as the USA, may have disproportionately influenced the global and regional prevalence estimates, while countries with fewer studies, even those with large populations such as India, were under-represented.

Meanwhile, UNICEF's recent estimates, based primarily on DHS and MICS data and supplemented by other national and regional surveys, provided valuable insights[12]. However, the methodology differed for males and females, and estimates were limited to lifetime prevalence, without capturing past-year prevalence, suggesting areas where methodological consistency could be further strengthened. Separately, the most recent study drew on 460 sources from publicly available data repositories to estimate SVAC prevalence[20]. Although it adjusted for differences in case definitions and survey modes, it focused exclusively on contact sexual violence and did not provide past-year prevalence estimates for children[20].

The objective of this study is to produce baseline reliable, reproducible and internationally comparable global and regional prevalence estimates of lifetime and past-year SVAC, disaggregated by sex. Unlike previous efforts[12,18,19], this study draws on an extensive multilingual search across the six UN languages using both general and language-specific databases, resulting in a more comprehensive synthesis of the evidence. In addition, we account for definitional and methodological variation across studies and apply a Bayesian multilevel framework capable of accommodating sparse and unbalanced data. By providing robust global and regional estimates of contact and overall (both contact and non-contact, excluding online) SVAC, this research offers critical baselines for understanding the magnitude of SVAC, monitoring global progress and informing evidence-based policies and interventions to protect children from sexual violence and its devastating consequences.

## Results

A total of 53,035 records in English and 11,358 records in other UN languages were identified through database searches and grey literature exploration. After removing duplicates, we screened 39,358 records at the title and abstract level for eligibility. Subsequently, we reviewed 2,464 records at the full-text stage. We excluded records that lacked sufficient research data (for example, non-disaggregated results or lack of representative sampling), duplicated survey data or focused on special populations. Ultimately, 1,159 records, comprising 1,412 studies from 147 countries and representing 93% of the global population, met the inclusion criteria and were selected for analysis (Fig. 1). Collectively, these studies encompassed responses from 4,070,693 females and 2,910,973 males. Definitions of terms are provided in Table 1. Sample characteristics are detailed in Table 2.

### Lifetime prevalence

Globally, 20.1% (95% uncertainty interval (UI), 19.8–20.4) of women and 16.8% (95% UI, 16.5–17.1) of men aged 18 years and older reported experiencing at least one form of SVAC (including both contact and non-contact forms) prior to age 18 (Table 3). Regional variations, based on SDG classifications, indicate that the lifetime prevalence of overall SVAC among women is the highest in Oceania (33.9%; 95% UI, 33.1–34.7), followed by Sub-Saharan Africa (28.4%; 95% UI, 28.0–28.9), Europe and Northern America (25.6%; UI, 25.3–25.9), Latin America and the Caribbean (23.0%; 95% UI, 22.6–23.3), and Northern Africa and Western Asia (19.3%; 95% UI, 17.9–20.9). The lowest prevalence rates were observed in Eastern and South-Eastern Asia (16.9%; UI, 16.7–17.2) and Central and Southern Asia (15.8%; 95% UI, 14.9–16.6).

https://doi.org/10.1038/s41562-026-02436-1

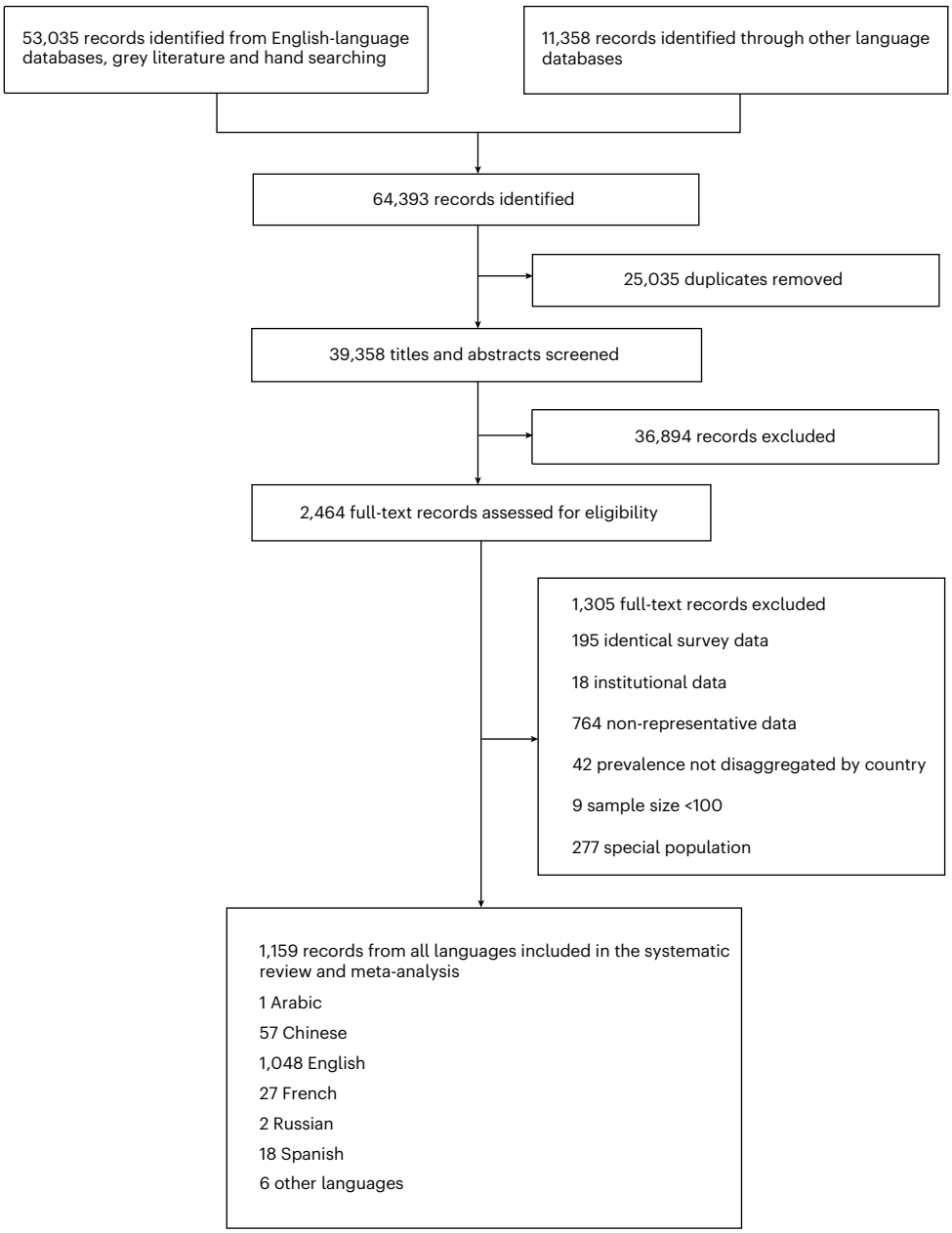


**Fig. 1 | PRISMA flow diagram of systematic review.** Although 1,159 records were included, they contained 1,412 extractable studies. Multi-country surveys contributed multiple studies because each country-level estimate was treated separately. Some records also included multiple distinct datasets from the same country (for example, different years or independent samples), which were each counted as a separate study in the meta-analysis. Six additional non-UN-language reports were retained because they were nationally comparable survey reports (for example, the DHS), included to maximize country coverage.

Among men, the regional variation in the prevalence of overall SVAC presents a different pattern. The highest prevalence was found in Sub-Saharan Africa (22.1%; 95% UI, 21.6–22.6), followed by Latin America and the Caribbean (17.6%; 95% UI, 17.3–18.0), Oceania (16.7%; 95% UI, 16.1–17.4), Eastern and South-Eastern Asia (16.4%; 95% UI, 16.2–16.7), Europe and Northern America (15.8%; 95% UI, 15.5–16.0), and Central and Southern Asia (15.7%; 95% UI, 14.8–16.5). The lowest prevalence was recorded in Northern Africa and Western Asia (14.5%; 95% UI, 13.3–15.9).

Regarding the global lifetime prevalence of childhood contact sexual violence, 12.4% (95% UI, 12.2–12.6) of women and 10.0% (95% UI, 9.8–10.2) of men aged 18 years and older experienced contact sexual violence at least once before the age of 18 (Table 3). Regional variations in the lifetime prevalence of contact SVAC among women largely mirror the pattern observed for overall SVAC, except that Eastern and South-Eastern Asia (8.9%; 95% UI, 8.8–9.1) replaced Central and Southern Asia (9.9%; 95% UI, 9.2–10.5) as the region with the lowest contact SVAC prevalence. Oceania remained the region with the highest prevalence of contact SVAC (24.2%; 95% UI, 23.5–24.9).

For men, the regional variation in contact SVAC shows a somewhat different pattern from that observed for overall SVAC. Sub-Saharan Africa had the highest prevalence (14.0%; 95% UI, 13.7–14.3), followed by Latin America and the Caribbean (11.4%; 95% UI, 11.2–11.6), Oceania (11.1%; 95% UI, 10.7–11.6), Northern Africa and Western Asia (10.3%; 95% UI, 9.4–11.4), Central and Southern Asia (9.8%; 95% UI, 9.2–10.4), Europe and Northern America (9.7%; 95% UI, 9.5–9.9), and Eastern and South-Eastern Asia (8.6%; 95% UI, 8.5–8.8).

