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## Sexual and Reproductive Health Outcomes of Violence Against Women and Girls in Lower-Income Countries: A Review of Reviews

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### ABSTRACT

Gender-based violence (GBV) against women and girls is pervasive and has negative consequences for sexual and reproductive health (SRH). In this systematic review of reviews, we aimed to synthesize research about the SRH outcomes of GBV for adolescent girls and young women in low- and middle-income countries (LMICs). GBV exposures were child abuse, female genital mutilation/cutting, child marriage, intimate partner violence (IPV), and non-partner sexual violence. PsycINFO, PubMed, and Scopus searches were supplemented with expert consultations, reference-list searches, and targeted organizational website searches. Reviews had to contain samples of girls and young women ages 10–24, although inclusion criteria were expanded post-hoc to capture adolescent-adult combined samples. Twenty-seven reviews were quality-rated. Study-level data were extracted from the 10 highest quality reviews (62 unique studies, 100 samples). Reviews were mostly from Africa and Asia and published between 2011 and 2015. We found consistent associations between GBV and number of sexual partners, gynecological conditions (e.g., sexually transmitted infections [STIs]), unwanted/unplanned pregnancy, and abortion. Some types of IPV also were associated with greater use of contraception/STI prevention. Addressing GBV is essential to improve SRH for girls and women in LMICs.

Gender-based violence (GBV) against women and girls is a prevalent global health problem and human rights violation, with detrimental health, social, and economic consequences (Decker et al., 2014; Yount, DiGirolamo, & Ramakrishnan, 2011). GBV against women and girls includes any act of violence that “results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty” (United Nations [UN] General Assembly, Resolution 48/104 1993, p. 3, art. 1, para.1). Polyvictimization, or experiencing multiple forms of GBV in one’s lifetime, may intensify the negative effects (Finkelhor, Ormrod, & Turner, 2007). Ending all forms of GBV against women is a UN priority and a means to achieve global gender equality (United Nations Development Programme [UNDP], 2016). Eliminating GBV as a sustainable development goal also is tied to the achievement of other goals, such as improving women’s health (United Nations Women, 2018).

In this systematic review of reviews, we set out to synthesize the literature on GBV exposures and sexual and reproductive health (SRH) outcomes for adolescent girls and young women in low- and middle-income countries (LMICs), with the goal of informing policy and prevention. SRH is defined as physical, emotional, mental, and social well-being regarding sexuality and the reproductive system (United Nations

Population Fund [UNFPA], 2016; World Health Organization [WHO], 2006). Sexual health goes beyond disease, dysfunction, or infirmity, requiring respectful relationships and the possibility of pleasurable and safe sex (WHO, 2006). To attain SRH, sexual empowerment may be necessary. Sexual empowerment is a psychosocial process whereby less powerful individuals gain more power and control over their sexuality through healthy sexual experiences and more claim to resources (Peterson, 2010; Zimmerman, 1995). Aspects of sexual empowerment include the ability to make decisions about sexual health and the ability to refuse unwanted behavior and to advocate for one’s sexual desires and interests (Peterson, 2010).

### *GBV and Adolescence in the Context of LMICs*

Despite increased attention to GBV, research on the subject has come disproportionately from higher-income countries. Existing research may perpetuate biases and lack relevance to cultural and economic environments in LMICs, where 89% of the world’s 600 million adolescent girls and young-adult women live (UNFPA, 2014a). Predominantly, research on GBV in LMICs has focused on adult women in urban environments (e.g., Chacham, Simao, & Caetano, 2016; Decker

et al., 2014), leaving the experiences of adolescent girls and young women in LMICs underexplored, especially in rural areas (Yount, Krause, & Miedema, 2017). During adolescence and young adulthood (approximately ages 10–24), young people form intimate relationships and an understanding of their sexuality (Fatusi & Hindin, 2010). Early exposure to GBV may negatively influence well-being, with lifelong consequences for SRH. Some evidence suggests that experiencing GBV during one's formative years may increase one's chances of revictimization or polyvictimization (Dunkle, Jewkes, Brown, Yoshihama, et al., 2004; Finkelhor et al., 2007). For women, adolescence and young adulthood introduce biological vulnerabilities (e.g., unique cellular formation of the cervix) that make them disproportionately susceptible to the negative consequences of GBV compared to older women, such as Human Immunodeficiency Virus (HIV; Kleppa et al., 2015) and other sexually transmitted infections (STIs; Andersson, Cockcroft, & Shea, 2008). Adolescents in LMICs face the largest global SRH burden, including STIs, early pregnancy, and unsafe abortions (Bearinger, Sieving, Ferguson, & Sharma, 2007). For instance, of the estimated 10 million people ages 15–24 living with HIV, 84% are in Africa and Asia (Bearinger et al., 2007), while the average birth rate for girls ages 15–19 in sub-Saharan Africa is 100/1000, compared to the global average of 44/1000 (The World Bank, 2019).

Forms of GBV relevant for adolescent girls and young women in LMICs include child abuse, female genital mutilation/cutting (FGMC), child marriage, intimate partner violence (IPV), and non-partner perpetrated sexual violence (NPSV; Yount et al., 2017). *Child abuse* includes physical, emotional, and sexual abuse, neglect, exploitation, and other ill treatment (United Nations Children's Fund [UNICEF], 2014) and disproportionately affects girls (UNFPA, 2014a). Estimates of child abuse range from 30% to 50% across geographic regions (Hillis, Mercy, Amobi, & Kress, 2016). *FGMC* involves the partial or total removal of external female genitalia, or other injury to the female genital organs for non-medical reasons (UNICEF, 2016b; WHO, 1997). *FGMC* affects at least 200 million girls, of whom 44 million are under age 15 (UNICEF, 2016a). *Child marriage*, meaning formal marriage or informal union of a child before the age of 18, affects 44% of young women in South Asia and 39% in sub-Saharan Africa, with approximately 8% of these young women married before age 15 (Santhya & Jejeebhoy, 2015; UNICEF, 2016b). *IPV* refers to behaviors committed by a current or former intimate partner that causes physical, emotional, or sexual harm (WHO, 2006). Across 81 LMIC settings, an estimated 30% of women ages 15 and over have experienced physical and/or sexual IPV (Devries et al., 2013). Moreover, an estimated 20–75% of women ages 15 and over have experienced emotional abuse, which includes insults, humiliation, intimidation, and use of threats (WHO, 2005). Finally, *NPSV* includes attempted or completed unwanted sexual acts or advances using coercion, intimidation, or force (WHO, 2013). Although sexual violence before age 18 often is counted as a sub-type of child abuse, estimates in adulthood sometimes include women ages 15 and

above (WHO, 2013). Globally, between 178 and 312 million women have experienced sexual violence in their lifetime (Abrahams et al., 2014). Across 30 LMICs, 15% of sexually experienced adolescents and over 11% of young adult women report that their first sexual experience was forced or coerced (Decker et al., 2014).

GBV against women and girls can be attributed to an interplay of personal, situational, and sociocultural factors (Heise, 1998). Globally, men have disproportionate social, political, and economic power, which is reinforced through sexist norms and policies (Connell, 2009; Heise, 1998). Although men may experience violence linked to their gender, unequal power places the burden of GBV on women and girls (Connell, 2009; Yount, James-Hawkins, Cheong, & Naved, 2018). In general, masculinity norms support men's use of violence to discipline and dominate women and children, whereas norms of femininity encourage women to exert emotional labor by attending to others' needs and not their own (Fahs & Swank, 2017; James-Hawkins, Salazar, Hennink, Ha, & Yount, 2016; Wingood & DiClemente, 2000). In addition, men may feel entitled to use coercion and aggression to meet their sexual needs. Harmful practices such as child marriage and FGMC reinforce the notion that girls' and women's sexuality is mainly for producing children—particularly sons—and for men's pleasure (Andro & Lesclingand, 2016). With global inequities that render women and girls vulnerable to GBV and poor SRH, understanding how GBV experiences are associated with SRH across the life course is critical.

GBV is linked to negative SRH outcomes for women and girls. GBV has been associated with pain during sex, arousal problems, risky sexual behaviors (Alsibiani & Rouzi, 2010; Biglu, Farnam, Abotalebi, Biglu, & Ghavami, 2016), genital and reproductive tract infections (Diouf & Nour, 2013; Iavazzo, Sardi, & Gkegkes, 2013), and unintended pregnancies and pregnancy complications (Anand, Unisa, & Singh, 2017; Berg & Underland, 2013). Conceivably, although beyond the scope of the current study, some SRH behaviors or statuses may precede GBV in instances where sociocultural factors engender intolerance of women's sexual and reproductive agency (Anderson, 2005). Further, the relationship of any one form of GBV with a specific SRH outcome may be confounded by prior or co-occurring forms of GBV (i.e., polyvictimization; Ellsberg & Heise, 2005; Santhya et al., 2010).

We aimed originally to synthesize the literature on SRH outcomes associated with GBV exposures for adolescent girls and young women in LMICs (ages 10–24). However, too few reviews focused exclusively on this group. Therefore, we expanded our eligibility criteria to allow reviews including our target group (ages 10–24) as well as girls and women of other ages. A recent review highlighted the lack of sexuality studies focused on the Global South, especially research on sexual violence (Dworkin, Lerum, & Zakaras, 2016). This systematic review of reviews provides a synthesis of the global research in this area by assessing the methodological quality of systematic reviews and compiling the results of studies

included in the highest-quality reviews. It also allowed us to synthesize findings across a range of exposures and outcomes, identifying implications of observed patterns for future research and prevention efforts.

## Method

We followed the Assessment of Multiple Systematic Reviews (AMSTAR) guidelines for systematic review of reviews (Shea et al., 2007). AMSTAR is an 11-item tool to assess the methodological quality of systematic reviews. Our protocol is based on two other reviews from our research group (Grose, Roof, Semenza, Leroux, & Yount, 2019; Yount et al., 2017).

## Search Strategy

We used a comprehensive list of search strings on PubMed and PsycINFO (November 1, 2016) and Scopus (November 6, 2016) online databases. Search strings included keywords on violence (e.g., domestic violence), SRH (e.g., vaginismus, sexual arousal), and LMICs (e.g., third world nation, underdeveloped country), including specific names (e.g., Latin America, Haiti). A complete list of search strings is available in Online Supplement 1. We searched the reference lists of eligible reviews from the database search and emailed the corresponding author(s) for additional reviews. Finally, we conducted a gray-literature search for non-peer reviewed and unpublished work from targeted organizational websites (Figure 1).

## Eligibility Criteria

This systematic review of reviews included original, English-language systematic reviews and meta-analyses of primary studies published between January 1, 2000 and November 6, 2016. We included reviews that were not labeled “systematic” if they discussed search terms and use of electronic databases. Included were reviews that addressed at least one quantitative association between a GBV exposure and SRH outcome of interest; reviews that explicitly examined only SRH exposures predicting GBV outcomes were excluded. The principal GBV exposures of interest were child abuse, FGMC, child marriage, IPV, and NPSV. Outcomes were sexual function, behavior, and empowerment; contraception/STI prevention; gynecological conditions; and pregnancy and birth-related outcomes. Our current focus on SRH complements prior reviews of GBV interventions (Yount et al., 2017) and mental health and psychological empowerment outcomes (Grose et al., 2019). Reviews must have included at least one sample with adolescent girls and young women ages 10–24 from an LMIC, based on the 2016 World Bank classifications of country incomes (The World Bank, 2018).

## Review Selection

The search, screening, review, and selection processes are summarized in Figure 1. The PsycINFO search revealed no eligible reviews. After excluding duplicate results from the PubMed and Scopus database searches, all 214 reviews were

double-screened by title and abstract, yielding 22 eligible reviews. After full-text screening, 10 reviews met eligibility criteria. Additional reviews were found through a reference-list search ( $n = 7$ ), expert consultations ( $n = 5$ ), and a gray-literature search ( $n = 6$ , including one duplicate). A list of included and excluded reviews is available upon request.

## Quality Assessment

All 27 reviews were duplicate-rated for quality using AMSTAR criteria (Shea et al., 2007). AMSTAR denotes criteria to evaluate review designs, search strategies, inclusion criteria, quality assessment of included studies, methods for synthesizing studies, publication bias, and conflicts of interest (Online Supplement 2). Scores ranged from 1 to 8 ( $M = 4.04$ ,  $SD = 2.38$ ) on the 11-point scale. Seventeen reviews were low quality (scored 0–4), 10 were moderate quality (scored 5–8) and zero were high quality (scored 9–11). We included reviews scoring 5 or higher (moderate quality) in our summary of study-level results, for a total of 10 eligible reviews.

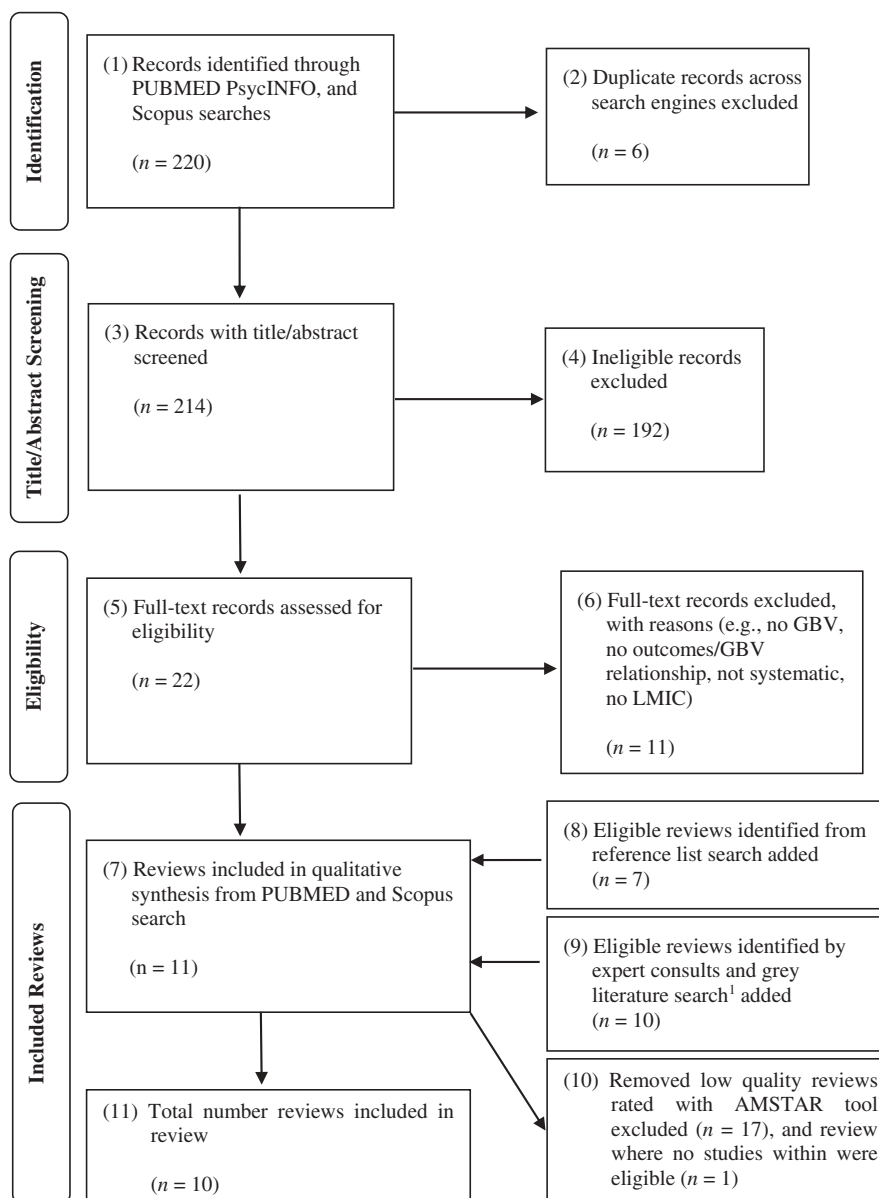
## Data Extraction and Analysis

We used a systematic approach to extract review- and study-level data. One author and one research assistant extracted review data. Three authors extracted study data. Original, empirical studies ( $N = 62$ ) included in the data extraction must have met the same exposure, outcome, gender, age, and language inclusion criteria applied at the review level. Data were extracted only once from studies reported in multiple reviews. There was no restriction on publication date for studies within the reviews. Information from reviews and studies was extracted in duplicate.

## Results

### Review Characteristics

Table 1 summarizes characteristics of the 10 moderate-quality reviews, all published between 2011 and 2015. Sums in Table 1 account for instances of study duplication across reviews. Ten reviews yielded 362 studies ( $M = 36.2$ ; range 10–124), of which two-thirds ( $n = 239$ ) focused on LMICs. LMIC geographic representation in reviews included North, South, East, West, and Central Africa ( $n = 8$ ); East, South, and Southeast Asia ( $n = 4$ ); South and Central America ( $n = 3$ ); Eastern Europe ( $n = 2$ ); Polynesia ( $n = 2$ ), and the Caribbean ( $n = 1$ ). Of the studies from LMICs, 88% were written in English ( $n = 210$ ). The percentage of English-language studies contained in the LMIC-inclusive reviews ranged from 79% to 100%. Only 53% ( $n = 189$ ) of all studies were in English and analyzed women and girls only or analyzed girls’ and women’s data separately from boys’ and men’s data. Of those studies stratified by gender, 40% examined exposures and outcomes of interest to this review (21% of all studies). Ultimately, 3% ( $n = 12$ ) of studies met all criteria by examining our exposures and outcomes with adolescent girls and young women ages 10–24 years in LMICs.



**Figure 1.** Study selection flow diagram.

<sup>1</sup>Websites: <https://www.unicef.org/>, <https://www.unicef-irc.org/>, <http://www.who.int/en/>, <http://www.unwomen.org/en>, <http://www.savethechildren.org/>, <http://www.care.org/>, <https://www.campbellcollaboration.org/>, <http://www.bettercarenetwork.org/>, <https://plan-international.org/>, <http://www.endcorporalpunishment.org/>, <http://www.childtrafficking.com/>, <http://www.ecpat.org/>, <http://www.unfpa.org/>, <http://www.worldsexology.org/>, <http://www.svri.org/>, <https://www.globalfundforwomen.org/>, <https://www.fordfoundation.org/>, <http://www.icrw.org/>, <http://www.popcouncil.org/>, <http://www.pathfinder.org/>, <https://www.engenderhealth.org/index-main.php>, <http://whatworks.co.za/>

Our original intent was to synthesize evidence from adolescent and young-adult samples (ages 10–24). However, too few reviews focused exclusively on this group in LMICs to provide a thorough review. Therefore, we widened the scope to incorporate any review that included samples of adolescent and young-adult respondents, even those that included adult women, expanding the age range to 9–70 years. We included additional four reviews and 11 studies, ultimately producing another 88 samples.

In terms of exposures and outcomes, reviews covered all five forms of GBV: IPV (50%,  $n = 5$ ), NPSV (50%,  $n = 5$ ), child abuse (40%,  $n = 4$ ), FGMC (30%,  $n = 3$ ), and child marriage (10%,  $n = 1$ ). Sixty percent of reviews examined only one GBV outcome (range 1–4). Reviews tended to collapse emotional,

physical, and/or sexual child abuse or IPV into “any child abuse” or “any IPV” in one’s life to accommodate studies that utilized composite measures. Composites included various combinations of emotional, physical, and/or sexual violence (e.g., physical and sexual, physical only, or all three). The largest number of reviews addressed any IPV experience (Hall, Chappell, Parnell, Seed, & Bewley, 2014; Li et al., 2014; Maxwell, Devries, Zionts, Alhusen, & Campbell, 2015; Shamu, Abrahams, Temmerman, Musekiwa, & Zarowsky, 2011; UNICEF, 2012), or NPSV (Hall et al., 2014; Li et al., 2014; Shamu et al., 2011; Thornton & Veenema, 2015; UNICEF, 2012). Only one review each addressed emotional child abuse (Norman et al., 2012), child neglect (Norman et al., 2012), any child abuse (Li et al., 2014), or child marriage (Li et al., 2014).