Figure 2 presents maps illustrating the lifetime prevalence of contact SVAC and overall SVAC at the subregion level for both women and men. Among the subregions, for women, Australia and New Zealand reported the highest prevalence of both contact SVAC (24.5%; 95% UI, 23.8–25.2) and

**Table 1 | Operational definitions of SVAC and indicators**

| | Definition |
|---|---|
| Overall SVAC | Overall SVAC refers to any deliberate, unwanted and non-essential sexual act, whether completed or attempted, involving either contact or non-contact, that is perpetrated against a child. This definition excludes acts of sexual exploitation and those occurring in an online context. |
| Contact SVAC | Contact SVAC includes rape and sexual assault.<br>Rape refers to vaginal, anal or oral penetration of a sexual nature of a child's body with any bodily part or object, with or without the use of force, and without consent because the child is too young to consent or consent is not given. Examples include physically forced rape, pressured or coerced rape, drug- and/or alcohol-facilitated rape, non-consensual sexual penetration without physical force or threat, incest involving a child, rape in the context of armed conflict and gang-perpetrated rape.<br>Sexual assault refers to touching a child's private parts or making a child touch someone else's private parts (excluding penetration), with or without the use of force, and without consent because the child is too young to consent or consent is not given. This primarily includes unwanted groping, fondling or other forms of touching; sexual acts (other than penetration) obtained through threats of physical violence; sexual acts (other than penetration) obtained through threats to the well-being of family members; the use of force or coercion to obtain unwanted sexual acts or any sexual activity that the child finds degrading or humiliating; and pulling a child's clothing up or down to reveal intimate areas. |
| Non-contact SVAC | Non-contact SVAC refers to any form of verbal or non-verbal non-physical conduct, whether isolated or persistent, that involves unwanted references to the body, sexual organs or sexuality of the child, excluding acts occurring in an online context. This includes, but is not limited to, sexual harassment; sexual threats; exposure of a child to sexual abuse and pornography; sexual bullying and/or unwanted sexual jokes, taunts or comments; exposing sexual organs; trapping a child and subjecting him/her to sexual advances; subjecting a child to sexual rumours; persistent leering looks; sexual stalking; sexual extortion; coercion and blackmailing a child for sexual purposes; and non-consensual image-taking of the sexual organs or sexual activities involving a child. |
| Lifetime prevalence of SVAC | The proportion of adults aged 18 years or older who reported experiencing contact or non-contact SVAC at any point before reaching 18 years of age. |
| Past-year prevalence of SVAC | The proportion of children under 18 years who reported experiencing contact or non-contact SVAC by anyone at least once within the previous 12 months. |

The definition of SVAC employed for this study aligns with the operational definitions specified in the UNICEF ICVAC[2].

overall SVAC (34.2%; 95% UI, 33.5–35.0), whereas Central Asia recorded the lowest prevalence for both contact SVAC (3.4%; 95% UI, 2.0–5.4) and overall SVAC (5.7%; 95% UI, 3.3–8.7). For men, the Caribbean exhibited the highest prevalence of both contact SVAC (17.1%; 95% UI, 16.3–18.0) and overall SVAC (25.4%; 95% UI, 24.3–26.6), while Central Asia again recorded the lowest prevalence for both contact SVAC (3.3%; 95% UI, 2.0–5.3) and overall SVAC (5.6%; 95% UI, 3.3–8.7), as shown in Fig. 2 and Table 3.

Across Asia (Central, Southern, Eastern, South-Eastern and Western Asia), as well as in Southern Europe and South America, lifetime SVAC prevalence is similar between men and women, with less pronounced sex differences than those observed in other regions.

### Past-year prevalence

Globally, 6.2% (95% UI, 6.0–6.3) of female children and 4.9% (95% UI, 4.8–5.0) of male children experienced any form of SVAC (including both contact and non-contact forms) at least once in the past 12 months (Table 4). The prevalence of overall SVAC in the past year increases with age. The past-year prevalence is highest among children aged 14–17 years (female: 13.3%; 95% UI, 13.1–13.6; male: 10.7%; 95% UI, 10.5–10.9), followed by children aged 10–13 years (female: 9.5%; 95% UI, 9.3–9.7; male: 7.5%; 95% UI, 7.4–7.7). Among children aged 0–9 years, the past-year prevalence of contact SVAC is 1.9% (95% UI, 1.9–1.9) for females and 1.4% (95% UI, 1.4–1.5) for males. For contact SVAC, 3.7% (95% UI, 3.6–3.7) of female children and 2.8% (95% UI, 2.8–2.9) of male children under the age of 18 experienced contact SVAC at least once in the past 12 months (Table 4). Similar to overall SVAC, the prevalence of contact SVAC increases with age. The highest prevalence is observed among children aged 14–17 years (female: 8.1%; 95% UI, 7.9–8.2; male: 6.3%; 95% UI, 6.2–6.5). In 2024, the global prevalence resulted in an estimated 72.6 million girls and 60.9 million boys who experienced at least one form of sexual violence, including 43.3 million girls and 34.8 million boys who were subjected to rape or sexual assault.

Regional variations in the past-year prevalence of contact and overall SVAC are detailed in Supplementary Information sections 1 and 2. Figure 3 provides a map illustrating the past-year prevalence of contact SVAC and overall SVAC at the subregion level for both females and males aged 0–17 years.

In addition to presenting regional prevalence estimates based on SDG regional classifications, we estimated prevalence by the World Health Organization (WHO), World Bank income group, UNICEF and Global Burden of Disease regions. These results are provided in Supplementary Information sections 3–6. The references for the studies included in this systematic review and meta-analysis are provided in Supplementary Information section 7.

## Discussion

Our study confirms that SVAC is highly prevalent globally. One in five (20.1%) adult women experienced sexual violence as children. Among them, one in eight (12.4%) women experienced contact sexual violence in childhood. Among adult men, around one in six (16.8%) experienced sexual violence as children, with one in ten (10.0%) experiencing childhood contact sexual violence. In 2024 alone, an estimated 72.6 million girls and 60.9 million boys—a total of 133.5 million children—experienced any type of childhood sexual violence excluding online sexual violence. Among them, 43.3 million girls and 34.8 million boys experienced childhood contact sexual violence in the past year.

Comparisons with recent global syntheses indicate that our findings are broadly aligned with existing evidence while extending it in important ways (Table 5). For females, our lifetime prevalence estimates for both overall and contact SVAC closely match the 2024 UNICEF assessment. For males, our lifetime prevalence for overall SVAC is modestly higher than UNICEF's. This divergence probably reflects methodological differences: UNICEF inferred male prevalence by applying a male–female ratio derived from a subset of countries with nationally representative data, whereas we synthesized all available male data directly[12]. Despite drawing on a substantially larger and more linguistically diverse body of evidence—1,412 studies across six UN languages—our lifetime estimates remain closely comparable. In contrast to our study, however, UNICEF reported only lifetime prevalence and did not provide past-year estimates for contact or overall SVAC[12].

Methodological heterogeneity across other recent studies also contributes to variation in reported prevalence. Cagney et al. relied on three predefined databases rather than a systematic search and estimated only lifetime contact SVAC (Table 5). Their global estimates (18.9% for females; 14.8% for males) exceed both UNICEF's and ours, probably owing in part to upward adjustments applied to estimates obtained via face-to-face interviews[20]. Conversely, the systematic review by Piolanti et al., based primarily on English-language sources

https://doi.org/10.1038/s41562-026-02436-1

**Table 2 | Characteristics of the included studies on lifetime and past-year SVAC**

| | Lifetime | | | Past-year | | |
|---|---|---|---|---|---|---|
| **Sample characteristics** | **Female** | **Male** | **Both** | **Female** | **Male** | **Both** |
| Number of participants interviewed | 3,486,254 | 2,397,826 | 7,941,152 | 858,136 | 678,186 | 2,128,833 |
| Number of studies | 796 | 532 | 705 | 289 | 170 | 186 |
| Number of specific observations | 1,632 | 1,119 | 1,513 | 583 | 417 | 565 |
| Nationally representative studies | 540/796 (67.8%) | 329/532 (61.8%) | 370/705 (52.5%) | 209/289 (72.3%) | 113/170 (66.5%) | 107/186 (57.5%) |
| Subnationally representative studies | 93/796 (11.7%) | 73/532 (13.7%) | 148/705 (21.0%) | 35/289 (12.1%) | 25/170 (14.7%) | 27/186 (14.5%) |
| City/district/county-level representative studies | 163/796 (20.5%) | 130/532 (24.4%) | 187/705 (26.5%) | 45/289 (15.6%) | 32/170 (18.8%) | 52/186 (28.0%) |
| Number of countries represented | 142 | 94 | 84 | 98 | 60 | 55 |
| Countries with one study | 30/142 (21.1%) | 23/94 (24.5%) | 22/84 (26.2%) | 35/98 (35.7%) | 27/60 (45.0%) | 24/55 (43.6%) |
| Countries with two studies | 30/142 (21.1%) | 26/94 (27.7%) | 19/84 (22.6%) | 30/98 (30.6%) | 17/60 (28.3%) | 16/55 (29.1%) |
| Countries with three studies | 29/142 (20.4%) | 13/94 (13.8%) | 11/84 (13.1%) | 11/98 (11.2%) | 4/60 (6.7%) | 10/55 (18.2%) |
| Countries with four or more studies | 53/142 (37.3%) | 32/94 (34.0%) | 32/84 (38.1%) | 22/98 (22.4%) | 12/60 (20.0%) | 5/55 (9.1%) |
| Number of SDG subregions represented | 20/20 (100.0%) | 19/20 (95.0%) | 18/20 (90.0%) | 19/20 (95.0%) | 16/20 (80.0%) | 17/20 (85.0%) |
| Population coverage | 93.4% | 87.1% | 84.8% | 83.6% | 66.2% | 61.0% |
| Median date of data collection | 2013 | 2013 | 2013 | 2013 | 2013 | 2012 |
| Studies conducted before 2005 | 82/796 (10.3%) | 35/532 (6.6%) | 48/705 (6.8%) | 23/289 (8.0%) | 7/170 (4.1%) | 14/186 (7.5%) |
| Studies conducted 2005–2009 | 151/796 (19.0%) | 100/532 (18.8%) | 127/705 (18.0%) | 33/289 (11.4%) | 25/170 (14.7%) | 23/186 (12.4%) |
| Studies conducted 2010–2014 | 248/796 (31.2%) | 211/532 (39.7%) | 233/705 (33.0%) | 112/289 (38.8%) | 72/170 (42.4%) | 80/186 (43.0%) |
| Studies conducted 2015–2019 | 214/796 (26.9%) | 141/532 (26.5%) | 214/705 (30.4%) | 92/289 (31.8%) | 54/170 (31.8%) | 57/186 (30.6%) |
| Studies conducted 2020–2023 | 101/796 (12.7%) | 45/532 (8.5%) | 83/705 (11.8%) | 29/289 (10.0%) | 12/170 (7.1%) | 12/186 (6.5%) |

and including 165 studies, reported lower lifetime contact SVAC prevalence (Table 5). This pattern is expected given their lack of adjustment for definitional differences, categories of relationship with the person who perpetrated the violence, respondent age and data collection period. Their analytic approach pooled studies reporting violence perpetrated by family members only or peers only with those reporting any relationship, which mathematically biases pooled estimates downward[19]. Moreover, their past-year estimates predominantly reflect adolescents aged 14–17, since the mean respondent age for most included studies falls within this range, rather than all children aged 0–17 (ref. 19). Accordingly, their past-year prevalence estimates for contact SVAC among both females and males are lower than our estimates for adolescents aged 14–17, probably reflecting their lack of adjustment for definitional differences. However, their past-year estimates exceed our prevalence estimates for the full 0–17 age range. This difference arises because contact SVAC prevalence is substantially lower among younger children, particularly those aged 0–9, who constitute more than half of the child population. When this age distribution is incorporated, our population-weighted past-year prevalence of contact SVAC becomes lower than theirs despite higher estimates within the 14–17 age group (Tables 4 and 5). The prevalence estimates of overall SVAC were not provided in their study.