**Table 1.** Systematic review of summary characteristics.<sup>1</sup>

Review (1st author, date)	AMSTAR (out of 11)	Regions	<i>N</i> Studies	<i>n</i> LMICs	<i>n</i> English	<i>n</i> GW Analyzed	<i>n</i> Exposure- Outcome Analyzed	<i>n</i> 10–24-year -olds Only	Age Range (years)	GBV	SRH
Shamu et al., 2011	5	S Africa	19	19	19	18	1	0	16–44	CA IPV SV	Contra, SB, STI
Thornton & Veenema, 2015	5	S America	14	14	11	9	1	0	16–30	SV	Emp, Preg, SB, STI
Berg et al., 2014	6	E/N/W Africa	54	45	41	38	16	1	15–70	FGMC	Contra, Gyn, Preg, SB, SFxn, STI
UNICEF, 2012	6	E/S/SE Asia E Europe Polynesia	89 <sup>2</sup>	79	63	53	8	5	9–64	CA IPV SV	Contra, Emp, Preg, SB, SFxn, STI
Berg & Underland, 2013	7	E/N/W Africa	27	19	15	15	6	0	15–55	FGMC	Contra, Gyn, Preg, SB, SFxn, STI
Norman et al., 2012	7	S Africa	124	6	6	2	1	1	16–26	CA	STI
Berg & Denison, 2012	8	C//N/W Africa	15	14	14	14	6	1	15–54	FGMC	Emp, Gyn, Preg, SB, SFxn, STI
Hall et al., 2014	8	C/E/W Africa E/S/SE Asia E Europe Polynesia	73	21	19	18	13	1	13–69	IPV SV	Contra, Preg
Li et al., 2014	8	E/S Africa S Asia Caribbean S America	26	18	18	18	18	3	14–59	CA CM IPV SV	Contra, Emp, Preg, SB, STI
Maxwell et al., 2015	8	E/S Africa S Asia C America	10	4	4	4	3	0	15–49	IPV	Contra, SB, STI
<b>Totals</b>	-	-	<b>362</b>	<b>239</b>	<b>210</b>	<b>189</b>	<b>73</b>	<b>12</b>	<b>9–70</b>	-	-

Columns: AMSTAR = AMSTAR quality assessment rating; range 0–11; low = 0–4, moderate = 5–8, high = 9–11. Regions = geographic areas represented in the reviews. *N* Studies = total # of articles included in the reviews. *n* LMICs = total # of articles in the reviews that were from low- or middle-income countries. *n* English = total # of articles in the reviews written in English. *n* GW analyzed = # of articles in the reviews in which there was a separate analysis for women. *n* Exposure-Outcome Analyzed = # of articles in the reviews that analyzed a relationship of interest with a sample that included adolescents. *n* Adolescent Only = # of articles in the review analyzed data for adolescent girls and young women separately. Age Range = the age range of women and girls, in years, across the articles in the reviews. GBV = gender-based violence exposures. SRH = sexual and reproductive health outcomes.

Note: CA = childhood abuse; CM = child marriage; Contra = contraception; Emp = empowerment; FGMC = female genital cutting/mutilation; Gyn = gynecological conditions other than STIs; IPV = intimate partner violence; Preg = pregnancy, abortion outcomes; SB = sexual behavior; SFxn = sexual function/dysfunction; STI = sexually transmitted infections; SV = non-partner sexual violence.

<sup>1</sup>Includes duplicates studies across reviews. Studies are counted once, even if they analyzed multiple samples.

<sup>2</sup>Total studies for UNICEF (2012) are the number of studies analyzing “consequences,” and does not include prevalence studies.

Nearly all reviews ( $n = 9$ ) focused on more than one SRH outcome. Considered by broad SRH category, most reviews (90%) addressed STIs/HIV (Berg & Denison, 2012; Berg & Underland, 2013; Berg, Underland, Odgaard-Jensen, Fretheim, & Vist, 2014; Li et al., 2014; Maxwell et al., 2015; Norman et al., 2012; Shamu et al., 2011; Thornton & Veenema, 2015; UNICEF, 2012). Sexual behaviors were included in eight reviews (80%), with most focusing on extramarital sex (Berg & Denison, 2012; Berg & Underland, 2013; Berg et al., 2014; Li et al., 2014; Shamu et al., 2011; UNICEF, 2012) and number of sexual partners (Berg et al., 2014; Li et al., 2014; Maxwell et al., 2015; Shamu et al., 2011; Thornton & Veenema, 2015; UNICEF, 2012). Seven (70%) addressed contraception/STI prevention (Berg & Underland, 2013; Berg et al., 2014; Hall et al., 2014; Li et al., 2014; Maxwell et al., 2015; Shamu et al., 2011; UNICEF, 2012). Reviews of pregnancy and birth-related outcomes also were common (70%,  $n = 7$ ), especially reviews of miscarriage and/or stillbirth (Berg & Denison, 2012; Berg & Underland, 2013; Berg et al., 2014; Hall et al., 2014; Li et al., 2014; UNICEF, 2012). Limited attention was given to sexual function (Berg & Denison, 2012;

Berg & Underland, 2013; Berg et al., 2014; UNICEF, 2012) or gynecological conditions other than STIs (Berg & Denison, 2012; Berg & Underland, 2013; Berg et al., 2014). Further, reviews that focused on sexual empowerment were less common, with only one or two covering sexual communication (Li et al., 2014; UNICEF, 2012), refusing unwanted sexual behavior (Li et al., 2014; UNICEF, 2012), relationship equity (Li et al., 2014), or sexual knowledge (Berg & Denison, 2012; Thornton & Veenema, 2015).

### Characteristics of Extracted Studies

Sixty-two unique studies from the moderate-quality reviews assessed GBV exposures and SRH outcomes for women and girls in LMICs (see Online Supplement 3 for extensive study information). Twelve (19%) were studies of adolescent and young-adult women ages 10–24. Several studies included distinct samples from multiple LMIC study sites, so we synthesized information from all 100 separate samples from the 62

studies and report *sample* percentages in this section. Designs for the samples were mostly cross-sectional (87%) and rarely longitudinal (6%). The majority (75%) used probability (e.g., multi-stage cluster) sampling, whereas 25% relied on non-probability (convenience) sampling. Most samples (78%) were community- or population-based, and 20% were clinical.

Most studies were published between 2000–2010 (62%) or 2011–2016 (31%). Over half (56%) were undertaken in Africa, and more than one quarter (27%) in Asia. Samples were split on urbanicity, with 34% comprised of urban sites/participants, 39% mixed urban/rural, and 27% rural. Sample sizes ranged from 80 to 37,781, with most between 500 and 1,499 (45%) or 1,500 and 4,999 (28%) women and girls. Most samples (84%) included only married/partnered adolescent girls and women. However, only 8% of the adolescent/young adult-only samples were comprised of married/partnered participants (58% unmarried, 34% unknown). Our results revealed a shortage of research that was longitudinal, from LMICs outside Africa and Asia, inclusive of married adolescents and young adults, or focused only on adolescent girls and young-adult women.

### Synthesis of Results for Sexual and Reproductive Health

Table 2 summarizes the GBV exposures and SRH outcomes addressed in the 10 moderate-quality reviews and their 62 unique studies (12 adolescent-only). For exposure-outcome combinations, we report the number of *reviews* (out of 10), *samples* (out of 100), and *analyses* (out of 542). Recall that some studies examined GBV and SRH across multiple sites or countries, yielding multiple samples. Many of these samples included several assessments of the same type of GBV exposures and/or SRH outcomes, yielding multiple analyses. In Table 2, we report the percentage of positive, negative, and null associations for each exposure–outcome relationship studied. The denominators vary because they are the total number of *analyses* for the specific exposure–outcome relationships (see Online Supplement 4 for detailed results by sample). Positive associations indicated that a GBV exposure was associated with a higher likelihood of experiencing an SRH outcome (e.g., IPV associated with a higher likelihood of contraception use). We did not attempt to predict all possible exposure–outcome combinations *a priori*, rather, outcomes emerged from the systematic search strategy. The following summary statistics provide a cursory understanding of the gaps in the literature on the direct connections between GBV exposures and SRH outcomes.

The reviews addressed 28% of all possible exposure–outcome relationships. Only 7% ( $n = 23$ ) of exposure–outcome combinations were examined in five or more samples, with most associations examined in only one or two. Several exposure–outcome relationships stand out because they were assessed in numerous samples ( $>5$ ) and resulted in a high percentage of significant associations ( $>40\%$ ). Any IPV was positively associated with number of sexual partners (100% of analyses), STIs other than HIV (86% of analyses), induced abortion (78% of analyses), combined measures of pregnancy termination (78% of analyses), and unwanted/unplanned pregnancy (64% of analyses). Emotional IPV was positively associated with HIV (67% of analyses), and induced abortion (50% of analyses). Similarly, physical IPV was positively

associated with induced abortion (86% of analyses). Emotional IPV and physical IPV were (counterintuitively) related to greater use of contraception/STI prevention (56% and 50% of analyses, respectively). Finally, sexual IPV was positively associated with induced abortions (57% of analyses), and FGMC was related to genital symptoms other than STIs (41% of analyses). Below we summarize results for each SRH outcome organized by broad category. We provide country designations in parentheses the first time a citation appears in each sub-section (see Online Supplement 4 for detailed study information).

### Sexual Function

GBV and sexual function were examined in seven samples from seven studies. Sexual function included measures of general sexual dysfunction, sexual pleasure (desire, arousal, orgasm, or satisfaction), and pain during sex. Child sexual abuse (CSA) was positively associated with general sexual dysfunction in 40% ( $n = 2$ ) of analyses from one 9–18-year-old sample (Fahrudin & Edward, 2009 [Malaysia]) and one combined adolescent-adult sample (Luo, Parish, & Laumann, 2008 [China]), and was not associated in the other 60% ( $n = 3$ ). FGMC analyses ( $n = 2$ ) revealed mixed results, with half finding positive associations and half finding no association with pain during sex (Elnashar & Abdelhady, 2007 [Egypt]). Similarly, FGMC was negatively associated with pleasure in 44% ( $n = 8$ ) of analyses (Adinma, 1997 [Nigeria]; Elnashar & Abdelhady, 2007; Megafu, 1983 [Nigeria]), including results from one 18–28-year-old sample (Thabet & Thabet, 2003 [Egypt]), but was not associated in the other 56% ( $n = 10$ ). Thus, there was some evidence that CSA and FGMC are detrimental to sexual function for this population. Yet, research on non-sexual child abuse, child marriage, IPV, and NPSV was absent, and few studies examined only adolescents or young adults.

### Sexual Behavior

The relationship between GBV and women's sexual behavior was examined in 19 samples from 19 studies. Four forms of GBV exposure (all except child marriage) were assessed in relationship to sexual behavior. Sexual behaviors included age of sexual debut, frequency of sex, number of sexual partners, extramarital sex, drug and/or alcohol use before or during sex, transactional sex, and "other" behaviors.

**Timing and Frequency.** All five analyses indicated that FGMC, physical IPV, and NPSV were associated with a younger age of sexual debut (Caceres, Vanoss Marin, & Sid Hudes, 2000 [Peru]; Fonck, Leye, Kidula, Ndinya-Achola, & Temmerman, 2005 [Kenya]; Yount & Abraham, 2007 [Kenya]). Results from one less-than-22-year-old sample supported this overall finding with NPSV (Cheng et al., 2001 [China]). In contrast, FGMC, physical IPV, sexual IPV, any IPV, and NPSV were not associated with coital frequency in 90% ( $n = 9$ ) of analyses (Caceres et al., 2000; Stewart, Morison, & White, 2002 [Central African Republic]; van der Straten et al., 1998 [Rwanda]). Results from one 15–26-year-old sample were consistent with these null results for any IPV and coital frequency (Jewkes et al., 2006 [South Africa]). Although research was missing on child abuse, results

**Table 2.** Summary of results (% positive, negative, and null analyses).

Outcomes	Exposures										Total				
	Child Abuse					IPV									
	Emo	Neg	Phys	Sex	Wit	Any	CM	FGMC	Emo	Phys		Sex	Any	2+	SV
<b>Sexual Function</b>															
General															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	1,2,5	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,2,6
% positive analyses				40											40
% negative analyses				0											0
% null analyses				60											60
Desire/Arousal/Orgasm/Satisfaction															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	3,4,18	0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	3,4,18
% positive analyses							0								0
% negative analyses							44								44
% null analyses							56								56
Pain During Sex															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	3,2,2	50	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	3,2,2
% positive analyses							50								50
% negative analyses							0								0
% null analyses							50								50
<b>Sexual Behavior</b>															
Age of Sexual Debut															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	2,1,1	0	0,0,0	1,1,1	0,0,0	0,0,0	0,0,0	2,2,3	5,4,5
% positive analyses							0			0				0	0
% negative analyses							100			100				100	100
% null analyses							0			0				0	0
Coital Frequency															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,1,2	0	0,0,0	1,1,2	1,1,4	1,1,1	0,0,0	1,1,1	3,4,10
% positive analyses							0			0	25	0		0	10
% negative analyses							0			0	0	0		0	0
% null analyses							100			100	75	100		100	90
Number of Sexual Partners															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	3,2,3	0,0,0	0,0,0	1,1,6	0	0,0,0	1,1,1	0,0,0	3,5,5	0,0,0	4,3,5	6,10,21
% positive analyses				33			0			0		100		80	52
% negative analyses				0			0			0		0		0	0
% null analyses				67			100			100		0		20	48
Extramarital Sex															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	3,3,3	0,0,0	0,0,0	3,2,2	0	0,0,0	0,0,0	0,0,0	2,3,3	0,0,0	3,2,3	6,8,11
% positive analyses				67			0					67		100	64
% negative analyses				0			0					0		0	0
% null analyses				33			100					33		0	36
Transactional Sex															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	2,1,1	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	3,3,4	0,0,0	3,2,3	4,4,8
% positive analyses				0								100		33	63
% negative analyses				0								0		0	0
% null analyses				100								0		67	38
Other Sexual Behaviors															
n reviews, samples, analyses	0,0,0	0,0,0	1,1,1	1,2,4	1,1,1	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,1,1	0,0,0	1,2,2	2,6,9
% positive analyses			0	75	0							100		50	56
% negative analyses			0	0	0							0		0	0
% null analyses			100	25	100							0		50	44
<b>Sexual Empowerment</b>															
Communication															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,1,1	1,1,2	2,15,15	0,0,0	0,0,0	2,16,18
% positive analyses										0	100	20			28
% negative analyses										0	0	0			0
% null analyses										100	0	80			72

(Continued)



Table 2. (Continued).

Outcomes	Exposures														Total
	Child Abuse							IPV							
	Emo	Neg	Phys	Sex	Wit	Any	CM	FGMC	Emo	Phys	Sex	Any	2+	SV	
<b>Refusing Unwanted Behavior</b>															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	1,1,1	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,1,1	1,1,1	0,0,0	0,0,0	0,0,0	0,0,0
% positive analyses				0						0	100				
% negative analyses				0						0	0				
% null analyses				100						100	0				
<b>Relationship Equity</b>															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,1,1	0,0,0	0,0,0	0,0,0
% positive analyses												0			
% negative analyses												100			
% null analyses												0			
<b>Sexual Knowledge</b>															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,1,3	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,1,1	2,2,4
% positive analyses								0						0	0
% negative analyses								0						0	0
% null analyses								100						100	100
<b>Contraception/STI Prevention</b>															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	2,1,1	0,0,0	0,0,0	0,0,0	2,2,2	2,6,9	3,11,14	4,9,12	5,25,32	0,0,0	2,2,3	7,36,73
% positive analyses				0				0	56	50	8	22		0	27
% negative analyses				100				100	33	14	25	22		67	27
% null analyses				0				0	11	36	67	56		33	45
<b>Gynecological Conditions</b>															
<b>HIV</b>															
n reviews, samples, analyses	1,1,2	1,1,4	1,1,2	3,3,4	1,1,1	1,1,1	1,1,1	2,7,8	1,5,6	1,8,14	1,17,21	3,21,24	1,11,11	2,4,6	6,36,105
% positive analyses	100	0	50	25	100	0	0	13	67	36	19	33	9	0	27
% negative analyses	0	0	0	0	0	0	0	13	0	0	0	0	0	0	1
% null analyses	0	100	50	75	0	100	100	75	33	64	81	67	91	100	72
<b>Other STIs</b>															
n reviews, samples, analyses	1,1,2	1,1,4	1,1,2	2,2,4	0,0,0	0,0,0	0,0,0	3,5,14	1,2,2	1,3,3	1,2,2	2,5,7	0,0,0	1,1,1	7,15,41
% positive analyses	0	25	0	50				7	50	100	50	86		100	39
% negative analyses	0	0	0	0				7	0	0	0	0		0	2
% null analyses	100	75	100	50				86	50	0	50	14		0	59
<b>Other Genital Symptoms</b>															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	3,7,26	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	3,7,26
% positive analyses								35							35
% negative analyses								4							4
% null analyses								61							61
<b>Pregnancy-Related Outcomes</b>															
<b>Unplanned/Unwanted Pregnancy</b>															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,2,3	2,3,5	2,3,5	1,14,14	1,1,2	2,2,2	3,18,31
% positive analyses									100	60	60	64	0	0	65
% negative analyses									0	0	0	0	0	0	0
% null analyses									0	0	40	36	100	100	35
<b>Miscarriage, Stillbirth</b>															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	3,2,8	0,0,0	1,2,3	1,1,2	2,16,16	1,1,2	0,0,0	6,20,31
% positive analyses								12		67	0	37	0		29
% negative analyses								0		0	0	0	0		0
% null analyses								88		33	100	63	100		71
<b>Abortion: Induced</b>															
n reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,5,6	1,6,7	1,6,7	2,20,23	1,2,2	1,1,1	2,24,46
% positive analyses									50	86	57	78	50	100	72
% negative analyses									0	0	0	0	0	0	0
% null analyses									50	14	43	22	50	0	28
<b>Abortion: Induced w/Stillbirth &amp;/or Spontaneous</b>															

(Continued)

Table 2. (Continued).

Outcomes	Exposures										Total				
	Child Abuse					IPV									
	Emo	Neg	Phys	Sex	Wit	Any	CM	FGMC	Emo	Phys		Sex	Any	2+	SV
<i>n</i> reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	1,1,1	1,2,3	1,2,3	1,14,14	1,1,2	0,0,0	1,16,23
% positive analyses								100	67	0	79	50	65		
% negative analyses								0	0	0	0	0	0		0
% null analyses								0	33	100	21	50	35		
Birth Complications															
<i>n</i> reviews, samples, analyses	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	0,0,0	3,6,49
% positive analyses								18					18		
% negative analyses								0					0		
% null analyses								82					82		
<b>Total</b>															
<i>n</i> reviews, samples, analyses	1,1,4	1,1,8	2,2,5	4,6,27	2,2,2	1,1,2	1,1,1	3,20,141	3,13,27	3,20,55	4,28,59	5,57,161	2,13,19	5,8,31	10,100,542
% positive analyses	50	13	20	42	50	50	0	17	63	55	28	50	16	35	37
% negative analyses	0	0	0	4	0	0	0	10	11	5	7	4	0	7	7
% null analyses	50	88	80	54	50	50	100	73	26	40	65	45	84	48	56

We include the number of systematic reviews (out of 10), unique samples from the extracted studies (out of 100), and the number of analyses exploring a particular exposure–outcome relationship (out of 542). Percent positive, negative, and null analyses are calculated out of the number of analyses exploring a particular exposure–outcome relationship so the denominator changes. Shaded cells denote combinations analyzed in ≥5 samples. Emo = emotional, Neg = neglect, Phys = physical, Sex = sexual, Wit = witnessing parental abuse, Any = any type, CM = child marriage, FGMC = Female Genital Mutilation/Cutting, IPV = Intimate partner violence, 2+ = two or more forms of IPV, SV = non-partner sexual violence

consistently suggested that GBV was related to earlier first sex but not to coital frequency.