The meta-analysis by Qu et al. provides the narrowest scope, based on only 28 studies from three databases[18]. Their sole estimate, lifetime overall SVAC prevalence among females (24%), is modestly higher than our female lifetime estimate (20.1%). No estimates for contact SVAC, for males or for past-year prevalence were provided. Taken together, these comparisons underscore the distinct contribution of the present study. By drawing on an extensive multilingual search, harmonizing definitional and methodological variation, and applying a Bayesian multilevel framework capable of accommodating sparse and unbalanced data, we provide the most comprehensive and internally consistent set of global SVAC prevalence estimates to date, spanning both sexes, both contact and overall SVAC, and both lifetime and past-year indicators (Table 5).

Girls are generally considered to be at substantially higher risk of sexual violence, a pattern observed in earlier studies and meta-analyses primarily based in Europe and North America[16,21]. However, our findings suggest less pronounced sex differences in some regions, particularly across Asia, as well as in Southern Europe and South America. The reasons for these regional variations have not been widely explored.

Inhibited disclosure, in the face of more intense stigma in some places and for some individuals who experience SVAC, has often been hypothesized. But this explanation for sex patterns needs to include why inhibition varies by sex. Some research suggests that boys are less likely to disclose abuse and may experience greater inhibition than girls[22]. Over time, as stigma declines, disclosure rates tend to increase, with little sex difference observed across generations[22].

https://doi.org/10.1038/s41562-026-02436-1

**Table 3 | Regional prevalence estimates of lifetime SVAC by UN SDG super-region and subregion**

| | Contact SVAC (%) | | Overall SVAC (%) | |
|---|---|---|---|---|
| | Female | Male | Female | Male |
| **Central and Southern Asia** | 9.9 (9.2–10.5) | 9.8 (9.2–10.4) | 15.8 (14.9–16.6) | 15.7 (14.8–16.5) |
| Central Asia | 3.4 (2.0–5.4) | 3.3 (2.0–5.3) | 5.7 (3.3–8.7) | 5.6 (3.3–8.7) |
| Southern Asia | 10.0 (9.4–10.6) | 9.9 (9.3–10.5) | 16.0 (15.1–16.8) | 15.8 (14.9–16.7) |
| **Eastern and South-Eastern Asia** | 8.9 (8.8–9.1) | 8.6 (8.5–8.8) | 16.9 (16.7–17.2) | 16.4 (16.2–16.7) |
| Eastern Asia | 8.8 (8.7–9.0) | 8.6 (8.5–8.7) | 16.8 (16.7–17.0) | 16.3 (16.2–16.5) |
| South-Eastern Asia | 9.1 (8.7–9.5) | 8.7 (8.3–9.2) | 17.1 (16.4–17.9) | 16.6 (15.9–17.4) |
| **Europe and Northern America** | 16.5 (16.3–16.8) | 9.7 (9.5–9.9) | 25.6 (25.3–25.9) | 15.8 (15.5–16.0) |
| Eastern Europe | 12.3 (11.6–12.8) | 8.6 (8.1–9.1) | 19.2 (18.4–20.0) | 13.9 (13.1–14.6) |
| Northern America | 20.8 (20.6–20.9) | 10.2 (10.1–10.3) | 31.6 (31.4–31.9) | 16.8 (16.6–16.9) |
| Northern Europe | 15.2 (15.1–15.4) | 10.2 (10.1–10.4) | 24.0 (23.7–24.2) | 16.7 (16.6–16.9) |
| Southern Europe | 15.6 (15.0–16.2) | 14.8 (14.2–15.5) | 24.4 (23.6–25.3) | 23.3 (22.5–24.3) |
| Western Europe | 16.4 (16.0–16.8) | 5.9 (5.7–6.1) | 25.6 (25.0–26.2) | 10.0 (9.6–10.3) |
| **Latin America and the Caribbean** | 15.2 (15.0–15.5) | 11.4 (11.2–11.6) | 23.0 (22.6–23.3) | 17.6 (17.3–18.0) |
| Caribbean | 21.9 (21.0–22.9) | 17.1 (16.3–18.0) | 31.6 (30.3–33.0) | 25.4 (24.3–26.6) |
| Central America | 16.1 (15.6–16.7) | 8.4 (7.9–8.8) | 24.2 (23.4–24.9) | 13.2 (12.6–13.9) |
| South America | 14.3 (14.1–14.6) | 12.4 (12.2–12.6) | 21.8 (21.4–22.2) | 19.1 (18.8–19.5) |
| **Northern Africa and Western Asia** | 14.1 (12.9–15.3) | 10.3 (9.4–11.4) | 19.3 (17.9–20.9) | 14.5 (13.3–15.9) |
| Northern Africa | 20.7 (18.0–23.6) | 10.9 (8.6–13.3) | 27.9 (24.6–31.5) | 15.4 (12.3–18.7) |
| Western Asia | 10.2 (9.4–11.2) | 10.0 (9.3–11.0) | 14.3 (13.2–15.6) | 14.1 (13.1–15.3) |
| **Oceania** | 24.2 (23.5–24.9) | 11.1 (10.7–11.6) | 33.9 (33.1–34.7) | 16.7 (16.1–17.4) |
| Australia and New Zealand | 24.5 (23.8–25.2) | 11.3 (10.8–11.7) | 34.2 (33.5–35.0) | 17.0 (16.4–17.6) |
| Oceania (excluding Australia and New Zealand) | 23.1 (21.7–24.6) | 10.6 (9.8–11.5) | 32.5 (30.8–34.4) | 16.0 (14.9–17.3) |
| **Sub-Saharan Africa** | 18.6 (18.3–18.9) | 14.0 (13.7–14.3) | 28.4 (28.0–28.9) | 22.1 (21.6–22.6) |
| Eastern Africa | 21.2 (20.9–21.5) | 16.0 (15.7–16.3) | 32.1 (31.6–32.6) | 25.1 (24.6–25.6) |
| Middle Africa | 21.3 (20.7–21.9) | 16.2 (15.7–16.8) | 31.7 (30.9–32.6) | 25.0 (24.3–25.9) |
| Southern Africa | 10.7 (10.5–11.0) | 7.8 (7.6–8.0) | 17.4 (17.0–17.9) | 13.0 (12.6–13.4) |
| Western Africa | 16.3 (15.9–16.6) | 12.1 (11.8–12.4) | 25.3 (24.7–25.9) | 19.5 (18.9–20.0) |
| **World** | 12.4 (12.2–12.6) | 10.0 (9.8–10.2) | 20.1 (19.8–20.4) | 16.8 (16.5–17.1) |

The data are presented as percentage (95% UI).

**Table 4 | Global prevalence estimates of past-year SVAC**

| Age | Contact SVAC (%) | | Overall SVAC (%) | |
|---|---|---|---|---|
| | Female | Male | Female | Male |
| 0–9 years | 1.1 (1.1–1.1) | 0.8 (0.8–0.8) | 1.9 (1.9–1.9) | 1.4 (1.4–1.5) |
| 10–13 years | 5.6 (5.5–5.7) | 4.4 (4.3–4.5) | 9.5 (9.3–9.7) | 7.5 (7.4–7.7) |
| 14–17 years | 8.1 (7.9–8.2) | 6.3 (6.2–6.5) | 13.3 (13.1–13.6) | 10.7 (10.5–10.9) |
| 10–17 years | 6.8 (6.7–7.0) | 5.3 (5.2–5.4) | 11.4 (11.2–11.6) | 9.1 (8.9–9.3) |
| 0–17 years | 3.7 (3.6–3.7) | 2.8 (2.8–2.9) | 6.2 (6.0–6.3) | 4.9 (4.8–5.0) |

The data are presented as percentage (95% UI).

Another possible explanation is that, in some regions, boys and girls may interpret or encounter sexual violence items differently. Non-contact forms of SVAC such as being told unwanted sexual jokes, being shown pornographic materials or being made to expose or view private parts may occur more frequently among boys in certain cultural or social contexts[23–26]. As a result, when surveys include these behaviourally specific items, boys may be more likely than girls to endorse such experiences, contributing to higher overall SVAC prevalence among males in some regions.

Cultural and sociological factors may also play a role. Patterns of supervision and household sleeping arrangements vary across cultures and sexes, potentially influencing exposure to risk[27]. Additionally, access to pornography, societal expectations for males to gain sexual experience, masculinity norms and attitudes towards male-to-male sexual activity may contribute to differential risks and vulnerabilities for boys across various contexts[28]. Further research is needed to understand the complex interplay of cultural, societal and structural factors shaping these sex dynamics, as well as how they vary across different contexts, including within regions where the sex differences appear minimal, such as in Asia.