**Number of Sexual Partners.** CSA was unrelated to number of sexual partners in most analyses (67%,  $n = 2$ ; Luo et al., 2008 [China]). All analyses indicated that any child abuse ( $n = 1$ ; Jewkes et al., 2006 [South Africa]) and any IPV ( $n = 5$ ; Decker et al., 2009 [India]; Dunkle, Jewkes, Brown, Gray, et al., 2004 [South Africa]; Jewkes et al., 2006; Kacanek et al., 2013 [South Africa/Zimbabwe, combined]; Silverman, Decker, Saggurti, Balaiah, & Raj, 2008 [India]) were associated with reporting more sexual partners. Further, in 80% of analyses ( $n = 4$ ), NPSV was associated with reporting more sexual partners (Cheng et al., 2001 [China]; Dunkle, Jewkes, Brown, Gray, et al., 2004). In all analyses, FGMC ( $n = 6$ ; Klouman, Manongi, & Klepp, 2005 [Tanzania]) and physical IPV ( $n = 1$ ; Fonck et al., 2005 [Kenya]) were unrelated to the number of sexual partners. Results from one less-than-22-year-old (Cheng et al., 2001) and one 15–26-year-old sample (Jewkes et al., 2006) were consistent with those from combined adolescent-adult samples, showing GBV was related to reporting more sexual partners. Overall, some forms of GBV – especially any child abuse, any IPV, and NPSV – were associated with reporting more sexual partners.

**Extramarital Sex.** In 67% of analyses, CSA ( $n = 2$ ; Dunkle, Jewkes, Brown, Gray, et al., 2004 [South Africa]; Niu, Lou, Gao, Zuo, & Shah, 2010 [China]) and any IPV ( $n = 2$ ; Dunkle, Jewkes, Brown, Gray, et al., 2004; Jewkes et al., 2006 [South Africa]) were related to a higher likelihood of reporting extramarital sex. All three analyses of NPSV showed a positive association with extramarital sex (Dunkle, Jewkes, Brown, Gray, et al., 2004; Le & Blum, 2009 [Vietnam]). FGMC was not associated with extramarital sex in any analysis ( $n = 2$ ; Megafu, 1983 [Nigeria]; Yount & Abraham, 2007 [Kenya]). Results from 15–26-year-old (Jewkes et al., 2006), 15–24-year-old (Le & Blum, 2009) and 18–24-year-old samples (Niu et al., 2010) were consistent with those of combined adolescent-adult samples. Overall, CSA, any IPV, and NPSV were consistently related to a higher likelihood of reporting extramarital sex.

**Transactional Sex.** Transactional sex measures included exchanging sex for resources such as food, clothes, transportation, school fees, housing, or money. None of the analyses ( $n = 1$ ) suggested a relationship between CSA and transactional sex (Dunkle, Jewkes, Brown, Gray, et al., 2004 [South Africa]). In 33% of analyses ( $n = 1$ ), NPSV was positively associated with transactional sex (Dunkle, Jewkes, Brown, Gray, et al., 2004). In all four analyses, including a 15–26-year-old sample (Jewkes et al., 2006 [South Africa]), any IPV was related to a higher likelihood of participating in transactional sex (Dunkle, Jewkes, Brown, Gray, et al., 2004; Kacanek et al., 2013 [South Africa/Zimbabwe, combined]). Overall, results suggested NPSV and any IPV were related to a higher likelihood of transactional sex, although research on non-sexual child abuse was missing and only one 15–26-year-old sample was found.

**Other Sexual Behavior.** The relationships between GBV and other sexual behaviors (e.g., drug or alcohol use before sex, pornography use) were also examined, though most were assessed in only one study each. In all analyses, physical child abuse ( $n = 1$ ) and witnessing parental abuse ( $n = 1$ ) were unrelated to a measure of “risky sexual behavior” for 14–20-year-olds (Yi et al., 2010 [Cambodia]). In one analysis each, CSA was unrelated to “thinking about sex often,” but was positively related to reporting masturbation and a greater variety of sexual practices (Luo et al., 2008 [China]), and to watching pornography in an 18–24-year-old sample (Niu et al., 2010 [China]). Any IPV was related to recent anal sex for women in sex work in all analyses ( $n = 1$ ; Decker et al., 2010 [Thailand]). Sexual coercion was related to a higher likelihood of sex following excessive drinking for less-than-22-year-old abortion seekers in all analyses ( $n = 1$ ; Cheng et al., 2001 [China]). However, coercion at first sex was unrelated to sex under the influence of drugs or alcohol for all analyses in a probability sample of 16–30-year-olds ( $n = 1$ ; Caceres et al., 2000 [Peru]). Although some studies used rigorous methods, the limited number of analyses across varied behaviors made it difficult to draw broad conclusions.

### Sexual Empowerment

Twenty samples from seven studies assessed the relationship between GBV and sexual empowerment. All GBV exposures except child marriage were examined in relationship to sexual empowerment outcomes, which included sexual communication, refusing unwanted sexual behavior, relationship equity, and sexual knowledge. Physical IPV and any IPV were unrelated to sexual communication in 100% ( $n = 1$ ) and 80% ( $n = 12$ ) of analyses, respectively (van der Straten et al., 1998 [Rwanda]; Kiarie et al., 2006 [Kenya]; WHO, 2005 [American Samoa, Bangladesh, Brazil, Ethiopia, Peru, Serbia and Montenegro, Tanzania, and Thailand]). In contrast, sexual IPV was associated with more condom negotiation in all analyses ( $n = 2$ ; van der Straten et al., 1998). A partner’s insistence on sex was related to higher likelihood of refusing sex in all analyses ( $n = 1$ ; van der Straten et al., 1998). However, no associations were observed between CSA and sex just to please one’s partner ( $n = 1$ ; Luo et al., 2008 [China]) or between physical IPV and refusing sex ( $n = 1$ ; van der Straten et al., 1998). Results from one 15–26-year-old sample found a negative relationship between any IPV and relationship equity in all analyses ( $n = 1$ ; Jewkes, Dunkle, Nduna, & Shai, 2010 [South Africa]). In all analyses, neither coercion at sexual initiation for 16–30-year-olds ( $n = 1$ ; Caceres et al., 2000 [Peru]) nor FGMC for 18–28-year-olds ( $n = 3$ ; Thabet & Thabet, 2003 [Egypt]) were related to sexual knowledge. Thus, available evidence suggested IPV was associated with lower power in sexual relationships and that sexual violence (IPV and NPSV) was related to more refusal and negotiation.

### Contraception/STI Prevention

Thirty-six samples from 21 studies analyzed the relationship between GBV and using contraception or STI-prevention methods (e.g., condoms, hormonal pills, sterilization, etc.). All GBV exposures except child marriage were examined in

relation to contraception/STI prevention. Of childhood GBV exposures, CSA (Dunkle, Jewkes, Brown, Gray, et al., 2004 [South Africa]) and FGMC (Jackson, Adongo, Bawah, Feinglass, & Phillips, 2005 [Ghana]; Yount & Abraham, 2007 [Kenya]) were associated with *less* use of contraception/STI prevention in all three analyses. No other forms of childhood abuse were explored.

Results for IPV were mixed and varied by form of abuse. In 56% of analyses ( $n = 5$ ), emotional IPV was associated with *more* use of contraception/STI prevention (Emenike, Lawoko, & Dalal, 2008 [Kenya]; Nguyen et al., 2012 [Vietnam]; Salazar, Valladares, & Hogberg, 2012 [Nicaragua]), but was related to *less* use in 33% ( $n = 4$ ; Antai & Adaji, 2012 [Nigeria]; Kacaneck et al., 2013 [South Africa/Zimbabwe, combined]). In 50% of analyses ( $n = 7$ ), physical IPV was associated with *more* use of contraception/STI prevention (Emenike et al., 2008; Fonck et al., 2005 [Kenya]; Nguyen et al., 2012; Okenwa, Lawoko, & Jansson, 2011 [Nigeria]; Salazar et al., 2012; Stephenson, Jadhav, & Hindin, 2013 [India]), but with *less* use in 14% ( $n = 2$ ; Antai & Adaji, 2012; Kacaneck et al., 2013). Examples of positive, negative, and null associations with physical IPV were found with longitudinal study designs (Kacaneck et al., 2013; Stephenson et al., 2013). In 56% of analyses ( $n = 18$ ), any IPV was not associated with contraception/STI prevention use (Decker et al., 2010 [Thailand]; Dunkle, Jewkes, Brown, Gray, et al., 2004 [South Africa]; Jewkes et al., 2006 [South Africa]; Kiarie et al., 2006 [Kenya]; Nguyen et al., 2012 [Vietnam]; Salazar et al., 2012; Were et al., 2011 [Botswana/Kenya/Rwanda/South Africa/Tanzania/Uganda/Zambia, combined]; WHO, 2005 [American Samoa, Bangladesh, Brazil, Ethiopia, Namibia, Peru, Serbia, and Montenegro]), was positively associated in 22% of analyses ( $n = 7$ ; Nguyen et al., 2012; Salazar et al., 2012; WHO, 2005 [Tanzania and Thailand]), and was negatively associated in 22% of analyses ( $n = 7$ ; Antai & Adaji, 2012; Decker et al., 2009 [India], 2010; Kacaneck et al., 2013; Silverman et al., 2008 [India]; Were et al., 2011). Results for sexual violence exposures also varied. In 67% of analyses ( $n = 8$ ), sexual IPV was not associated with contraception/STI prevention use (Le & Blum, 2009 [Vietnam]; Nguyen et al., 2012 [Vietnam]; Okenwa et al., 2011 [Nigeria]; Salazar et al., 2012 [Nicaragua]; van der Straten et al., 1998 [Rwanda]), with *less* use in 25% ( $n = 3$ ; Antai & Adaji, 2012 [Nigeria]; Kacaneck et al., 2013 [South Africa/Zimbabwe, combined]), and with *more* use in 8% ( $n = 1$ ; Emenike et al., 2008 [Kenya]). Null findings were confirmed in samples examining sexual IPV with 15–24-year-olds (Le & Blum, 2009) and any IPV with 15–26-year-olds (Jewkes et al., 2006 [South Africa]). Negative associations and null findings with sexual IPV and any IPV were found in longitudinal analyses (Kacaneck et al., 2013). Finally, in 67% of analyses ( $n = 2$ ), NPSV was associated with *less* use of contraception/STI prevention (Dunkle, Jewkes, Brown, Gray, et al., 2004 [South Africa]), including one 15–24-year-old sample (Speizer et al., 2009 [South Africa]). In sum, NPSV and sexual IPV tended to be either unassociated with contraception/STI prevention use or associated with less use.