Our study includes estimates of both contact sexual violence and overall SVAC (including both contact and non-contact forms of sexual violence), providing a more complete picture of children's experiences of sexual harm, in line with the UNICEF ICVAC. While contact forms such as rape and sexual assault represent the most severe physical violations, non-contact forms—including sexual harassment, exposure, and coercive or degrading sexualized behaviours—also cause substantial psychological and developmental harm. By presenting estimates for both, this study captures the continuum of experiences encompassed within internationally recognized standards, facilitating cross-study comparability and ensuring that prevention and response strategies

https://doi.org/10.1038/s41562-026-02436-1

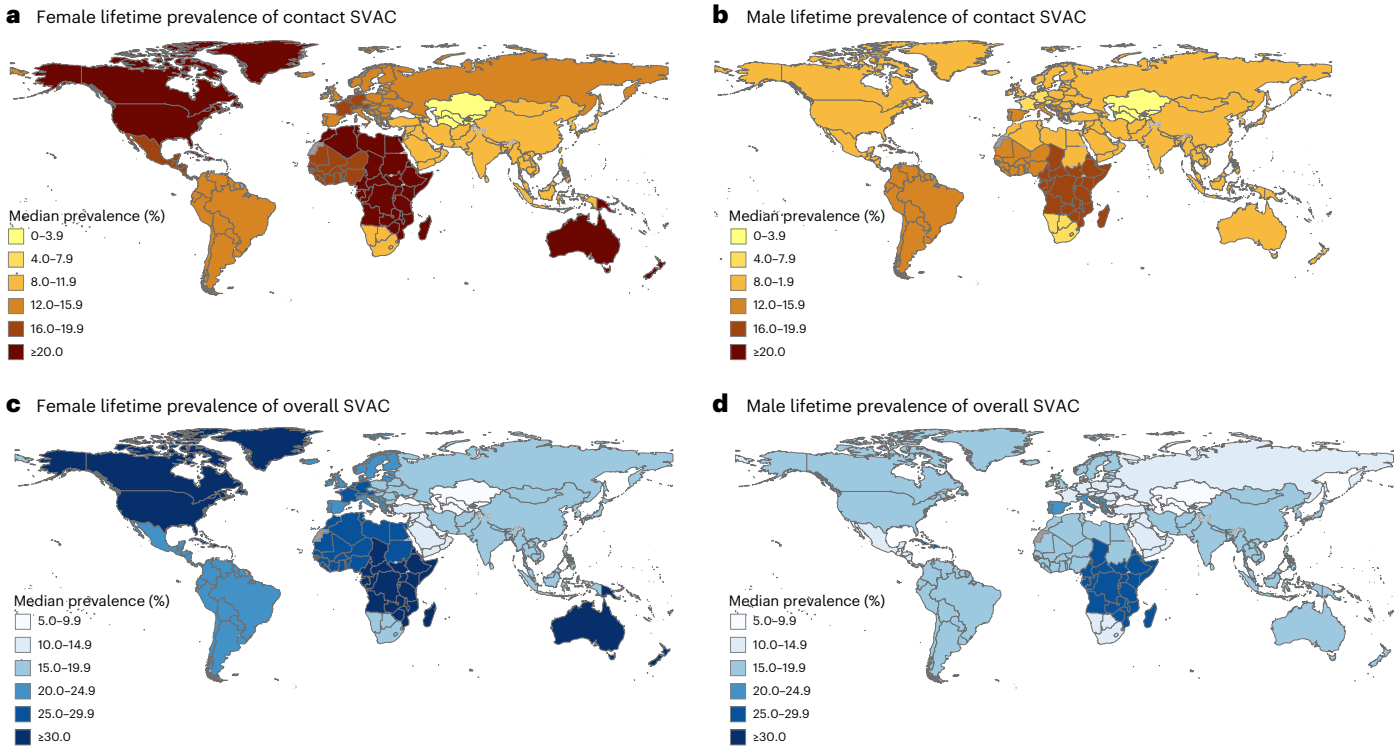


**Fig. 2 | Maps of prevalence estimates of lifetime SVAC by SDG subregion.** **a**, Female lifetime prevalence of contact SVAC. **b**, Male lifetime prevalence of contact SVAC. **c**, Female lifetime prevalence of overall SVAC. **d**, Male lifetime prevalence of overall SVAC. Darker shading indicates higher prevalence, whereas lighter shading indicates lower prevalence. Basemaps from Natural Earth (https://www.naturalearthdata.com/).

address the full range of behaviours that constitute SVAC. Nonetheless, fewer studies have included non-contact forms of SVAC, and these experiences may be more challenging to measure using behaviourally specific approaches. Presenting both estimates allows for a more comprehensive assessment of the burden of SVAC, capturing both the severe physical forms and the broader spectrum of non-contact experiences that contribute to psychological harm and social vulnerability.

Importantly, the adoption of the ICVAC framework provides conceptual clarity and harmonization relative to many earlier syntheses that relied on broader or less well-defined CSA definitions. By using standardized and developmentally grounded categories, our study aims to ensure that the pooled prevalence estimates reflect a consistent conceptualization of SVAC. At the same time, this standardization may limit direct comparability with prior meta-analyses[16,21] that applied less harmonized definitions. The implications of this definitional alignment for interpreting differences in prevalence remain uncertain. Future meta-analytic work could explore how estimates differ when studies are classified according to ICVAC-aligned definitions versus legacy CSA definitions, helping clarify whether this framework substantively changes epidemiological understanding or primarily reorganizes existing constructs.

Our findings underscore the pervasiveness of SVAC globally, with evidence from every region where it has been measured. This high prevalence highlights the urgent need to strengthen child protection systems and invest in robust primary prevention programmes, as well as secondary prevention efforts to facilitate justice and healing for those who experience sexual violence. In recent years, global efforts to reduce the burden of SVAC have increasingly emphasized evidence-based, scalable solutions. One major initiative advancing this agenda is the Safe Futures Hub, a global knowledge and evidence platform designed to synthesize, curate and disseminate rigorous research on 'what works' to prevent and respond to childhood sexual violence. By making high-quality evidence more accessible to policymakers, practitioners and programme implementers, the Hub plays a critical role in bridging the gap between research and practice, particularly in low- and middle-income countries where evidence needs are greatest.

Recent evaluations featured in the Safe Futures Hub and related global evidence platforms have identified several effective prevention and response interventions. The 2024 Building Safe Futures Evidence Review for low- and middle-income countries consolidates emerging evidence on effective strategies, highlighting promising approaches such as adolescent development clubs, parenting programmes, teacher training initiatives and cash-plus programmes[29]. Likewise, the 2025 INSPIRE Evidence Update reports strong new evidence supporting the effectiveness of cognitive behavioural therapy for children exposed to violence and cash-plus life skills training for youth[30].

While these findings provide a strong foundation for evidence-based prevention strategies, these reviews also highlight critical gaps. A recent outcome measurement rapid review flags the "mismatch between problem and measurement", where prevention programmes measure outcomes related to knowledge or skills rather than experiences of sexual violence[31]. The Safe Futures Hub Evidence Review notes the lack of evaluations specifically assessing the efficacy of multisectoral co-ordination in preventing SVAC[29]. Despite the absence of rigorous evaluations, some country-specific evidence suggests the promise of such approaches. For example, in Kenya, the repeat nationally representative VACS show that the prevalence of lifetime sexual violence against girls declined substantially from 36.2% in 2010 to 25.2% in 2019[32]. A qualitative study identified key factors that may have contributed to the reductions following the government's and partners' response to the inaugural VACS and government response plan, including a strengthened legal framework, increased service provider capacity and improved information systems[33]. Latent class analyses of adverse childhood experiences between the two survey periods revealed shifts in risk factor patterns. For example, the importance of orphanhood co-occurring with sexual and physical violence in males increased in the second VACS compared with the first, even as overall prevalence declined, suggesting that vulnerability to violence may

https://doi.org/10.1038/s41562-026-02436-1

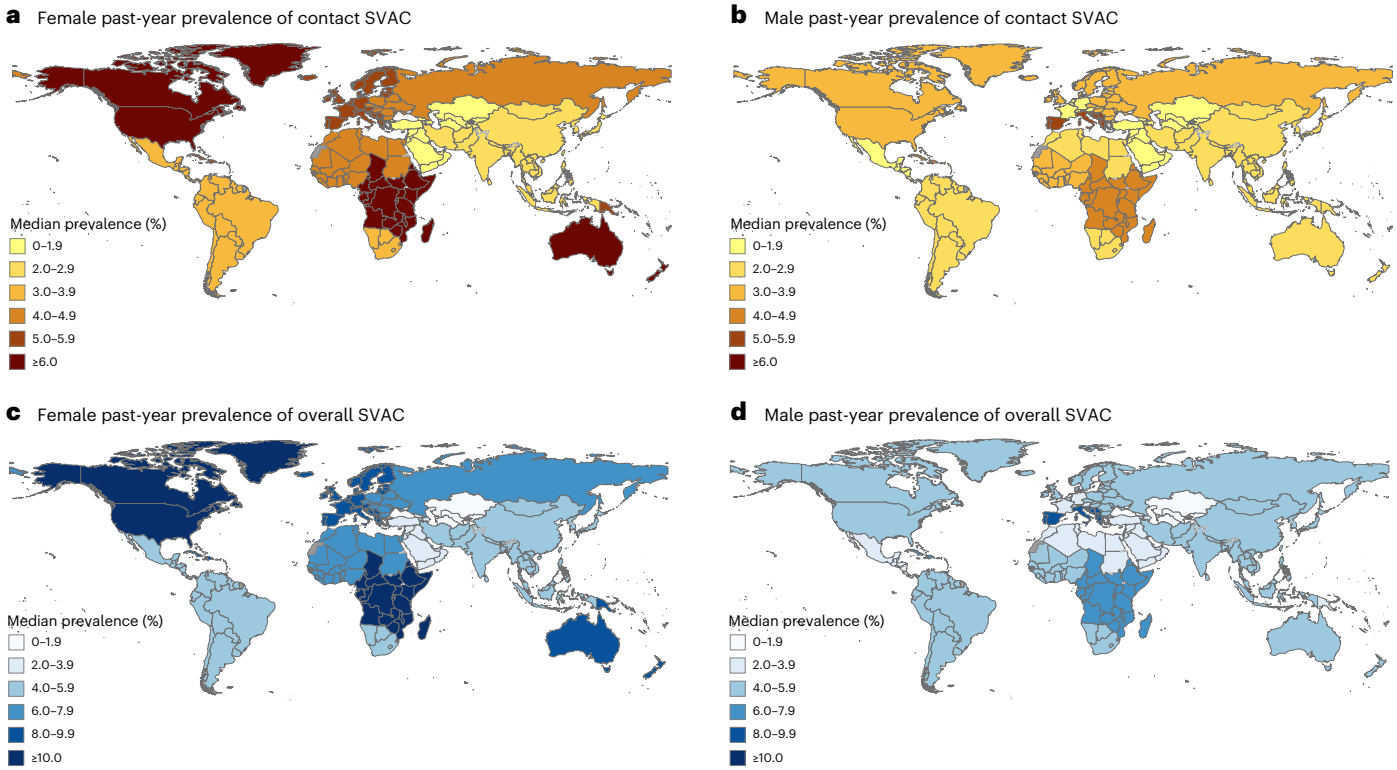


**Fig. 3 | Map of prevalence estimates of past-year SVAC by SDG subregion.** **a**, Female past-year prevalence of contact SVAC. **b**, Male past-year prevalence of contact SVAC. **c**, Female past-year prevalence of overall SVAC. **d**, Male past-year prevalence of overall SVAC. Darker shading indicates higher prevalence, whereas lighter shading indicates lower prevalence. Basemaps from Natural Earth (https://www.naturalearthdata.com/).

become concentrated among specific populations when the overall population prevalence declines[34]. These findings highlight the crucial role of prevalence studies not only in quantifying the magnitude of violence against children but also in identifying shifts in its drivers and risk factors over time. Such insights can guide the reprioritization of prevention, support and justice efforts for individuals who experience SVAC, ensuring that limited resources are allocated as strategically and effectively as possible.