### Gynecological Conditions

The relationship between GBV and gynecological conditions was assessed in 45 samples across 35 studies. Gynecological

conditions included STIs and other genital symptoms that were not clearly sexually transmitted (e.g., abnormal discharge, urination difficulties, reproductive tract infections, and menstrual problems). All GBV exposures were examined in relationship to STIs. However, only FGMC was assessed in relation to other genital symptoms. The lack of studies of other GBV exposures in relationship to gynecological conditions beyond STI diagnoses and symptoms was a notable evidence gap.

**STIs.** HIV was the most common STI outcome analyzed, although most studies analyzed HIV and other STIs. Other STI symptoms (e.g., genital lesions, warts, sores) and diagnoses (e.g., chlamydia, gonorrhea, syphilis) were grouped to facilitate interpretation. Across exposures, GBV was positively associated with HIV in 27% of analyses ( $n = 28$ ) and with other STIs in 39% of analyses ( $n = 16$ ).

Emotional child abuse and witnessing parental abuse were consistently associated with a higher likelihood of HIV seropositivity (Jewkes, Dunkle, Nduna, Jama, & Puren, 2010 [South Africa]; Kayibanda, Bitera, & Alary, 2012 [Rwanda]); however, in most (75–100%) analyses, HIV was not associated with childhood neglect ( $n = 4$ ; Jewkes, Dunkle, Nduna, Jama, et al., 2010), CSA ( $n = 3$ ; Dunkle, Jewkes, Brown, Gray, et al., 2004 [South Africa]; Jewkes, Dunkle, Nduna, Jama, et al., 2010; Maman et al., 2002 [Tanzania]), any child abuse ( $n = 1$ ; Jewkes et al., 2006 [South Africa]), child marriage ( $n = 1$ ; Ghosh et al., 2011 [India]), and FGMC ( $n = 6$ ; Brewer, Potterat, Roberts, & Brody, 2007 [Kenya]; Jewkes, Dunkle, Nduna, Jama, et al., 2010; Klouman et al., 2005 [Tanzania]; Pépin et al., 1991 [The Gambia]). There were two exceptions for FGMC, with one study finding a negative association with HIV in a clinical convenience sample of sex workers (Kanki et al., 1992 [Senegal]), and one study finding a positive association in a nationally representative Kenyan sample (Maslovskaya, Brown, & Padmadas, 2009). Similarly, in most (75–100%) analyses, STIs were not associated with emotional child abuse ( $n = 2$ ), neglect ( $n = 3$ ), physical child abuse ( $n = 2$ ; Jewkes, Dunkle, Nduna, Jama, et al., 2010) or FGMC ( $n = 12$ ; Elmusharaf, Elkhidir, Hoffmann, & Almoth, 2006 [Sudan]; Klouman et al., 2005; Msuya et al., 2002 [Tanzania]; Yount & Abraham, 2007 [Kenya]). Mixed results in 25–50% of analyses from one study of 16–26-year-olds indicated a positive association between physical child abuse and HIV ( $n = 1$ ), CSA and HIV ( $n = 1$ ), and neglect and other STIs ( $n = 1$ ; Jewkes, Dunkle, Nduna, Jama, et al., 2010). The mixed results found with combined adolescent-adult samples also were evident with adolescents and young women of median age 17 (Brewer et al., 2007), ages 15–26 (Jewkes et al., 2006), or ages 16–26 (Jewkes, Dunkle, Nduna, Jama, et al., 2010). Overall, childhood GBV was not associated with HIV or other STIs, although emotional child abuse, physical child abuse, and witnessing parental abuse may be HIV risk factors, and CSA may be a risk factor for other STIs.

Associations between adult GBV exposures and STIs were mixed and dependent on the form of abuse. In 67% of analyses ( $n = 4$ ), emotional IPV was associated with a greater likelihood of HIV (Dude, 2011 [Rwanda]; Kayibanda et al., 2012; Kouyoumdjian et al., 2013 [Uganda]), and in 50% with

a greater likelihood of other STIs ( $n = 1$ ; Dude, 2011). Physical IPV was related to a greater likelihood of HIV in 36% of analyses ( $n = 5$ ; Fonck et al., 2005 [Kenya]; Kouyoumdjian et al., 2013; Maman et al., 2002), and was associated with a greater likelihood of other STIs in all three analyses (Barros, Schraiber, & Franca-Junior, 2011 [Brazil]; Dude, 2011; Fonck et al., 2005). In 19% of analyses ( $n = 4$ ), sexual IPV was positively associated with HIV (Kouyoumdjian et al., 2013; Maman et al., 2002; Quigley et al., 2000 [Uganda]; van der Straten et al., 1998 [Rwanda]), and in 50% was positively associated with other STIs ( $n = 1$ ; Dude, 2011). In 33% of analyses ( $n = 8$ ), any IPV was positively associated with HIV (Barros et al., 2011; Decker et al., 2009 [India]; Dude, 2011; Dunkle, Jewkes, Brown, Gray, et al., 2004; Jewkes, Dunkle, Nduna, & Shai, 2010; Kouyoumdjian et al., 2013; Were et al., 2011 [Botswana/Kenya/Rwanda/South Africa/Tanzania/Uganda/Zambia, combined]), and in 86% was positively associated with other STIs ( $n = 6$ ; Barros et al., 2011; Decker et al., 2010 [Thailand]; Dude, 2011; Jewkes, Dunkle, Nduna, & Shai, 2010). When two or more forms of IPV were combined, nearly all analyses (91%;  $n = 10$ ) found null results for HIV (Harling, Msisha, & Subramanian, 2010 [Dominican Republic, Haiti, India, Kenya, Liberia, Malawi, and Mali]; see; Silverman et al., 2008 [India] for an exception). Finally, no analyses ( $n = 6$ ) found a relationship between NPSV and HIV, although in all analyses ( $n = 1$ ) NPSV was positively associated with other STIs (Caceres et al., 2000 [Peru]). Studies with 15–26-year-olds (Jewkes et al., 2006) and 15–24-year-olds (Speizer et al., 2009 [South Africa]) supported the overall results, including one longitudinal study assessing incident HIV with 15–26-year-olds (Jewkes, Dunkle, Nduna, & Shai, 2010). In sum, emotional child abuse and IPV, physical child abuse and IPV, witnessing abuse, and any IPV were of concern for HIV, while CSA, all forms of IPV, and NPSV were of concern for other STIs.

**Other Genital Symptoms.** FGMC was assessed in relationship to several genital symptoms, including abnormal vaginal discharge, bacterial vaginosis, pelvic inflammatory disease, genital sores, irregular menses, and dysmenorrhea. There were no studies with only adolescents or young adults in this category. In 35% of analyses ( $n = 9$ ), FGMC was associated with more genital symptoms (Elnashar & Abdelhady, 2007 [Egypt]; Fillo & Leone, 2007 [Burkina Faso]; Jones, Diop, Askew, & Kabore, 1999 [Burkina Faso and Mali]; Morison et al., 2001 [The Gambia]). Although results were sparse, and none focused only on adolescents, there was some evidence that FGMC may be a risk factor for gynecological and menstrual problems.

### **Pregnancy and Birth-related Outcomes**

Forty-nine samples from 22 studies examined the relationship between GBV and pregnancy- or birth-related outcomes. Pregnancy-related outcomes included unplanned/unwanted pregnancy, miscarriage and/or stillbirth, and abortion. Birth-related outcomes included complications during delivery (e.g., episiotomy, cesarean delivery, obstructed labor, hemorrhage). Only studies of FGMC, IPV, and NPSV with pregnancy and birth-related outcomes were found.

**Unplanned/unwanted Pregnancy.** In all analyses, emotional IPV ( $n = 3$ ; Nguyen et al., 2012 [Vietnam]; Okenwa et al., 2011 [Nigeria]) and physical IPV ( $n = 5$ ; Nguyen et al., 2012; Okenwa et al., 2011; Silverman, Gupta, Decker, Kapur, & Raj, 2007 [Bangladesh]) were positively associated with unplanned/unwanted pregnancy. Most analyses of sexual IPV (60%,  $n = 4$ ; Nguyen et al., 2012; Okenwa et al., 2011) and any IPV (64%,  $n = 9$ ; Nguyen et al., 2012; Pallitto et al., 2013 [Bangladesh, Brazil, Ethiopia, Namibia, Peru, Tanzania, and Thailand]) also found positive associations with unplanned/unwanted pregnancy. Yet, in all analyses, two or more forms of IPV ( $n = 2$ ; Silverman et al., 2007) and NPSV ( $n = 2$ ; Caceres et al., 2000 [Peru]) were unrelated to unplanned/unwanted pregnancy. One 15–24-year-old study supported the null findings for NPSV (Speizer et al., 2009 [South Africa]). In sum, IPV (emotional, physical, sexual) was consistently associated with unwanted/unintended pregnancy.