Some important limitations of our findings must be acknowledged. Sexual violence is a highly sensitive and stigmatized experience, often leading to substantial under-reporting in surveys. The extent of under-reporting probably varies across countries and regions, potentially distorting global and regional prevalence estimates, particularly in regions with lower reported rates (such as highly populated areas of Asia). If inhibited disclosure differs by sex, this could also affect observed sex differentials.

Additionally, sexual behaviours, attitudes and cultural norms surrounding sexual violence vary widely across the world. Broad survey prompts may be interpreted differently across regions, potentially capturing distinct types of experiences—such as bullying content, exposure to sexual images, early childhood sexual exploration or consensual homosexual activity—thereby producing misleading impressions of regional differences. As of now, the field lacks a comprehensive understanding of the factors driving the sometimes-large differences in prevalence estimates within and across countries. Further research is urgently needed to investigate these disparities, which may lead to reinterpretations of the findings presented here.

More broadly, these definitional and methodological inconsistencies highlight that global syntheses, including our own and prior studies, are unavoidably constrained by variability in measurement quality and conceptual alignment. A larger pool of studies does not necessarily indicate stronger evidence; rather, expanding the evidence base may increase exposure to inconsistent designs, weak measures or problematic question wording. These foundational uncertainties underscore the need for caution when interpreting pooled global estimates of SVAC.

Another key limitation is that almost all past-year prevalence estimates for children under 10 rely on parental or proxy reports, which are known to substantially under-report sexual violence against young children[16,35]. Consequently, past-year prevalence estimates for the 0–9 age group generated in this study may underestimate the true prevalence.

Moreover, the Bayesian hierarchical modelling approach used in this study applies partial pooling, meaning that estimates for subregions with limited data are influenced by broader regional or global averages. While this helps stabilize estimates, it may misrepresent reality if the true prevalence in these subregions is substantially higher or lower than the pooled estimate.

Furthermore, the current systematic review has not reported data on race or ethnicity, as many of the included studies either did not report those characteristics due to local restrictions or reported them as descriptive demographics. In addition, the surveys did not disaggregate the prevalence estimates by those characteristics, so we excluded them to prevent potential misinterpretation. This study did not include online SVAC and thus may have underestimated prevalence estimates. Online sexual violence was excluded due to limited and non-comparable data. Existing studies are few, recent and often focus exclusively on online forms, with wide variation across countries in Internet access, digital use and definitions, precluding reliable estimation. While this exclusion preserved the validity of the Bayesian estimates, it represents an important limitation, as digital contexts are increasingly relevant to children's experiences of sexual harm.

It is also important to note that throughout this manuscript, we aimed to use person-first and non-stigmatizing language when describing individuals affected by SVAC. Person-first terminology

https://doi.org/10.1038/s41562-026-02436-1

**Table 5 | Comparison of prevalence estimates and methodological characteristics across five recent studies of SVAC**

| | | Current study | Qu et al.[18] | Piolanti et al.[19] | UNICEF[12] | Cagney et al.[20] |
|---|---|---|---|---|---|---|
| Global lifetime prevalence | Contact SVAC (female) | 12.4% | Not reported | 9.5% | About 12.5% (1 in 8) | 18.9% |
| | Contact SVAC (male) | 10.0% | Not reported | 5.5% | About 9.1% (1 in 11) | 14.8% |
| | Overall SVAC (female) | 20.1% | 24.0% | Not reported | About 20.0% (1 in 5) | Not reported |
| | Overall SVAC (male) | 16.8% | Not reported | Not reported | About 14.3% (1 in 7) | Not reported |
| Global past-year prevalence (0–17 years) | Contact SVAC (female) | 3.7% | Not reported | 7.6% | Not reported | Not reported |
| | Contact SVAC (male) | 2.8% | Not reported | 4.2% | Not reported | Not reported |
| | Overall SVAC (female) | 6.2% | Not reported | Not reported | Not reported | Not reported |
| | Overall SVAC (male) | 4.9% | Not reported | Not reported | Not reported | Not reported |
| Study design | Number of studies included | 1,412 | 28 | 165 | Not reported | 460 |
| | Systematic review conducted | Yes | Yes | Yes | No | No |
| | Databases searched | PubMed/Medline, Global Health, PsycINFO, Embase, Web of Science, Sociological Abstracts, CINAHL, ERIC, Criminal Justice Abstracts, Google Scholar, 23 non-English databases and >20 grey literature sources | PubMed, Embase and Web of Science | PubMed, Embase, CINAHL, Web of Science, PsycINFO, ERIC and APA PsycArticles | Not applicable; estimates were derived from Tier 1 (DHS/MICS) and Tier 2 (other nationally representative surveys) data sources | Global Health Data Exchange, WHO Global Database on the Prevalence of Violence Against Women and UN Women Global Database on Violence Against Women |
| | Search term language | Search terms in six UN languages | English search terms only | English search terms only | Not applicable | Not applicable |
| | Search period | Publications in any of the six UN languages from 1 January 2010 to 1 August 2024 | From inception of each database through April 2021 | From inception of each database through March 2022 | Data collected between 2010 and 2021 | Data collected between 1980 and 2023 |
| | Statistical model applied | Bayesian hierarchical model | Random-effects model | Random-effects model | Not reported (UNICEF notes "several adjustments" but does not describe the model) | Spatiotemporal Gaussian process regression |
| | Adjustment for definitional variation | Yes | No | No | Yes | Yes |
| | Adjustment for age effects | Yes | No | No | Yes | Yes |
| | Adjustment for data collection year | Yes | No | No | No | No |
| | Use of population weighting for regional/global estimates | Yes | No | No | Yes | Yes |

helps ensure that individuals are not defined by harmful experiences or behaviours and supports a more prevention-oriented framing of SVAC[36]. We recognize the importance of continued attention to language in future research to ensure accuracy, respect and alignment with prevention goals, including prevention of the perpetration of sexual violence.

Finally, our study estimated overall population prevalence using general population samples representative at national or subnational levels. While these samples included individuals of all sexual orientations and gender identities, subgroup-specific data were rarely available, limiting separate analyses. Future research should collect and report data that enable disaggregated analyses by sexual orientation and gender identity to enhance inclusivity and understanding of disparities.

Despite these limitations, this study compellingly demonstrates the persistently high prevalence of SVAC worldwide. Our findings highlight the urgent need for standardized data collection protocols and expanded research efforts to close critical knowledge gaps. Comprehensive prevalence studies that include both boys and girls and measure both lifetime and past-year experiences are essential for accurately assessing the scope of this issue. The example from Kenya demonstrates that data-driven awareness, political will and financial investment can drive impactful policy and programmatic responses[32–34]. Successful SVAC prevention efforts have shown that addressing harmful social and cultural norms can reshape the contexts in which violence occurs[29]. To achieve lasting progress, a co-ordinated global response should integrate standardized data collection, rigorous research and culturally sensitive, evidence-based prevention strategies. With strong commitment from governments, policymakers, researchers, civil society and communities, we can drive transformative change and substantially reduce the global burden of childhood sexual violence.

## Methods

### Search strategy and selection criteria

We initially conducted searches on 1 March 2023 and updated them on 20 August 2024. We employed a comprehensive set of search terms designed to identify studies of SVAC prevalence. These terms corresponded to act-based measures of sexual violence as defined by the UNICEF ICVAC[2], combined with additional terms to specifically limit the search to childhood populations and studies reporting prevalence estimates (see Supplementary Information section 8, Table 9, for the full list of terms in six UN languages).

We searched PubMed/MEDLINE, the Social Science Citation Index (Web of Science), Global Health, Embase, PsycINFO, CINAHL, ERIC, Sociological Abstracts (ProQuest), Criminal Justice Abstracts and Google Scholar, along with key journals in the field of child protection. Grey literature sources included research from international non-governmental organizations, UN agencies, community-based organizations and reports from national governments. We also searched relevant language-specific databases (see Supplementary Information section 8, Table 10, for a full list of databases and grey literature repositories searched). For globally comparable national survey reports (for example, the DHS and MICS), we retained eligible reports regardless of publication language, including those beyond the six UN languages, to maximize completeness and country coverage of prevalence estimates.

Studies were included if they (1) were published in one of the six official UN languages (Arabic, Chinese, English, French, Russian and Spanish) between 1 January 2010 and 1 August 2024; (2) reported the prevalence of SVAC; (3) relied on self-reported data from children (individuals under the age of 18 years), adults recalling childhood experiences (experiences that occurred prior to age 18) or reports from parents/guardians of experiences of their minor children; (4) included a measure of contact or non-contact SVAC, as consistent with the UNICEF ICVAC definitions (Table 1); (5) used general population samples representative at national or subnational levels; and (6) had a sample size of at least 100.

Studies were excluded if they (1) focused on specific subpopulations unlikely to generalize to the general population (for example, psychiatric patients, individuals who identify as LGBTQ+ or samples comprising only individuals who experienced SVAC); (2) did not provide disaggregated data for children or adults' experiences as children (for example, findings for those under 18 years could not be determined); (3) collected data through controlled studies or qualitative methods; and (4) only included data on online SVAC.

Eight reviewers screened English studies, and two reviewers screened studies in each of the other UN languages. For all papers, two reviewers independently screened studies using Covidence[37]. After initial title and abstract screening and removal of duplicates, studies meeting the eligibility criteria underwent full-text review. Discrepancies were resolved by a third reviewer.

At least two authors independently extracted data for each selected study using a standardized data extraction tool that we piloted across all language teams (see Supplementary Information section 9 for the extraction form). Any modifications were agreed on and shared with all authors. For studies using the same dataset and reporting the same type of prevalence, we retained only the study with the largest sample size. We assessed methodological quality using the risk-of-bias tool from Hoy et al.[38]. This tool comprises nine questions evaluating internal validity (for example, case definition, data source, instrument quality, data collection method, numerators and denominators) and external validity (for example, population representativeness, sampling method and non-response bias). Each item was rated as 'low risk' (score 0) or 'high risk' (score 1), with total scores classifying studies as low (0–3), moderate (4–6) or high risk (7–9)[38].

### Data analysis

The lifetime prevalence of SVAC is defined as the proportion of adults aged 18 years or older who reported experiencing contact or non-contact SVAC at any point before reaching 18 years of age. The past-year prevalence is defined as the proportion of children under 18 years who experienced contact or non-contact SVAC within the previous 12 months. In both measures, consistent with the UNICEF ICVAC definition, individuals are counted as experiencing SVAC if they were subjected to at least one act of sexual violence perpetrated by anyone, regardless of the relationship of the individual who perpetrated violence to the child. For this estimation, we examined two SVAC metrics: contact SVAC (rape and sexual assault) and the broader category of overall SVAC, which includes both contact and non-contact forms, excluding online SVAC (see the definitions in Table 1). Global or regional estimates for online sexual violence, a form of non-contact violence, were not produced due to considerable limitations in data availability. Available studies are few and mostly recent, and they often focus exclusively on online sexual violence without data on other forms, limiting comparability and precluding imputation[15]. Prevalence varies substantially with national differences in Internet access, digital adoption and social media use[12]. Variability in legal definitions, reporting practices and cultural norms further complicates measurement[15]. Given these constraints, we excluded online sexual violence to preserve the validity of Bayesian estimates for childhood sexual violence.

To estimate SVAC prevalence, we defined an optimal set of observations. These included data where the case definition encompassed all acts of sexual violence (for example, at least one experience of any type of SVAC), did not restrict specific categories of individuals who perpetrated violence, and represented both rural and urban populations to ensure comprehensive coverage. Observations must also have reported prevalence separately by sex and have used clear, behaviour-specific questions. For lifetime prevalence, incidents must have occurred before age 18 (for example, not before 15 or 13), and for past-year prevalence, within the prior 12 months (for example, not six or three months).

If studies did not meet these criteria, we applied statistical adjustments to align data with the optimal definition. The analysis incorporated all available observations, differentiating between those aligning with the optimal definition and those requiring adjustment, thereby addressing missing data and inconsistencies in sampling and case definitions[13]. Details of these statistical adjustments, particularly for the fixed-effects component of the Bayesian hierarchical model, are provided later.

We developed a Bayesian hierarchical (multilevel) framework to estimate the lifetime or past-year prevalence of SVAC across different regions. We used a Bayesian multilevel model because it offers greater flexibility and robustness than traditional meta-regression for estimating pooled prevalence[13,39,40]. This approach accounts for multiple sources of variability, such as between-country, regional, temporal and definitional differences, through random and mixed effects, allowing a more realistic representation of hierarchical data[13,40]. The Bayesian framework also handles sparse or unbalanced data effectively by borrowing strength across units, resulting in more stable estimates, particularly in settings with small sample sizes or limited observations for certain subgroups[13,39]. In addition, it accommodates the bounded nature of prevalence data by using appropriate likelihoods (for example, binomial or beta binomial) and link functions[13,41]. Finally, Bayesian inference provides full posterior distributions and credible intervals with direct probability interpretations, offering clearer and more intuitive uncertainty quantification than conventional methods[13,39].

Our model is specified within the generalized linear regression framework, using a binomial distribution with a logit link function. The response variable represents the number of SVAC cases observed out of the total trials[41]. This framework has four nested levels: (1) countries, (2) subregions, (3) super-regions and (4) the world. The SDG super-regions and subregions were defined by the UN Statistics Division to support reporting and monitoring of progress towards the SDGs. These groupings, based on geographical, economic and social similarities, include seven super-regions further divided into 20 nested subregions (see

Supplementary Information section 10 for regional classifications)[42]. The framework also accounts for various demographic and geographic factors and includes both fixed and random effects to pool data from different sources and capture variability at different levels. This multilevel approach of including both fixed and random effects enables us to 'borrow strength' across units, ensure that the degree of pooling is determined empirically by the data and not arbitrarily by the user, and adjust for definitional and methodological variations across studies[13,39,40].

The meta-regression model includes fixed effects for each type of violence (contact versus non-contact) and time frame (past-year versus lifetime) across the seven SDG super-regions. To account for the wide sex difference in SVAC prevalence across regions, the model also includes sex as both a main effect and an interaction term with the 20 SDG subregions. This interaction allows the model to capture regional variations in SVAC prevalence between males and females, ensuring that sex-specific differences are not assumed to be uniform across all subregions.

We modelled the nonlinear effects of age and the year in which data collection for the SVAC prevalence study ended using natural splines with three degrees of freedom, with two knots evenly distributed across the observed range for each variable. Additional fixed effects included relationship with the person who perpetrated the violence (for example, any, parents, partner or peers), frequency of acts (for example, at least once versus at least twice), prevalence recall period (for example, prior to age 18, prior to age 15, past 12 months or past 3 months), subtype of violence, sample site and SVAC question format (behaviour-specific inquiry, mixed or non-behaviour-specific inquiry). Non-behaviour-specific inquiries use broad or umbrella terms, placing reliance on respondents' subjective interpretation of concepts such as sexual harassment or sexual abuse. For example, questions may include "Have you ever been sexually harassed?" or "Have you ever been sexually abused?". The specific adjusted variables and categories can be found in Supplementary Information section 11.

We applied nested random effects to the geographical regions in the hierarchy of super-region, subregion and country, assuming that a country should be closer to its regional prevalence than to that of other regions and allowing borrowing strength from other observations in the same region to improve prevalence estimates[13,40]. We modelled subnational observations as having more variability than those representative at the national level, meaning less weight was given to subnational observations[13,39].

The proposed Bayesian model employed weakly informative priors, specifying normal distributions for the regression coefficients and a half-$t$ distribution for the standard deviations of the random effects[40]. This ensured reasonable regularization of the model parameters, improving convergence and interpretability. To specify the hyperparameters (including the number of knots in the splines, the prior variance for the regression coefficients of the fixed effects and priors for the standard deviation of the random effects) in the model, we used the widely applicable information criterion as the model selection criterion[13,39].

Posterior inferences were obtained using Markov chain Monte Carlo simulations with 10,000 iterations with 5,000 burn-ins. To ensure computational efficiency, we employed parallel processing. We assessed model convergence using Gelman–Rubin diagnostic statistics with multiple Markov chain Monte Carlo chains. Model validation was carried out using posterior predictive checks (including Bayesian $P$ values) and both in-sample and out-of-sample comparisons. These assessments examined median errors, median absolute errors and the coverage of posterior predictive intervals[13,39]. The final model produced country-level estimates of the SVAC prevalence accompanied by 95% UIs. To generate aggregate estimates (that is, by subregion, by super-region and globally), we used population denominators for the 2024 calendar year from the World Population Prospects (2024 revision)[43]. We performed all analyses in R (version 4.5.0)[44] and fitted the model primarily using the brms package[45]. The analysis code is publicly available to ensure reproducibility.

The protocol for this systematic review and meta-analysis was developed following the PRISMA-P standards[46] and has been registered on PROSPERO (number CRD42024495116). We adhered to PRISMA[47] standards for reporting the results.

### Reporting summary

Further information on research design is available in the Nature Portfolio Reporting Summary linked to this article.

## Data availability

Source data are provided with this paper. All other data supporting the findings of this work are available via the Open Science Framework at https://doi.org/10.17605/OSF.IO/EG8TN.

## Code availability

All analysis scripts are available via the Open Science Framework at https://doi.org/10.17605/OSF.IO/EG8TN.

## References


1. Hailes, H. P., Yu, R., Danese, A. & Fazel, S. Long-term outcomes of childhood sexual abuse: an umbrella review. *Lancet Psychiatry* **6**, 830–839 (2019).
2. *International Classification of Violence Against Children* (United Nations Children's Fund, 2023); https://data.unicef.org/resources/international-classification-of-violence-against-children/
3. Mathews, B. & Collin-Vézina, D. Child sexual abuse: toward a conceptual model and definition. *Trauma Violence Abuse* **20**, 131–148 (2019).
4. Spencer, C. N. et al. Health effects associated with exposure to intimate partner violence against women and childhood sexual abuse: a burden of proof study. *Nat. Med.* **29**, 3243–3258 (2023).
5. Bouchard, S. et al. Child sexual abuse and employment earnings in adulthood: a prospective Canadian cohort study. *Am. J. Prev. Med.* **65**, 83–91 (2023).
6. Molnar, B. E., Buka, S. L. & Kessler, R. C. Child sexual abuse and subsequent psychopathology: results from the National Comorbidity Survey. *Am. J. Public Health* **91**, 753–760 (2001).
7. Ogloff, J. R. P., Cutajar, M. C., Mann, E. & Mullen, P. Child sexual abuse and subsequent offending and victimisation: a 45 year follow-up study. *Trends Issues Crime Crim. Justice* **440**, 1–6 (2012).
8. Letourneau, E. J., Brown, D. S., Fang, X., Hassan, A. & Mercy, J. A. The economic burden of child sexual abuse in the United States. *Child Abuse Negl.* **79**, 413–422 (2018).
9. Currie, J. & Tekin, E. Understanding the cycle of childhood maltreatment and future crime. *J. Hum. Resour.* **47**, 509–549 (2012).
10. *Target 16.2 of Goal 16: End Abuse, Exploitation, Trafficking and All Forms of Violence Against and Torture of Children* (United Nations, 2024); https://sdgs.un.org/goals/goal16#targets_and_indicators
11. Hillis, S., Mercy, J., Amobi, A. & Kress, H. Global prevalence of past-year violence against children: a systematic review and minimum estimates. *Pediatrics* **137**, e20154079 (2016).
12. *When Numbers Demand Action: Confronting the Global Scale of Sexual Violence Against Children* (United Nations Children's Fund, 2024); https://data.unicef.org/resources/when-numbers-demand-action/
13. Sardinha, L., Maheu-Giroux, M., Stöckl, H., Meyer, S. R. & García-Moreno, C. Global, regional, and national prevalence estimates of physical or sexual, or both, intimate partner violence against women in 2018. *Lancet* **399**, 803–813 (2022).
14. Norman, R. E. et al. The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. *PLoS Med.* **9**, e1001349 (2012).
15. Fry, D. et al. Prevalence estimates and nature of online child sexual exploitation and abuse (OCSEA): a systematic review and meta-analysis. *Lancet Child Adolesc. Health* **9**, 184–193 (2025).