**Miscarriage/stillbirth.** FGMC was unrelated to miscarriage/stillbirth in 88% of analyses ( $n = 7$ ; Larsen & Okonofua, 2002 [Nigeria]; Morison et al., 2001 [The Gambia]). In all analyses, sexual IPV ( $n = 2$ ) and experiencing two or more forms of IPV ( $n = 2$ ) were unrelated to miscarriage/stillbirth (Silverman et al., 2007 [Bangladesh]). However, physical IPV was related to higher likelihood of miscarriage/stillbirth in 67% of analyses ( $n = 2$ ; Fonck et al., 2005 [Kenya]; Silverman et al., 2007). Also, experiencing any IPV was related to a higher likelihood of miscarriage/stillbirth in 37% of analyses ( $n = 6$ ; Stöckl, Filippi, Watts, & Mbwambo, 2012 [Tanzania]; WHO, 2005 [American Samoa, Brazil, and Peru]), although unrelated in 63% ( $n = 10$ ; Nair et al., 2013 [India]; WHO, 2005 [Bangladesh, Ethiopia, Namibia, Serbia and Montenegro, Tanzania, and Thailand]). In sum, physical IPV and any IPV were concerning potential risk factors for miscarriage/stillbirth.

**Abortion.** Studies assessed elective-induced abortion and measures of induced abortion combined with stillbirth and/or spontaneous abortion. In the latter case, it was not possible to disaggregate which pregnancy terminations were stillbirth, spontaneous abortion, or induced abortion. Physical IPV ( $n = 6$ ; Alio et al., 2011 [Cameroon]; Antai & Adaji, 2012 [Nigeria]; Emenike et al., 2008 [Kenya]; Kaye, Mirembe, Bantebya, Johansson, & Ekstrom, 2006 [Uganda]; Nguyen et al., 2012 [Vietnam]) and any IPV ( $n = 18$ ; Antai & Adaji, 2012; Kaye et al., 2006; Nguyen et al., 2012; Stöckl et al., 2012 [Tanzania]; WHO, 2005 [Bangladesh, Brazil, Ethiopia, Peru, Serbia and Montenegro, Tanzania, and Thailand]; Wu, Guo, & Qu, 2005 [China]) were positively associated with induced abortion in 86% and 78% of analyses, respectively. Similarly, physical IPV ( $n = 2$ ; Silverman et al., 2007 [Bangladesh]) and any IPV ( $n = 11$ ; Pallitto et al., 2013 [Bangladesh, Brazil, Ethiopia, Namibia, Peru, Serbia and Montenegro, Tanzania, and Thailand]) were positively related to other measures of pregnancy termination in 67% and 79% of analyses, respectively. In one 15–24-year-old sample, NPSV was related to a higher likelihood of induced abortion (Kalyanwala, Zavier, Jejeebhoy, & Kumar, 2010 [India]).

Results were also mixed for emotional IPV, sexual IPV, and combined measures of two or more forms of IPV. Emotional IPV was positively associated with induced

abortion in 50% of analyses ( $n = 3$ ; Emenike et al., 2008; Kaye et al., 2006; Nguyen et al., 2012), and with other termination measures in 100% ( $n = 1$ ; Okenwa et al., 2011 [Nigeria]). Positive associations between sexual IPV and induced abortion were found in 57% of analyses ( $n = 4$ ; Alio et al., 2011; Antai & Adaji, 2012; Kaye et al., 2006; Nguyen et al., 2012), but only null results ( $n = 3$ ) were reported for other termination measures (Okenwa et al., 2011). In 50% of analyses, two or more forms of IPV were positively associated with induced abortion ( $n = 1$ ) and with other termination measures ( $n = 1$ ; Alio et al., 2011; Silverman et al., 2007). Overall, GBV – especially emotional IPV, physical IPV, and any IPV – was consistently related to induced abortion and other measures of pregnancy termination.

**Birth Complications.** FGMC was unrelated to birth complications in 82% of analyses ( $n = 40$ ; Adinma, 1997 [Nigeria]; Browning, Allsworth, & Wall, 2010 [Ethiopia]; Elnashar & Abdelhady, 2007 [Egypt]; Jones et al., 1999 [Burkina Faso and Mali]; Larsen & Okonofua, 2002 [Nigeria]). FGMC was positively associated with birth complications like episiotomies and perineal tears in the other 18% ( $n = 9$ ; Elnashar & Abdelhady, 2007; Jones et al., 1999 [Mali]; Larsen & Okonofua, 2002). Overall, FGMC was not associated with birth complications, but no analyses focused solely on adolescents and young adults and no other GBV exposures were assessed.

## Discussion

This systematic review of reviews is the first synthesis of the evidence from the highest-quality reviews about the relationship between GBV and SRH for women and girls in LMICs. The reviews were published between 2011 and 2015, suggesting a literature in its early stages. Our analysis confirmed relationships between GBV and SRH across multiple exposures and outcomes and identified evidence gaps, offering a roadmap for future research. We examined five common forms of GBV in adolescents and young adults: child abuse, FGMC, child marriage, IPV, and NPSV. This review revealed that GBV exposure was a risk factor for more sexual partners, gynecological conditions (HIV, other STIs, and genital symptoms other than STIs), unwanted/unplanned pregnancy, and abortion. Emotional and physical IPV were associated with higher use of contraception/STI prevention, which may (depending on timing) be a self-protective response to IPV exposure. We conclude that GBV may have negative implications for the sexual health and well-being of women and girls in LMICs. Our work contributes an important synthesis of evidence from LMICs showing a relationship between GBV and aspects of SRH. Below, we summarize the scope of reviews and studies and offer guidance for future research.

### Review and Study Characteristics

We identified several important gaps in research on the association between GBV and SRH outcomes for adolescent girls and young women in LMICs. We originally aimed to focus on adolescent girls and young women only, but data targeting

10–24-year-olds were scarce. This finding corroborates our team's prior systematic reviews of reviews identifying a dearth of evidence regarding interventions to prevent GBV (Yount et al., 2017) and about the relationship between GBV and mental-health outcomes in the same population groups in LMICs (Grose et al., 2019). Therefore, we expanded the inclusion criteria post-hoc for the present study to capture combined samples of adolescent girls, young women, and adult women. Overall, out of 62 unique studies, only 12 (19%) focused solely on adolescent girls and young women, and only one sample included early adolescents (age 9–18). As such, we were only partially able to synthesize developmentally nuanced GBV consequences. Although findings from adolescent-only studies still corroborated with those for combined samples including adults, it is possible that the expanded age range may have diluted the results specifically for the 10–24-year-old age group of interest. That is, if a woman experienced GBV early in life and then experienced negative SRH outcome(s) later in life, the influence of time-varying confounders may grow with the increasing time between the exposure and the outcome.

Several other gaps in the literature were notable. Our findings were limited in geographic scope, with most studies occurring in Africa or Asia and evidence substantially lacking for Latin America, the Caribbean, and the Middle East. To some extent, the geographic focus on Africa and Asia is justified by the large numbers of adolescent girls in these regions and relatively high rates of GBV and poor SRH outcomes (Woog & Kågesten, 2017). That said, this synthesis is not necessarily generalizable to the experiences of women and girls living in underrepresented regions. Although married/partnered individuals were recruited in most studies, only one study explicitly analyzed results from married adolescents separate from adults. Attention must be paid to adolescents' entry into more diverse relationship types, given changing patterns of marriage worldwide (e.g., marrying at later ages, entering consensual non-marital unions; United Nations Department of Economic and Social Affairs, Population Division, 2016). Further, we focused on IPV and NPSV perpetrated by men against women and girls. Our search strategy did not focus on gay, lesbian, bisexual, transgender, or queer (LGBTQ) populations, and stratifying by gender identity was neither feasible nor a focus of this review of reviews. Future efforts to synthesize the literature on relationships between GBV and SRH should focus on LGBTQ populations.

Synthesizing research on GBV and SRH also was difficult due to variations in the measurement of exposures and outcomes. Few studies used validated measures of SRH (except for STI/HIV tests). More often, measures of GBV were standardized because studies used comparative survey modules for child marriage, FGMC, IPV, and NPSV available from the WHO (2005) or the Demographic and Health Surveys (DHS; Kishor & Johnson, 2004). Many studies did not have enough participants to analyze separate forms of IPV or subtypes of FGMC, so IPV often was consolidated into “any IPV” or “two or more forms,” and FGMC was coded as “cut” or “uncut.” Although combined prevalence measures allowed analysis of some rare exposures, some GBV exposures were common, and aggregation across type may have masked

relationships between more severe forms of GBV and SRH (Battle, Hennink, & Yount, 2017; Godha, Hotchkiss, & Gage, 2013) and between poly-victimization and SRH (Aho, Proczkowska-Björklund, & Svedin, 2016). For instance, combining FGMC types that vary greatly in severity may explain the mixed and contradictory findings for outcomes like pain during sex, genital symptoms, and birth complications. Sometimes there were contradictions between composite measures and their components, precluding clear guidance on tailoring interventions and policies to reduce specific types of GBV to improve SRH outcomes. Using validated instruments and standardized protocols in adequately sized samples would help ensure comparability across regions and inform interventions to best serve vulnerable groups.

Cross-sectional research was pronounced in the studies included here. Although many included studies reported adjusted statistics accounting for relevant covariates, cross-sectional findings are subject to the possibility of spurious and confounding relationships. The only SRH outcomes explored with longitudinal research designs were HIV seroconversion, Herpes seroconversion, and adoption of contraception (Jewkes, Dunkle, Nduna, Jama, et al., 2010; Jewkes, Dunkle, Nduna, & Shai, 2010; Kacanek et al., 2013; Stephenson et al., 2013). Interpreting limited longitudinal results alongside cross-sectional findings was difficult because mixed results were typical for these three outcomes.