16. Stoltenborgh, M., Van Ijzendoorn, M. H., Euser, E. M. & Bakermans-Kranenburg, M. J. A global perspective on child sexual abuse: meta-analysis of prevalence around the world. *Child Maltreat.* **16**, 79–101 (2011).
17. Amene, E. W. et al. Prevalence of adverse childhood experiences in sub-Saharan Africa: a multicountry analysis of the Violence Against Children and Youth Surveys (VACS). *Child Abuse Negl.* **150**, 106353 (2024).
18. Qu, X. et al. The prevalence of sexual violence against female children: a systematic review and meta-analysis. *Child Abuse Negl.* **131**, 105764 (2022).
19. Piolanti, A. et al. Global prevalence of sexual violence against children: a systematic review and meta-analysis. *JAMA Pediatr*. https://doi.org/10.1001/jamapediatrics.2024.5326 (2025).
20. Cagney, J. et al. Prevalence of sexual violence against children and age at first exposure: a global analysis by location, age, and sex (1990–2023). *Lancet* **405**, 1817–1836 (2025).
21. Barth, J., Bermetz, L., Heim, E., Trelle, S. & Tonia, T. The current prevalence of child sexual abuse worldwide: a systematic review and meta-analysis. *Int. J. Public Health* **58**, 469–483 (2013).
22. Mathews, B. et al. Disclosure and non-disclosure of childhood sexual abuse in Australia: results from a national survey. *Child Abuse Negl.* **160**, 107183 (2025).
23. Zhang, Y. et al. Co-occurrence subgroups of child sexual abuse, health risk behaviors and their associations among secondary school students in China. *BMC Public Health* **21**, 1139 (2021).
24. Abbas, S. S. & Jabeen, T. Prevalence of child abuse among the university students: a retrospective cross-sectional study in University of the Punjab, Pakistan. *Int. Q. Community Health Educ.* **40**, 125–134 (2020).
25. Kumar, M. T., Kumar, S., Singh, S. P. & Kar, N. Prevalence of child abuse in school environment in Kerala, India: an ICAST-CI based survey. *Child Abuse Negl.* **70**, 356–363 (2017).
26. Attawell, K. *Behind the Numbers: Ending School Violence and Bullying* (United Nations Educational, Scientific and Cultural Organization, 2019); https://doi.org/10.54675/TRVR4270
27. Al-Eissa, M. A. et al. Determining child maltreatment incidence in Saudi Arabia using the ICAST-CH: a pilot study. *Child Abuse Negl.* **42**, 174–182 (2015).
28. Finkelhor, D., Ji, K., Mikton, C. & Dunne, M. Explaining lower rates of sexual abuse in China. *Child Abuse Negl.* **37**, 852–860 (2013).
29. *Building Safe Futures: Solutions to End Childhood Sexual Violence; Evidence from Low- and Middle-Income Countries on Childhood Sexual Violence Prevention* (Safe Futures Hub, 2024); https://cdn.safefutureshub.org/files/SFH-ER-WEB-DEF-compressed.pdf
30. Little, M. T. et al. Interventions to prevent, reduce, and respond to violence against children and adolescents: a systematic review of systematic reviews to update the INSPIRE Framework. *Lancet Child Adolesc. Health* **10**, 49–61 (2026).
31. Franchino-Olsen, H., Neelakantan, L. & Silima, M. *Advancing the Science of Outcome Measurement in Child Sexual Violence Prevention: Results of A Rapid Review* (Sexual Violence Research Initiative, 2026); https://www.svri.org/outcome-measurement-child-sexual-violence/
32. Annor, F. B. et al. Changes in prevalence of violence and risk factors for violence and HIV among children and young people in Kenya: a comparison of the 2010 and 2019 Kenya Violence Against Children and Youth Surveys. *Lancet Glob. Health* **10**, e124–e133 (2022).
33. *Kenya's Journey Towards Protecting Children: A Decade of Change (2010–2019)* (Ministry of Labour and Social Protection of Kenya, Directorate of Children's Services, 2023); https://cdn.togetherforgirls.org/assets/files/VAC-REPORT-2023-REPORT-9_2023-11-30-135957_bcgi.pdf
34. Miedema, S. S., Chiang, L., Annor, F. B. & Achia, T. Cross-time comparison of adverse childhood experience patterns among Kenyan youth: Violence Against Children and Youth Surveys, 2010 and 2019. *Child Abuse Negl.* **141**, 106153 (2023).
35. Kaufman, K. L., Hilliker, D. R., Lathrop, P. & Daleiden, E. L. Assessing child sexual offenders' modus operandi: accuracy in self-reported use of threats and coercion. *Sex. Abuse* **6**, 213–229 (1993).
36. Willis, G. M. & Letourneau, E. J. Promoting accurate and respectful language to describe individuals and groups. *Sex. Abuse* **30**, 480–483 (2018).
37. Covidence https://www.covidence.org (Veritas Health Innovation, 2023).
38. Hoy, D. et al. Assessing risk of bias in prevalence studies: modification of an existing tool and evidence of interrater agreement. *J. Clin. Epidemiol.* **65**, 934–939 (2012).
39. Finucane, M. M., Paciorek, C. J., Danaei, G. & Ezzati, M. Bayesian estimation of population-level trends in measures of health status. *Stat. Sci.* **29**, 18–25 (2014).
40. Gelman, A. & Hill, J. *Data Analysis Using Regression and Multilevel/Hierarchical Models* (Cambridge Univ. Press, 2007).
41. McCullagh, P. *Generalized Linear Models* (Routledge, 2019).
42. *SDG Indicators—Regional Groupings Are Used in the Report and Statistical Annex* (United Nations Statistics Division, 2024); https://unstats.un.org/sdgs/indicators/regional-groups/
43. *World Population Prospects 2024* (United Nations Department of Economic and Social Affairs, Population Division, 2024); https://population.un.org/wpp/
44. R Core Team. R: A language and environment for statistical computing. (R Foundation for Statistical Computing, 2025). https://www.R-project.org/
45. Bürkner, P.-C. brms: An R package for Bayesian multilevel models using Stan. *J. Stat. Softw.* **80**, 1–28 (2017).
46. Shamseer, L. et al. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. *Br. Med. J.* **350**, g7647 (2015).
47. Page, M. J. et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Br. Med. J.* **372**, n71 (2021).

## Acknowledgements

This work was supported by the Children's Investment Fund Foundation (grant number 2307-08816, D.L. and X.F.) and the Human Dignity Foundation (grant number C18443, D. Fry and X.F.). The funders had no role in study design, data collection and analysis, decision to publish or preparation of the manuscript. We thank the Advisory Group, whose expertise and invaluable input shaped this study. The members included F. Cecon (ECPAT), E. Dartnall (SVRI), M. De Barra (Office of the SRSG on Violence Against Children), M. Ellsberg (George Washington University), D. Finkelhor (University of New Hampshire), C. G. Moreno (independent researcher), B. Madrid (University of the Philippines), T. Mpamira (Mutera Global Healing), T. Nevatia (Raising Voices), L. Sardinha (WHO), L. Stephens (formerly Save the Children, now independent consultant) and S. van Tuyll van Serooskerken Rakotomalala (WHO). The findings and conclusions in this report, including any maps developed following the approach used in the Global Burden of Disease studies published in *The Lancet*, are those of the authors and do not necessarily represent the official position, views, decisions or policies of the US Centers for Disease Control and Prevention, WHO, the Advisory Group or any other affiliated institutions.

## Author contributions

X.F., J.R., D. Fry and D.L. conceptualized, designed and oversaw the systematic review. J.R., X.F., D. Fry, W.J., W.L., H.Z., Y.Z., Y.L., X.G., J.L., M.L., I.V., Z.K., S.S., A.H.R., M.P.M.L., K.J.D., L.O., C.Q., D.S. and Z.F. contributed to the process of screening, data extraction and methodological assessment. J.K., X.F., J.R. and H.Z. supported both

the design and running of the statistical analysis. J.K., H.Z. and D.S. conducted the meta-analyses. X.F. is the lead author and guarantor. X.F. provided the first draft of the manuscript, including tables and figures, data interpretation and writing. J.R., D. Fry, A.K., D.L., D. Finkelhor, Y.Z., H.Z., J.K., B.F., C.G., A.L.H., F.B.A., G.M.M., J.A.M., S.B. and R.A.B. consulted and supported the writing process. All authors had complete access to all the data in this Article, edited and approved the final manuscript, and share final responsibility to submit for publication.

## Competing interests

D.L., A.L.H., B.F. and C.G. are employed by or affiliated with a non-academic organization that engages in advocacy activities (Together for Girls). These affiliations are declared as potential competing interests. The authors affirm that these organizational affiliations did not influence the study design, analytical methods, interpretation of the results or the conclusions of this research. The remaining authors declare no competing interests.

## Additional information

**Supplementary information** The online version contains supplementary material available at https://doi.org/10.1038/s41562-026-02436-1.

**Correspondence and requests for materials** should be addressed to Daniela Ligiéro or Deborah Fry.

**Peer review information** *Nature Human Behaviour* thanks Elizabeth Letourneau, Gabriel Otterman and Douglas Russell for their contribution to the peer review of this work. Peer reviewer reports are available.



**Xiangming Fang[1,2], Jingru Ren[1,3], Jian Kang[4], Daniela Ligiéro[5] ✉, Deborah Fry[3] ✉, Francis B. Annor[6], Stephanie Burrows[7], Robert Alexander Butchart[7], Katherine Jaramillo Diaz[8], Zuyi Fang[9], Begoña Fernandez[5], David Finkelhor[10], Constanza Ginestra[5], Xudong Gong[1], Ashleigh L. Howard[5], Wuwenhao Jin[1], Anna Krzeczkowska[3], Zain Kurdi[11,12], Jingxin Liu[1], Wei Liu[1], María Paula Marmolejo Lozano[8], Mengyao Lu[3], Yaoyue Lu[1], Greta M. Massetti[2], James A. Mercy[13], Louis Olié[14], Cheng Qin[15], Arturo Harker Roa[8], Sabina Savadova[3], Dongdong Shu[1], Hanqing Zhu[1], Yuchen Zhu[1] & Inga Vermeulen[3]**

[1]Center for Health Economics and Policy, China Agricultural University, Beijing, China. [2]School of Public Health, Georgia State University, Atlanta, GA, USA. [3]Childlight—Global Child Safety Institute, University of Edinburgh, Edinburgh, UK. [4]School of Public Health, University of Michigan, Ann Arbor, MI, USA. [5]Together for Girls, Washington, DC, USA. [6]National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA, USA. [7]Violence and Injury Prevention Unit, World Health Organization, Geneva, Switzerland. [8]School of Government, Universidad de los Andes, Bogotá, Colombia. [9]Institute of Population Research, Peking University, Beijing, China. [10]Crimes against Children Research Center, University of New Hampshire, Durham, NH, USA. [11]Safety and Protection Unit, Finnish Institute for Health and Welfare, Helsinki, Finland. [12]School of Social and Political Science, University of Edinburgh, Edinburgh, UK. [13]Center for Violence Prevention Research, Melrose, FL, USA. [14]UMR MoISA (University of Montpellier, Cirad, IAMM, INRAE, l'Institut Agro, IRD), CIRAD, Montpellier, France. [15]School of Economics, Guangxi University, Nanning, China. ✉e-mail: daniela@togetherforgirls.org; Debi.Fry@ed.ac.uk

nature portfolio

Corresponding author(s): Deborah Fry, Daniela Ligiero

Last updated by author(s): Feb 17, 2026

# Reporting Summary

Nature Portfolio wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Portfolio policies, see our Editorial Policies and the Editorial Policy Checklist.

## Statistics

For all statistical analyses, confirm that the following items are present in the figure legend, table legend, main text, or Methods section.

| n/a | Confirmed | |
|---|---|---|
| ☐ | ☒ | The exact sample size (*n*) for each experimental group/condition, given as a discrete number and unit of measurement |
| ☐ | ☒ | A statement on whether measurements were taken from distinct samples or whether the same sample was measured repeatedly |
| ☐ | ☒ | The statistical test(s) used AND whether they are one- or two-sided<br>*Only common tests should be described solely by name; describe more complex techniques in the Methods section.* |
| ☐ | ☒ | A description of all covariates tested |
| ☐ | ☒ | A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons |
| ☐ | ☒ | A full description of the statistical parameters including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals) |
| ☒ | ☐ | For null hypothesis testing, the test statistic (e.g. *F*, *t*, *r*) with confidence intervals, effect sizes, degrees of freedom and *P* value noted<br>*Give P values as exact values whenever suitable.* |
| ☐ | ☒ | For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings |
| ☐ | ☒ | For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes |
| ☒ | ☐ | Estimates of effect sizes (e.g. Cohen's *d*, Pearson's *r*), indicating how they were calculated |

*Our web collection on statistics for biologists contains articles on many of the points above.*

## Software and code

Policy information about availability of computer code

| | |
|---|---|
| Data collection | Data collection was performed using Microsoft Excel version 16.0. |
| Data analysis | Data were analyzed using R (v4.5.0), with model fitting conducted primarily using the "brms" package. All analysis scripts are available on OSF (https://doi.org/10.17605/OSF.IO/EG8TN). |

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors and reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Portfolio guidelines for submitting code & software for further information.

## Data

Policy information about availability of data

All manuscripts must include a data availability statement. This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A description of any restrictions on data availability
- For clinical datasets or third party data, please ensure that the statement adheres to our policy

This systematic review and meta-analysis was conducted using previously published data and did not involve new data collection. All data used in the meta-analysis, along with the analysis scripts, are available on OSF (https://doi.org/10.17605/OSF.IO/EG8TN).

## Research involving human participants, their data, or biological material

Policy information about studies with human participants or human data. See also policy information about sex, gender (identity/presentation), and sexual orientation and race, ethnicity and racism.

| | |
|---|---|
| Reporting on sex and gender | Prevalence estimates were disaggregated by sex, based on data from the included studies. |
| Reporting on race, ethnicity, or other socially relevant groupings | No race- or ethnicity-related factors were included, as the analyses focused on global and regional prevalence estimates. |
| Population characteristics | Covariates were included in the meta-analysis: gender (male, female, both); respondent age; data collection year; type of sexual violence (e.g., contact, non-contact); perpetrator (e.g.,anyone, parents/family members, peers, parter); sample site (rural, urban, both); and time period (e.g., lifetime before 18, past year). |
| Recruitment | No recruitment was done in the study. |
| Ethics oversight | No ethical approval was required for the study. |

Note that full information on the approval of the study protocol must also be provided in the manuscript.

# Field-specific reporting

Please select the one below that is the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

☐ Life sciences ☒ Behavioural & social sciences ☐ Ecological, evolutionary & environmental sciences

For a reference copy of the document with all sections, see nature.com/documents/nr-reporting-summary-flat.pdf

# Behavioural & social sciences study design

All studies must disclose on these points even when the disclosure is negative.

| | |
|---|---|
| Study description | This study is a quantitative systematic review and meta-analysis synthesizing data from 1,412 studies to estimate the global and regional lifetime and past-year prevalence of sexual violence against children (SVAC). |
| Research sample | We conducted comprehensive literature searches in the six official UN languages across 10 English-language databases, 23 non-English databases, and over 20 grey literature sources, covering records published between January 1, 2010, and August 1, 2024. Eligible studies included children under 18 or adults retrospectively reporting experiences of SVAC. Of 64,393 records identified and screened, 1,412 studies from 147 countries—representing 93% of the global population—were included in this systematic review and meta-analysis. Collectively, these studies captured responses from 4,070,693 females and 2,910,973 males. |
| Sampling strategy | This meta-analysis draws on data extracted from existing studies. Studies were included if they: (1) were published in one of the six official UN languages (Arabic, Chinese, English, French, Russian, Spanish) between January 1, 2010, and August 1, 2024; (2) reported the prevalence of SVAC; (3) relied on self-reported data from children (individuals under the age of 18 years), adults recalling childhood experiences (experiences that occurred prior to age 18), or reports from parents/guardians of experiences of their minor children; (4) included a measure of SVAC (as defined above); (5) used general population samples representative at national or sub-national levels; and (6) had a sample size of at least 100. |
| Data collection | Data extraction for each selected study was conducted independently by at least two authors using a standardized data extraction tool piloted across all language teams (see Appendix 2 for extraction form, pp 7). Any modifications were agreed upon and shared with all authors. |
| Timing | Searches were initially conducted on March 1, 2023, and updated on August 20, 2024. |
| Data exclusions | Studies were excluded if they: (1) focused on specific sub-populations unlikely to generalise to the general population (e.g., psychiatric patients, the sexual minorities, or samples comprising only victims or survivors of SVAC); (2) did not provide disaggregated data for children or adults' experiences as children (e.g., findings for those under 18 years could not be determined); (3) collected data through controlled studies or qualitative methods; and (4) only included data on online SVAC. |
| Non-participation | As this meta-analysis used previously published data, no participants were directly recruited. |
| Randomization | We relied on the sampling methodologies reported in the original studies to approximate randomization. We included only studies that used general population samples representative at the national or sub-national level, which helped to minimize selection bias and support the validity of prevalence estimates. |

# Reporting for specific materials, systems and methods

We require information from authors about some types of materials, experimental systems and methods used in many studies. Here, indicate whether each material, system or method listed is relevant to your study. If you are not sure if a list item applies to your research, read the appropriate section before selecting a response.

## Materials & experimental systems

| n/a | Involved in the study |
|---|---|
| ☒ | ☐ Antibodies |
| ☒ | ☐ Eukaryotic cell lines |
| ☒ | ☐ Palaeontology and archaeology |
| ☒ | ☐ Animals and other organisms |
| ☒ | ☐ Clinical data |
| ☒ | ☐ Dual use research of concern |
| ☒ | ☐ Plants |

## Methods

| n/a | Involved in the study |
|---|---|
| ☒ | ☐ ChIP-seq |
| ☒ | ☐ Flow cytometry |
| ☒ | ☐ MRI-based neuroimaging |

## Plants

Seed stocks

*Report on the source of all seed stocks or other plant material used. If applicable, state the seed stock centre and catalogue number. If plant specimens were collected from the field, describe the collection location, date and sampling procedures.*

Novel plant genotypes

*Describe the methods by which all novel plant genotypes were produced. This includes those generated by transgenic approaches, gene editing, chemical/radiation-based mutagenesis and hybridization. For transgenic lines, describe the transformation method, the number of independent lines analyzed and the generation upon which experiments were performed. For gene-edited lines, describe the editor used, the endogenous sequence targeted for editing, the targeting guide RNA sequence (if applicable) and how the editor was applied.*

Authentication

*Describe any authentication procedures for each seed stock used or novel genotype generated. Describe any experiments used to assess the effect of a mutation and, where applicable, how potential secondary effects (e.g. second site T-DNA insertions, mosiacism, off-target gene editing) were examined.*