Such cross-sectional research is particularly problematic in the context of GBV and SRH because male-perpetrated violence may be used to discipline girls and women for insubordination or violation of gender roles (Anderson, 2005; Hynes et al., 2016; Wingood & DiClemente, 2000). Some male partners could consider STIs/HIV, gynecological conditions, and sexual dysfunction to be evidence of a woman's violation of chaste, maternal gender roles. In this review, although we excluded studies that explicitly assessed SRH exposures, it was not always possible to unravel whether GBV caused women to pursue contraception use, extra-marital sex, a higher number of sexual partners, transactional sex, or abortion, or whether those behaviors put women at risk of experiencing violent retaliation. Resource instability also may heighten the reproductive imperative in some LMICs, creating a social milieu intolerant of certain SRH behaviors or statuses (Stellar, Garcia-Moreno, Temmerman, & van der Poel, 2016). Our search strategy excluded studies examining SRH exposures relative to GBV outcomes; other relationships are possible and should be considered when interpreting the results.

### **Scope of GBV Exposures**

Based on this body of evidence, several forms of GBV may have important consequences for the SRH of girls and women in LMICs. IPV and NPSV were studied most often, with IPV showing the most consistent adverse relationships with SRH measures. In contrast, little research linked childhood GBV experiences with SRH outcomes. Emotional child abuse, neglect, any child abuse, and child marriage were addressed only in one study each, while physical child abuse and witness-

ing parental abuse both were addressed in just two studies. The shortage of adolescent-only studies may be related to this oversight of childhood exposures. The limited research on child marriage was particularly concerning because girls married in childhood also are more likely than those married later to experience physical and/or sexual IPV (Santhya et al., 2010; Yount, Crandall, et al., 2016). Moreover, we found no adolescent-only studies of emotional or physical IPV. Because of these gaps, our results provide a limited understanding of dating violence and violence within marriages for young women in LMICs.

Consistent with findings from other systematic review of reviews (Grose et al., 2019; Yount et al., 2017), the implications of polyvictimization for SRH were underexplored for girls and women in LMICs. Fewer than half of the reviews in this synthesis examined multiple forms of GBV (Hall et al., 2014; Li et al., 2014; Shamu et al., 2011; UNICEF, 2012). The original studies comprising these reviews also rarely analyzed the unique experiences of those who have endured several GBV exposures over their lifetimes. Although some studies combined measures of IPV to assess two or more forms, they did not examine the combined relationship of IPV with child abuse, FGMC, child marriage, or NPSV. This oversight is a missed opportunity to understand women's lived experiences, which may include the sequential or co-occurrence of various forms of GBV by age 24 years. The impact of sequential and/or concurrent GBV may differ than that of single GBV exposures (Alexander, Amerigo, & Harrelson, 2018). The timing of exposure also may matter; for instance, the SRH effects of IPV before versus during pregnancy may differ (Islam, Broidy, Mazerolle, Baird, & Mazumder, 2018). To create interventions, a better understanding of polyvictimization against girls and women in LMICs will be essential (Grose et al., 2019; Le, Holton, Romero, & Fisher, 2018; Yount et al., 2017).

### **Scope of SRH Outcomes**

This systematic review of reviews makes a significant contribution in that we defined SRH broadly to include emotional, mental, and social aspects and identify neglected SRH outcomes in this corpus of research. Contraception, STIs/HIV, sexual risk behaviors, and pregnancy-related outcomes have been studied to a much greater extent in research on GBV in LMICs. This emphasis was not surprising given the severity of the HIV/AIDS pandemic in many LMIC contexts (Joint United Nations Programme on HIV/AIDS (UNAIDS), 2010) and social expectations of virginity and pressure to bear children once married (Andro & Lesclingand, 2016; Santhya & Jejeebhoy, 2010). In contrast, research was scarce on the relationship between GBV and sexual function, gynecological conditions other than STIs, and sexual empowerment. Although organizations like UNFPA and WHO define SRH broadly, the shortage of sexual empowerment outcomes reveals unequal attention to emotional, mental, and social aspects of SRH. Given these gaps and the predominantly cross-sectional nature of the research reviewed here, it may

be too early to make extensive inferences about these outcomes.

One explanation for this gap is that sexuality research globally tends to focus on negative aspects of sex and sexuality (Higgins & Hirsch, 2007); the research synthesized here was no exception. The attention to harmful biological outcomes such as STIs/HIV, other gynecological conditions, and pregnancy complications highlights this concentration. This pattern was most noticeable for adolescent-only studies. For example, the adolescent-only samples assessed general sexual function or pain during sex, neglecting positive aspects of sexual functioning like pleasure and orgasm (see Online Supplement 3). Further, authors defined sexual behaviors (e.g., masturbation, pornography use) as overtly “risky” and sometimes risky-by-omission by neglecting discussion of positive sexual health outcomes. Many of these behaviors are not fundamentally unhealthy. For instance, having a greater number of sexual partners may not be harmful or risky if a woman is free from coercion, practices safer sex, and is otherwise content with her partners. As such, more research is needed on positive SRH outcomes – such as sexual communication, sexual knowledge, relationship power, and sexual pleasure – especially among adolescent girls and young women in LMICs.

Future research should examine the possible reciprocal relationships between experiences of GBV and sexual empowerment in LMICs. The UN and other international agencies have discussed the importance of empowerment to achieve gender equity and to ensure equal participation in society free from violence (UNFPA, 2014b). Our review revealed that SRH research has not yet incorporated the global empowerment discourse. This gap is worrisome because, empirically, GBV may reduce one’s decision-making power and control within relationships (Grose & Grabe, 2014; Santhya et al., 2010). Indeed, one study reviewed here indicated that IPV was associated with reduced power in sexual relationships for a sample of adolescents (Jewkes, Dunkle, Nduna, & Shai, 2010). It also is possible that low sexual empowerment may increase the risk of IPV, although we did not assess those relationships in the current review. A systematic review on GBV and sexual empowerment would aid our understanding of the reciprocal relationships between GBV and empowered participation in healthy sexual relationships.

### Review Limitations

Our study was limited by the inclusion of only English-language reviews and studies published between January 1, 2000 and November 6, 2016. Although we identified reviews from three electronic databases, complementary expert consultation, and gray literature searches, we may have missed reviews. We extracted studies from the highest quality reviews using AMSTAR criteria (Shea et al., 2007), thus, we did not include studies contained in low-quality reviews. There also was an imbalance of study source. WHO and DHS data were overrepresented, with two-fifths of the samples derived from the WHO multi-country study (18%) and the DHS (24%).

Results and their implications should be interpreted in this context.

We were also unable to examine all forms of GBV, such as forced prostitution or trafficking, and their possible relationships with SRH. Further, this review examined direct relationships between GBV and SRH, although indirect relationships are possible (Yount & Abraham, 2007). For instance, GBV may be related to HIV/STIs indirectly through mental disorders, with symptom-expression of high-risk sexual behaviors. The evidence gaps we observed may reflect a nascent understanding of indirect relationships and SRH across the lifespan. It also is possible that researchers did not assess some direct GBV-SRH relationships because the researchers viewed these relationships as implausible (e.g., child abuse and sexual empowerment) or prioritized other physical or mental-health outcomes.

Another limitation is that this research focused exclusively on girls and women, and GBV as a risk factor for SRH outcomes in adolescent boys and young men were not addressed. Their experiences may include overlapping and distinct forms of GBV, and a different set of SRH outcomes may be indicated. Although most forms of GBV against adolescent girls and young women are perpetrated by boys and men, the pursuit of gender equity across all markers (UNDP, 2016) necessitates the study of GBV’s association with the sexual well-being of boys and men. A separate systematic review of reviews is warranted for this population. The current analysis also assumes sex-gender congruence among the participants. Yet, transgender, non-binary, and gender non-conforming people are at increased risk for violence, harassment, and discrimination (Institute of Medicine, 2011). Understanding the SRH sequelae of GBV in these populations within LMICs will be necessary for achieving gender equity.

### Recommendations and Conclusions

We have highlighted an ongoing need for research on GBV and SRH in LMICs. More research is needed to verify whether GBV has similar SRH ramifications for adolescent girls, young women, and adult women, and whether consequences vary based on timing, severity, and frequency. Future systematic reviews on these topics should feature adolescent-specific inquiries. Research should address the unique experiences of adolescent girls and young women to develop age/developmentally/culturally appropriate, evidence-based interventions (Yount et al., 2017). Longitudinal research is needed to fill this gap because, although GBV may impact SRH, a reciprocal causal relationship also may exist. Indeed, other factors like limited access to resources and gender inequity may influence both GBV and SRH. Understanding the temporal relationship between GBV and SRH could facilitate the development of policies and interventions that reflect girls’ and women’s lived experiences.

The synthesis presented here suggests that efforts to improve SRH for women and girls in LMICs may benefit from a focus on their early risks of exposure to multiple and diverse forms of GBV. Advocates and practitioners must



consider and address the structural, community, and relationship contexts that influence SRH (Sommer & Mmari, 2015). Community-level interventions aimed at eliminating GBV by changing social norms are vital and must be coupled with enhanced individual-level resource investments, community engagement, and community infrastructure improvements (Yount et al., 2017). Evidence-based sexual education also is crucial, especially programs that explicitly attend to gender and power in relationships (Haberland, 2015; Kalamar, Bayer, & Hindin, 2016). Moreover, increased access to STI screenings, contraception, age/developmentally/culturally appropriate clinical services, and youth development and economic opportunities are needed in LMICs (Bearinger et al., 2007). Policy and structural changes must be prioritized to combat GBV and move closer to the goal of ensuring universal access to SRH and rights for all.

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## Declaration of Interests

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\*Indicates an included systematic review +Indicates a study included the data extraction

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